

INSTITUT DES PARCS NATIONAUX  
DU CONGO BELGE

INSTITUUT DER NATIONALE PARKEN  
VAN BELGISCH CONGO

---

# Exploration du Parc National Albert

MISSION G. F. DE WITTE (1933-1935)

FASCICULE 62

---

# Exploratie van het Nationaal Albert Park

ZENDING G. F. DE WITTE (1933-1935)

AFLEVERING 62

**DORILAIIDÆ (PIPUNCULIDÆ)**  
(DIPTERA)

BY

D. ELMO HARDY (Honolulu, Hawaii)



BRUXELLES  
1950

BRUSSEL  
1950

INSTITUT DES PARCS NATIONAUX  
DU CONGO BELGE

INSTITUUT DER NATIONALE PARKEN  
VAN BELGISCH CONGO

---

# Exploration du Parc National Albert

---

MISSION G. F. DE WITTE (1933-1935)

---

FASCICULE 62

---

# Exploratie van het Nationaal Albert Park

---

ZENDING G. F. DE WITTE (1933-1935)

---

AFLEVERING 62

**DORILAIIDÆ (PIPUNCULIDÆ)**  
(DIPTERA)

BY

D. ELMO HARDY (Honolulu, Hawaii)



BRUXELLES  
1950

BRUSSEL  
1950

Imprimerie M. HAYEZ, Bruxelles  
— 112, rue de Louvain, 112 —  
Dom. légal: r. de la Chancellerie. 4

# DORILAIIDÆ (PIPUNCULIDÆ) (DIPTERA)

BY

D. ELMO HARDY (Honolulu, Hawaii)

This most interesting collection contained two hundred and forty seven specimens of *Dorilaidæ* and is by far the most extensive collection of these flies which has been made in the Belgian Congo. It is unfortunate that the writer's preliminary study of the African *Dorilaidæ* left his hands before this collection was studied; when the first paper was written, very little was known concerning the species which occur in the Belgian Congo.

The Belgian Congo is apparently very rich in *Dorilaidæ* species, forty two are now known from the Congo, this is nearly half of all the species known from all of Africa. Most of these were collected in the Albert National Park, an area representative of only a small portion of the Belgian Congo.

The DE WITTE collection contained five genera, one of which is herein described as new. There were thirty five species present, twenty of these are apparently undescribed.

The following report includes eleven specimens taken by Dr. H. DAMAS in 1935 and eight specimens collected by L. LIPPENS in 1936. Unless otherwise indicated all specimens were collected by G. F. DE WITTE. In order to facilitate the recognition of the species keys been prepared to the *Dorilaidæ* known to occur in the Belgian Congo.

The writer is very grateful to Pr. V. VAN STRAELEN, President of the Institut des Parcs Nationaux du Congo Belge for having had the opportunity of studying this unusual collection.

All the localities between [ ] are outside the Park's region.

## KEY TO GENERA KNOWN FROM THE BELGIAN CONGO.

1. Ocellar bristles present; head hemispherical. Wing venation incomplete, the *m* crossvein, the main part of vein  $M_1+2$  and the anal vein are missing ..... *Chalarus* WALKER.
- No ocellar bristles, head nearly spherical. Wing venation complete except in *Beckerias* which has only the anal vein lacking ..... 2
2. Anal vein lacking ..... *Beckerias* ACZEL.
- Anal vein present ..... 3
3. Apical cell closed in the wing margin. Wings entirely black fumose, covered with conspicuous microchætæ. Stigmata not differentiated from the wing margin ..... *Congomyia* HARDY.
- Apical cell open. Wings not black fumose without conspicuous microchætæ. Stigmata never obscured by the wing color ..... 4
4. Wing base long attenuated, the axillary excision is absent, and there is no developed posterior lobe. The anal lobe ends about half way between the humeral crossvein and the forking of the radial sector (fig. 21b) ..... *Wittella* n. genus.
- Wing base normal, the axillary excision and the posterior lobe are present. The anal lobe ends opposite the humeral crossvein ..... 5
5. Stigma absent, no darkened area in the third costal section .....  
*Tömösváryella* ACZEL.
- Stigma present, usually filling all of the third section .....  
*Dorilas* MEIGEN 5 A
- 5 A. Vein  $M_1+2$  with an appendix beyond the *m* crossvein .....  
*Dorilas* (*Cephalosphæra*) ENDERLEIN.
- Vein  $M_1+2$  without an appendix ..... 5 B
- 5 B. Propleura each with a fan of long hairs ..... *Dorilas* (*Dorilas*) MEIGEN.
- Propleura bare ..... *Dorilas* (*Eudorylas*) ACZEL.

**CHALARUS WALKER.**

*Chalarus* WALKER, 1834, Ento. Mag., 2, 269.

Only one species of this genus is known from Africa.

**Chalarus spurius (FALLEN).**

*Cephalops spurius* FALLEN, Diptera Sueciæ, Syrphici, 1, 16.

Two specimens were in the collection from the following localities : Ruanda, Kundhuru-ya-Tshuve (col Gahinga-Sabinyo), alt. 2.600 m (bam-bous), 15.IX.1934; and : Kivu, Kalondo (lac Ndaraga, Mokoto), alt. 1.750 m, 22-27.III.1934.

**BECKERIAS ACZEL.**

*Beckerias* ACZEL, 1939, Zool. Anz., 126, 191-195.

This genus is distinguished from *Dorilas* by having no anal vein. To date the writer has been unable to find additional characters for separating this group, and it might be best to treat it as a subgenus of *Dorilas*.

**Beckerias inchoatus HARDY.**

(Fig. 1a.)

*Beckerias inchoatus* HARDY, 1949, Inst. Roy. Sci. Nat. Belg., Mém. 2<sup>e</sup> série, fasc. 36, p. 62.

This is the only species of this genus which has been described from Africa. Following is the first description of a female :

*Head* : Front entirely polished black and slightly widened in the central portion. The third antennal segment is yellowish brown and moderately acuminate below. *Thorax* : Mesonotum and scutellum grayish brown pollinose, pleura gray. Propleura each with a fan of hairs. Humeri dark brown to black, halteres yellowish. Scutellum with just a few short hairs around the margin. *Legs* : Coxæ brown to black, polished on upper surfaces. Femora with broad brown to black rings just beyond their middles. Flexor spines of femora weak, extensor hairs present but short. Tibiæ and tarsi all yellow. *Wings* : Very lightly fumose, stigma filling all of the third costal section. The third section is equal in length to the fourth and the two combined are equal to the fifth. The *r-m* crossvein is at or slightly beyond the middle of the discal cell and the last section of the fourth vein is slightly curved. The last section of the fifth vein is equal in length to the *m* crossvein and the anal vein is completely lacking. *Abdomen* : Highly polished black, except for the gray band on the first tergum. First tergum with a row of long hairs on each side, abdomen

otherwise covered with distinct, but sparse, erect hairs. Hind margin of sixth tergum straight. *Ovipositor* : The base is shining black and rather globose, slightly gibbose below. The piercer is reddish. It is longer than the short base, extends to the second abdominal segment and is slightly curved outward (fig. 1a).

Length : body, 3,0 mm; wings, 4,5 mm.

TYPE LOCALITY : Nyasaland, Cholo.

Type in British Museum.

The above described female was from Kivu, Rutshuru, alt. 1.285 m, 7.VI.1935.

### DORILAS MEIGEN.

*Dorilas* MEIGEN, 1800, Nouv. Class, Mouch., p. 31.

*Collinias* ACZEL, 1940, Zool. Anz., 132, 151. New synonymy <sup>(1)</sup>.

*Collinias* was characterized by having a supernumerary crossvein in the third costal section. This has proved to be a variable character. Specimens of *Dorilas conspectus* HARDY, *abdominalis* (LOEW) and *damasi* n. sp. have been seen which have such a crossvein at the end of the stigma. It apparently is an atypical condition in these species and cannot be depended upon as even a specific character.

As will be discussed below *Cephalosphæra* ENDERLEIN and *Eudorylas* ACZEL are considered as subgenera by this writer.

The collection contained twenty four species of *Dorilas*. Thirteen of these belong in the subgenus *Eudorylas*, nine are *Dorilas* (*Dorilas*), and two are *Dorilas* (*Cephalosphæra*). The species can be separated by the following key to the *Dorilas* of the Belgian Congo.

### KEY TO DORILAS.

1. Fourth vein  $M_1+2$  with an appendix beyond the  $m$  crossvein (*Cephalosphæra*) ..... 2
- Fourth vein without an appendix ..... 3
2. Femora very stout, flexor spines unusually strong. Middle femora each with a row of strong bristles on the outside surface near apex (fig. 3b). Third costal section of wing equal to the fourth ... *magnispinosus* n. sp.
- Femora slender, flexor spines weak. Middle femora with no such bristles. Third costal section one-third to one-fourth as long as the fourth ..... *lucidus* n. sp.

<sup>(1)</sup> The other synonymy is not being repeated in this paper.

3. Abdomen polished, at least on the apices of some segments ..... 4  
 — Abdomen pollinose, lightly to entirely opaque ..... 25
4. Face of both sexes very narrow, only one-half or less as wide as the front just above the antennæ ..... 5  
 — Face normal, as wide as the front ..... 7
5. Only apices of abdominal segments polished. Stigma filling all of the third costal section ..... *angustifacies* HARDY.  
 — Abdomen almost all polished. Stigma filling only the apical two-thirds of the third costal section ..... 6
6. Abdomen rufous on the sides. Front of male polished, front of female with a shining black line down the middle. Male harpagones broad, terminating in small points on inner apices (fig. 5d). Female ovipositor curved (fig. 5c) ..... *damasi* n. sp.  
 — Abdomen black or but faintly rufous tinged on sides. Front of both sexes silvery pubescent. Male harpagones developed on inner median margins and attenuated at apices (fig. 4b). Female ovipositor straight (fig. 4a) ..... *conspectus* HARDY.
7. Sides of abdomen yellow to rufous ..... 8  
 — Abdomen entirely black ..... 12
8. Propleura each with a fan of long hairs ..... 9  
 — Propleura bare ..... 11
9. Third antennal segment short acuminate. Sides of mesonotum and entire pleura yellowish. Males with a large symmetrical hypopygium, equal to the fifth segment in length and without a membranous area or cleft ..... *pallidipleurus* (CURRAN).  
 — Third antennal segment short acute to obtuse. Thorax black. (Females run here) ..... 10
10. Third costal section about equal to the fourth. The *r-m* crossvein situated at the basal third of the discal cell. Third antennal segment short acute, rounded at the apex. Ovipositor base globose (fig. 9a) ..... *visendus* n. sp.  
 — Third section about one-half as long as fourth. Crossvein *r-m* near the middle of the discal cell. Third antennal segment pointed at the apex. Ovipositor base elongated ..... *bellulus* HARDY.
11. Third antennal segment short acuminate. Male hypopygium with a large dorsal cleft on the right side, besides a small, round, apical membranous area ..... *rubrus* n. sp.  
 — Third antennal segment long acuminate. Male hypopygium with an oblong apical membranous area and usually an apical keel but with no dorsal cleft ..... *abdominalis* (LOEW).



12. Legs yellow or with only narrow, pale brown, bands ..... 13  
 — At least the femora chiefly black ..... 22
13. Third costal section very short, only one-third to one-fourth as long as the fourth. Entire thorax and abdomen highly polished. Flexor spines very strong ..... *perpaucus* n. sp.  
 — Wing venation not as above. Thorax entirely pollinose ..... 14
14. Abdomen densely covered with erect bristles. Third antennal segment long acuminate ..... *wittei* n. sp.  
 — Abdomen nearly bare, not conspicuously bristled except on the sides of the first tergum. Third antennal segment usually acute to short acuminate ..... 15
15. Front and hind tibiae with very strong erect bristles in the middle of the outside surface, those of the hind legs are especially developed, two times longer than the tibiae are wide (fig. 6a). Extensor hairs on femora long and conspicuous ..... *longisetosus* n. sp.  
 — Front tibiae without such bristles. Erect bristles sometimes present on the hind pair, but they are not longer than the tibiae are wide. Extensor hairs not conspicuous ..... 16
16. Third antennal segment acuminate. Male hypopygium rather symmetrical, with a cleft on the right side but no membranous area ..... 17  
 — Third segment obtuse to acute. Hypopygium with an apical membranous area, except in *bequaerti* which has no apical membranous area or dorsal cleft ..... 18
17. Third segment very long acuminate, developed into a long slender point which is longer than the remainder of the segment (fig. 10d). Humeri yellow ..... *decorus* n. sp.  
 — Third segment short acuminate, tapered to the apex. Humeri brown. (Kenya) ..... *flavivrus* (RAPP).
18. Third antennal segment obtuse, rounded at the apex. Third section of costa two times longer than fourth ..... 19  
 — Third segment acute. Third costal section about equal or shorter than the fourth ..... 20
19. Propleura haired. Last section of the fourth vein moderately curved. Only hind margins of abdominal terga polished ..... *vinnulus* HARDY.  
 — Propleura bare. Last section of fourth vein straight. Terga three to five entirely polished black ..... *modicus* HARDY.
20. Terga three to five polished only on their apices. Male hypopygium equal in length to the fifth abdominal segment and with no membranous area or dorsal cleft ..... *bequaerti* (CURRAN).  
 — Abdomen almost entirely polished. Hypopygium shorter than the fifth segment and with a conspicuous membranous area ..... 21

21. Male hypopygium short rather rounded, with a very large membranous area slightly to the left of the apex. Ninth segment plainly visible from dorsal view. Humeri and knobs of halteres brown to black. Third costal section equal to the fourth. Crossvein *r-m* situated near basal third of the discal cell ..... *visendus* n. sp.
- Male hypopygium three-fourths as long as the fifth and tapered toward the apex. With a small membranous area slightly to the right of the apex. Ninth segment not visible from above. Third section about one-half as long as fourth. Crossvein *r-m* near middle of discal cell ..... *bellulus* HARDY.
22. Abdomen chiefly polished black, at least terga four and five entirely polished. Third and fourth costal sections equal in length to the fifth ..... 23
- Abdomen chiefly opaque, only apices of segments polished ..... 24
23. Thorax and abdomen entirely polished except for the first tergum. Third antennal segment short acuminate. Male hypopygium about equal in length to the fifth abdominal segment. Ninth segment not visible from above ..... *ghesquièrei* n. sp.
- Thorax and bases of terga two and three opaque. Third antennal segment short acute, slightly rounded at the apex. Hypopygium short, not over one-half as long as the fifth. Ninth segment visible from dorsal view. (Some males may run here) ..... *visendus* n. sp.
24. The combined lengths of the third and fourth costal sections is only one-half as long as the fifth section. Third antennal segment acute ..... *breddoi* HARDY.
- The third and fourth costal sections combined are about two times longer than the fifth. Third antennal segment rounded at the apex. (Some specimens may run here) ..... *angustifacies* HARDY.
25. Legs entirely yellow ..... 26
- At least the femora with broad brown to black bands or chiefly black ..... 30
26. Third antennal segment long acuminate, the apex is slender and drawn out ..... 27
- Third antennal segment short acuminate to acute, the apex is not attenuated ..... 28
27. Male hypopygium with a dorsal cleft on the right side and no apical membranous area. Third costal section shorter than the fourth ..... *mikenensis* n. sp.
- Male hypopygium with a large apical membranous area and no dorsal cleft. Third costal section longer than the fourth ..... *galeatus* HARDY.

28. Third costal section slightly longer than the fourth. Last section of the fourth vein strongly curved ..... 29  
 — Third section one-third to one-half as long as the fourth. Last section of fourth vein straight ..... *ruandensis* n. sp.
29. Male hypopygium tapering to a blunt apex, no membranous area present ..... *lubuti* (CURRAN).  
 — Male hypopygium not tapered and with an apical membranous area ..... *congoensis* HARDY.
30. Third antennal segment prolonged into a bristle-like apex, which is equal or longer than the remainder of the segment (fig. 14a) .....  
*inornatus* HARDY.  
 — Third segment not bristle-like at the apex ..... 31
31. Third costal section two to three times longer than the fourth ..... 32  
 — Third section not over one and one-half times longer than the fourth, usually equal or distinctly shorter than the fourth. (if the third is one and one-half longer than the fourth the third antennal segment is long acuminate and the male hypopygium has an apical membranous area and no dorsal cleft. *D. unanimitus* HARDY fits here) ..... 33
32. Third antennal segment acuminate. Male hypopygium with a median cleft extending to its base (fig. 11c). Female ovipositor long and straight. Last section of fourth vein straight ..... *dorsalis* n. sp.  
 — Third segment acute. Male hypopygium with no dorsal cleft and with an apical membranous area (fig. 12a). Female ovipositor curved. Last section of fourth vein curved ..... *falcatus* HARDY.
33. Third section of costa one and one-half longer than the fourth. Third antennal segment long acuminate. Flexor bristles of femora very strongly developed. Male hypopygium equal to the fifth abdominal segment in length and with an apical membranous area .....  
*unanimitus* HARDY.  
 — Third section about equal or shorter than the fourth. Flexor bristles small. Male hypopygium with a dorsal cleft on the right side or a membranous area which extends down the dorsum. Third antennal segment usually acute ..... 34
34. Legs predominantly black. Petiole of cubital cell very long, almost equal to longer than the last section of the fifth vein ..... 35  
 — At least tibiae and tarsi chiefly yellow. Petiole of cubital cell normal, about one-half as long as the last section of the fifth vein ..... 36
35. Third antennal segment very long acuminate. (Some female specimens run here) ..... *dorsalis* n. sp.  
 — Third segment short acute ..... *sordidatus* n. sp.

36. Wings distinctly brown fumose. Male hypopygium without an apical membranous area. Inner harpago greatly developed, two times longer than the outer (fig. 15a) ..... *libratus* HARDY.  
 — Wings hyaline or nearly so. Hypopygium without an apical membranous area only in *mikenensis* n. sp. Harpagones not as above ... 37
37. Third antennal segment long acuminate. Male hypopygium without an apical membranous area. Harpagones as in fig. 16b .....  
*mikenensis* n. sp.  
 — Third segment acute to short acuminate. Hypopygium with an apical membranous area. Harpagones as in fig. 17a ..... *mutillatus* (LOEW).

**DORILAS (CEPHALOSPHERA) new combination.**

*Cephalosphæra* ENDERLEIN, 1936, Diptera Tierwelt Mitteleuropas, 6, 3.

It is perhaps best to treat this as a subgenus, the appendix on the fourth vein alone does not seem to be a good enough character to warrant giving the group generic rank. The writer has separated it from *Dorilas* in the past because it made a convenient grouping. COLLIN<sup>(1)</sup> agrees that this character does not have generic value and that there are no sound grounds for considering *Cephalosphæra* a distinct genus.

This is the first time this subgenus has been reported from Africa. Two species were present in the collection, both are apparently undescribed.

***Dorilas (Cephalosphæra) lucidus* n. sp.**

(Figs. 2a-b.)

This species appears more closely related to *D. furcatus* (EGGER) than to any other known species. It differs very distinctly by having the third antennal segment acute; the third costal section very short, the legs yellow, the femora slender and the ovipositor not so elongated.

♀. *Head* : Front expanded in the middle, shining black above, gray pubescent on the lower portion and on the sides; the shining black portion extends as a narrow line half way down the middle of the front. Face slightly narrower than the front and silvery pubescent. Occiput chiefly gray, subshining black above. Antennæ brown to black, the second segment bears moderately long bristles above and below. The third segment is acute to very short acuminate at its apex (fig. 2a) and is densely white pubescent. *Thorax* : shining black in ground color, densely brown pollinose on the dorsum, gray on the sides. Humeri brown to black, halteres chiefly yellow with discolored knobs. Propleura each with a fan of pale hairs. Dorsocentral and scutellar hairs present but fine and inconspicuous. *Legs* : All yellow, except for the yellow-brown coxæ.

(1) 1945, *The Ento. Mo. Mag.*, 81, 2.

Femora slender, flexor spines rather weak. Middle femora without strong bristles on the outer dorsal surface. *Wings* : Light fumose, stigma brown and filling all of the third costal section. Third section very short only one-third to one-fourth as long as the fourth section. The two sections combined are about as long as the fifth. The *r-m* crossvein is near the basal third of the wing. The section of the fourth vein from the *m* crossvein to the fork is straight and is equal in length to the *m* crossvein. The portion beyond the fork is very slightly curved and two times longer than the *m* crossvein. The appendix on the fourth vein is longer than the *r-m* crossvein and about equal in length to the petiole of the cubital cell. *Abdomen* : Slightly clavate in shape, widest at segments four and five. The first tergum is densely gray pollinose, the remainder of the abdomen is moderately covered with brownish gray pollen, the shining brown to black ground color is almost obscured. The hind margin of the sixth tergum is straight. *Ovipositor* : Broad, somewhat flattened dorsoventrally. From a side view the base is hemispherical. The piercer is straight, and slightly longer than its base (fig. 2b).

Length : body, 3,0 mm; wings, 4,5 mm.

♂ unknown.

HOLOTYPE ♀ : Ruanda, Kundhuru-ya-Tshuve, Rutabagwe, alt. 2.600 m, 13-14.IX.1934.

Type returned to the Institut des Parcs Nationaux du Congo Belge.

### **Dorilas (Cephalosphæra) magnispinosus** n. sp.

(Figs. 3a-e.)

This species is very distinctive from all members of this subgenus known to the writer. It is characterized by the very strong flexor spines on the femora, by the row of strong spine-like bristles on the outer extensor surfaces of the middle femora and by the yellow scutellum, pleura and margins of the mesonotum. The genital characters are also very distinctive.

♂. *Head* : Eyes joined for a distance equal to about twice the length of the frontal triangle, the junction extends not quite to the ocelli. Face and front silvery pubescent, the face is just slightly wider than the broadest portion of the front. The occiput is entirely gray, faintly subshining on the upper portion. The antennæ are bright yellow. The second segment has long brown bristles above and below. The third segment is acute at the apex and is densely pubescent (fig. 3c). *Thorax* : Mesonotum chiefly brown, extreme lateral margins and the notopleura yellow. The sides of the mesonotum are polished, the median portion is brown pollinose. The scutellum, humeri, halteres and pleura are yellow. The metanotum is black. The propleura each have a conspicuous fan of long pale hairs. The scutellum has a row of short hairs around the margins. *Legs* : All yellow, except for the brownish coxæ. Femora very stout and each with

five to seven pairs of large, black spines on the apical portion below. The middle femora each have a row of seven or eight strong, black bristles on the outside of the dorsal surface near the apex of the segment (fig. 3b). The hind tibiae are moderately curved and bear no unusually strong bristles on the outer surfaces or spurs at their apices. *Wings* : Brownish fumose, the stigma dark brown and filling all of the third costal section. Third section equal in length to the fourth, the two combined are slightly longer than the fifth section. The *r-m* crossvein is situated at the basal third of the discal cell. The fourth vein, beyond the *m* crossvein is straight until it reaches the fork. From the appendix to the wing margin the fourth vein is strongly curved. The appendix on the fourth vein is equal in length to slightly longer than the *r-m* crossvein. The last section of the fifth vein is longer than the *m* crossvein and the petiole of the cubital cell is scarcely longer than the petiole on the fourth vein. *Abdomen* : Chiefly polished brown to black and slightly clavate in shape. The first tergum is opaque gray and has a row of long pale hairs on each side. The other terga are all shining except for the very narrow, faintly grayed apices and more distinctly grayed sides. Abdomen rather conspicuously covered with erect, yellow pile. *Hypopygium* : Very well developed, almost as long as the fifth abdominal segment, asymmetrical in shape and somewhat compressed to the left side. The ninth segment is bright yellow and is plainly visible from a dorsal view. The eighth segment is opaque brown and has a narrow cleft extending obliquely across the apex (fig. 3d). From a ventral view the narrow apical membranous area extends about half way down the eighth segment. The harpagones are very long and slender, they are longer than the ninth segment and curve inward toward their apices (fig. 3a).

Length : body, 5,5 mm; wings, 7,5 mm.

♀ unknown.

HOLOTYPE ♂ : Nyasheke (volc. Nyamuragira), alt. 1.820 m, 14-26.VI.1935. One paratype male, same data as type.

Both returned to the Institut des Parcs Nationaux du Congo Belge.

### DORILAS (DORILAS) MEIGEN.

Typical *Dorilas* are distinguished by having a fan of hairs on each propleura and by having the fourth vein without an appendix.

### *Dorilas (Dorilas) angustifacies* HARDY.

*Dorilas angustifacies* HARDY, 1949, Inst. Roy. Sci. Nat. Belg., Mém. 2<sup>e</sup> série, fasc. 36, p. 20.

Two male specimens are in the collection which agree with the original description of *angustifacies* except that the antennæ are black not yellowish. The face is wider near the antennæ, but narrow toward the lower portion.

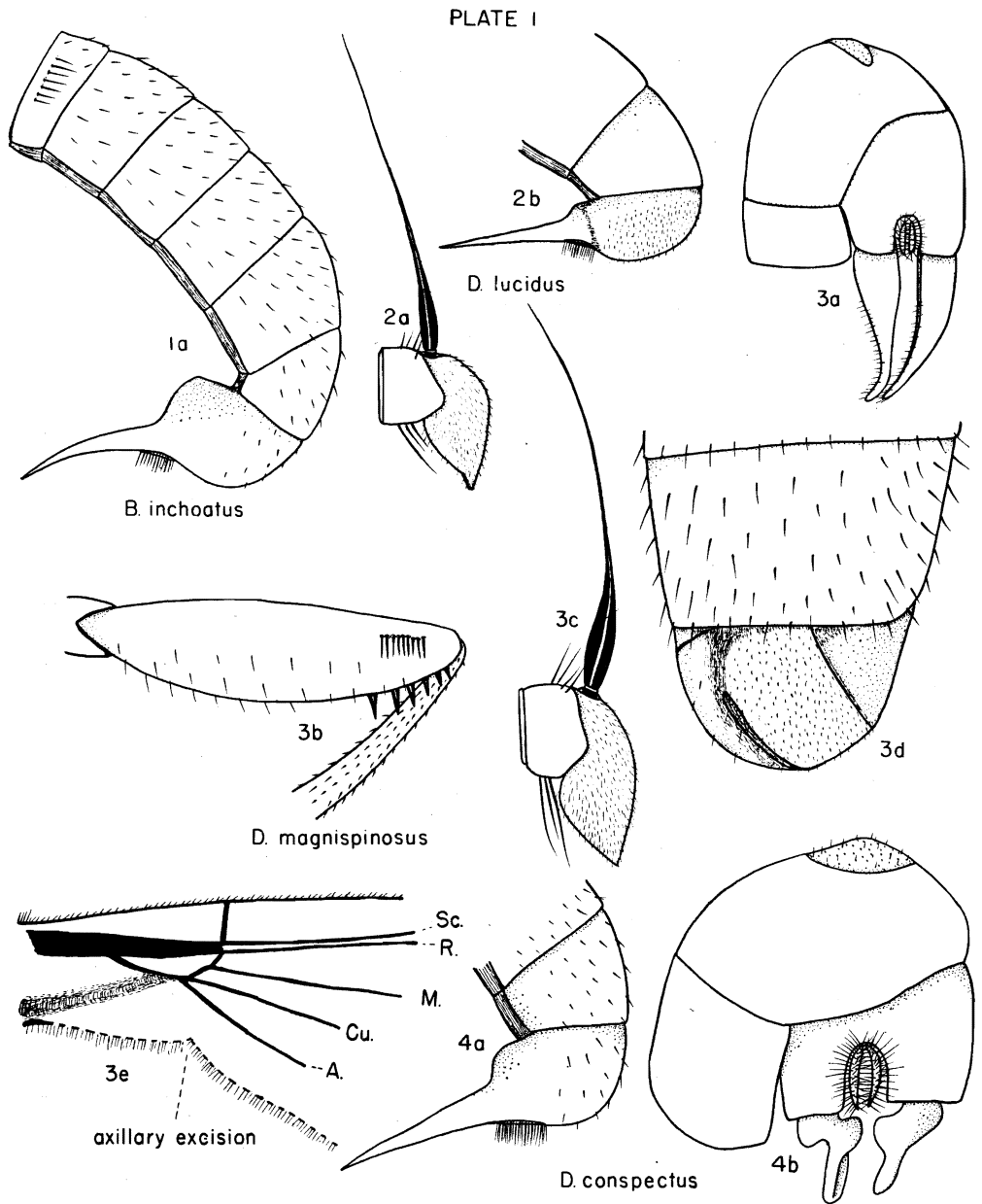


FIG. 1. — *Beckeria inchoatus* HARDY. a. female abdomen, lateral view.

FIG. 2. — *Dorilas (Cephalosphæra) lucidus* n. sp. a. antenna; b. female ovipositor, lateral.

FIG. 3. — *Dorilas (Cephalosphæra) magnispinosus* n. sp. a. male hypopygium, ventral; b. middle femur, lateral; c. antenna; d. male hypopygium, dorsal; e. basal portion of wing.

FIG. 4. — *Dorilas (Dorilas) conspectus* HARDY. a. female ovipositor, lateral; b. male hypopygium, ventral.

The second, third and fourth terga each have a very narrow polished band on their hind margin, the fifth tergum is half polished. The specimens are slightly smaller than the type.

Length : 2,8 mm; wings, 3,6 mm.

TYPE LOCALITY : Cape Province, Sommerset East.

Type in British Museum.

Added distribution : Ruanda, lac N'Gando (volc. Karisimbi), alt. 2.400 m, 8.III.1935 and Tshamugussa (Bweza), alt. 2.250 m (bambous), 10.VIII.1934.

#### **Dorilas (Dorilas) bellulus** HARDY.

*Dorilas bellulus* HARDY, 1949, Inst. Roy. Sci. Nat. Belg., Mém. 2<sup>e</sup> série, fasc. 36, p. 21.

This species is characterized by the polished abdomen, acute third antennal segment; the yellow legs and antennæ; the rufous sides of the female abdomen; the third costal section shorter than the fourth, and the *r-m* crossvein near the middle of the discal cell; also by the small apical membranous area on the male hypopygium.

It has been recorded from several localities in Kenya.

One typical female specimen was in the collection from N'Goma, 19.IV.1935 (H. DAMAS).

The allotype female was headless so the head characters for this sex have not previously been described. The upper half of the front is highly polished black, the lower portion is gray. The face is about equal in width to the front and is silvery pubescent. The antennæ are bright yellow, the third segment is acute as in the male.

One male specimen appears to belong here but is atypical. The antennæ are black; the third costal section is one and one-half times longer than the fourth and the femora have brown to blackish bands.

The male was from lac Mokoto, Bita, 23.VIII.1935 (H. DAMAS).

#### **Dorilas (Dorilas) conspectus** HARDY.

(Figs. 4a-b.)

*Dorilas conspectus* HARDY, 1949, Inst. Roy. Sci. Nat. Belg., Mém. 2<sup>e</sup> série, fasc. 36, p. 27.

This species is characterised by the very narrow face of both sexes, the rather small, obtuse, third antennal segment, the abbreviated stigmata in the wings and by the genital characters.

A good series of specimens in the DE WITTE collection apparently belong here. They show some variations from the original description but agree in all structural details. The following observations are supplemental to the original description : *Head* and *thorax* : The face of the male and the mesonotum and scutellum are usually highly polished. The humeri are



brown, tinged with yellow. The scutellum has a row of short, fine, hairs around its margin. *Legs* : The extensor hairs are well developed on the femora. A few specimens have been seen which have the legs all yellow. These will run, in the writer's African *Dorilas* key, to *parvicornis* HARDY and the narrow face will distinguish them. *Wings* : The apical cell is characteristically narrow but there is considerable variation in its width at the wing margin. This section of the costa is typically very narrow but some specimens have been seen which have it rather broad, equal or slightly longer than the *r-m* crossvein. Some specimens have been studied which have a distinct supernumerary crossvein in the third costal section and thus fall into ACZEL's genus *Collinias*. This has been demonstrated to be a variable character and is apparently of no taxonomic value. *Genitalia* : From ventral view the ninth segment is seen to be wider than long and has a deeply « U » shaped concavity in the middle of the hind margin. The harpagones are irregular in shape, are enlarged on their inner median margins and attenuated on their apical halves (fig. 4b). The membranous area of the eighth segment occupies only the apical portion as seen from ventral view.

♀. This is the first description of this sex. The specimens at hand apparently belong with the males which have been determined as *conspicuosus*. *Head* : The front is rather broad for most of its length but is strongly narrowed on the upper portion. The front is entirely silvery pubescent. The face is extremely narrow, in the median portion it is scarcely wider than one eye facet. The ocellar triangle and upper portion of the occiput are shining as in the male. *Thorax* : Usually lightly grayish brown pollinose on the dorsum and gray on the sides. In some specimens the dorsum is all polished, devoid of pollen. *Legs* : The femora usually have broad brown to black bands but some specimens have the legs entirely yellow. *Abdomen* : Almost entirely shining black, the sides are often faintly tinged with rufous. The sides are almost straight and the sixth tergum is not excised on the hind margin. *Ovipositor* : The base is shining black and is globose in shape. The piercer is rufous and straight, it is one and one-half times longer than its base (fig. 4a) and extends to the apex of the third abdominal segment.

Length : body, 3,0-3,5 mm; wings, 4,2-4,8 mm.

TYPE LOCALITY : Ashanti, W. Africa.

Type in British Museum.

Records from the DE WITTE collection : Kivu, Rutshuru, alt. 1.285 m, 11.VII.1935; escarpement de Kabasha, alt. 1.500 m, 14.XII.1934; Nyongera (près Rutshuru), alt. 1.218 m (Butumba), 17.VII.1935; vers mont Kamatembe, vers 2.800 m, 7-23.I.1935; vers Rweru, volc. Mikeno (bambous), 2.400 m, 26.VII.1935; lac Magera, alt. 2.000 m, 27-28.II.1934; Kashwa (entre Ngesho-Bishakishaki), 2.000 m, 7-23.I.1935; Nyasheke (volc. Nyamuragira), alt.

1.820 m, 14-26.VI.1935; Kitondo (près Gandjo), alt. 2.000 m, 7-23.I.1935; Ruanda, Ilega (pied volc. Karisimbi), alt. 2.400 m, 12.III.1935; Ruanda, lac Nganda (volc. Karisimbi), alt. 2.400 m, 9.III.1935; Kivu, Rutshuru (envir. du Poste), alt. 1.285 m, 18-23.VI.1934; Kivu, Munagana (vers Gahinga-Sabinyo), alt. 2.200 m, 18.VIII.1934; Gitebe (volc. Nyamuragira), alt. 2.324 m, 14-26.VI.1935; lac Mokoto, c. Kishale, 23.IX.1934 (Mis. H. DAMAS); riv. Ondo, affl. Rutshuru, 30.VII.1935 (Mis. H. DAMAS).

**Dorilas (Dorilas) damasi** n. sp.

(Figs. 5a-d.)

This species is closely related to *D. conspectus* HARDY and is best distinguished by the striking differences in the male genitalia and the curved female ovipositor. The sides of the abdomen are rufous and the front of the male is polished black.

♂. *Head* : Eyes joined for about half the length of the front. Frontal triangle shining black, except for a gray pubescent area just above the antennæ. Face entirely polished black and about half as wide as the front just above the antennæ. Vertex and upper half of the occiput shining black. The third antennal segment is yellow rather small and obtuse below (fig. 5a). *Thorax* : Entirely polished black on the dorsum, brown on the sides. The humeri are dark brown, the halteres are yellowish except for brownish discolorations on the knobs. The propleura each have a fan of fine pale hairs on each side. The dorsocentral hairs are rather well developed and the scutellum has some short inconspicuous hairs around the margin. *Legs* : Chiefly yellow, the femora with broad, brown to black, bands. The flexor spines and extensor hairs are rather weakly developed and the hind tibiæ have no strong bristles on the outside surface of the swollen portion. *Wings* : Faintly fumose, stigma brown and filling just two-thirds of the third costal section. Third costal section equal in length to the fourth and often with a supernumerary crossvein at the base of the stigma. Crossvein *r-m* located at the basal third of the discal cell, ultimate section of the fourth vein moderately curved. The apical cell is rather broad at the apex, this section of the costa is sometimes two times longer than the *r-m* crossvein. *Abdomen* : Entirely polished, except for the gray first tergum. The sides of segments two to four are reddish, the median and apical portions are black. The first tergum has a row of long bristles on each side, the other terga are rather sparsely covered with short, erect hairs. The sides of the abdomen are almost straight. *Hypopygium* : About equal in length to the fifth segment, with a large subapical membranous area on the right. The ninth segment is clearly visible, from a dorsal view, on the right side (fig. 5b). The harpagones are short and stout and each is developed into a small slender point at inner apex (fig. 5d).

Length : body, 3,0 mm; wings, 3,5 mm.

♀. Front broad, slightly widened in the middle, not strongly narrowed above and with a shining black line extending down the center. Face dull gray pollinose and about as wide as two eye facets. The pleura are brownish yellow to yellow and the humeri are usually all yellow. *Ovipositor* : The base is chiefly shining black and elongated. The piercer is red, is about equal in length to its base and is curved upward (fig. 5c). The piercer extends to the apex of the third abdominal segment.

Length : body, 3,5-4,0 mm; wings, 5,0-5,5 mm.

HOLOTYPE ♂ : lac Mokoto, c. Kishale, 23.IX.1935 (Mis. H. DAMAS).

ALLOTYPE ♀ : vers Rweru (volc. Mikeno), alt. 2.400 m, 26-27.VII.1934.

PARATYPES, 1 ♂, 4 ♀ ♀ : Kivu, Rutshuru (riv. Musugereza), alt. 1.100 m, 8.VII.1935; Ruanda, Kibga (volc. Visoke), alt. 2.400 m, 8-9.II.1935 and Nyasheke (volc. Nyamuragira), alt. 1.820 m, 14-26.VI.1935.

Type, allotype and three paratypes returned to the Institut des Parcs Nationaux du Congo Belge. Two paratypes have been deposited in the U. S. National Museum collection.

### **Dorilas (Dorilas) longisetosus** n. sp.

(Figs. 6a-b.)

This species is very close to *D. bellulus* HARDY and is distinguished by the very strong bristles on the outside of all of the tibiæ, by having the third costal section equal to the fourth and by having opaque bands on the bases of the abdominal segments.

♂. *Head* : Eyes joined on the front for a distance equal to about ten eye facets. Upper portion of the front and the ocellar triangle polished black, lower portion and face silvery pubescent. First two antennal segments black, the second with short bristles above and below. The third segment is broken, it is very probably acute and dark in color. The upper half of the occiput is subshining black, the lower portion is dense gray. *Thorax* : Dorsum lightly brown pollinose, sides gray. Propleura each with a very conspicuous fan of long pale hairs on its hind margin. Mesonotum with distinct dorsocentral hairs and with several long hairs on each side behind the humeri. The scutellum has rather short but distinct hairs on its hind margin. The humeri and halteres are yellow. *Legs* : Entirely yellow except for the brownish coxæ and apical subsegments of tarsi. The femora are rather slender and the flexor spines and extensor hairs are well developed, the latter are at least half as long as each femur is wide. Front and hind tibiæ each with three or four exceptionally long and well developed, yellow, bristles at the middle of the outside surface (fig. 6a). *Wings* : Hyaline or nearly so, the stigma filling all of the third costal section. The third section is equal in length to the fourth and the two combined are equal to the fifth section. The *r-m* crossvein is at the middle

of the discal cell and the last section of the fourth vein is gently curved. The ultimate section of the fifth vein is shorter than the *m* crossvein. *Abdomen* : Chiefly polished black. First tergum gray except for the brown band at base. Second tergum chiefly opaque brown, with a narrow polished band at the apex. Third tergum with the basal half opaque brown and the apical half polished. Terga four and five all polished except for narrow bands of opaque brown at their bases. Sides of abdomen almost straight, slightly rounded at segments three to four. First tergum with a row of long bristles on each side, other terga with scattered erect hairs. *Hypopygium* : Very similar, from dorsal view, to *bellulus*. It is about half as long as the fifth segment, is compressed to the right and has a small membranous area to the right side of the apex (fig. 6b). The ninth segment is not visible from a dorsal view.

Length : body, 4,6 mm; wings, 5,8 mm.

♀ unknown.

HOLOTYPE ♂ : Tshamugussa (Bweza), alt. 2.250 m (bambous), 10.VIII.1934. Type returned to the Institut des Parcs Nationaux du Congo Belge.

#### **Dorilas (Dorilas) lubuti** (CURRAN).

*Pipunculus lubuti* CURRAN, 1929, Amer. Mus. Novit., 340, 1-2.

This species is related to *D. congoensis* HARDY. It is distinguished by having the male hypopygium symmetrical, tapering to a blunt point and with no membranous area present. It is a very large and conspicuous species with the body entirely subopaque black and the legs bright yellow.

The type was from Lubutu, Belgian Congo. The writer has identified the species from several localities in the Congo.

Two male specimens were in the collection from Ruanda, Kundhurya-Tshuve (col. Gahinga-Sabinyo), alt. 2.600 m (bambous), 15.IX.1934 and Kivu, Rutshuru (riv. Rodahira), alt. 1.200 m, 1.VII.1935.

#### **Dorilas (Dorilas) perpaucus** n. sp.

(Figs. 7a-b.)

This species runs out with *candidulus* HARDY in couplet 33 of the writer's key to the African *Dorilas*. It is, however, a typical *Dorilas* (*candidulus* has been transferred to a new genus), the wing base is not strongly attenuated, the anal lobe extends opposite the humeral crossvein, the axillary excision is present and the posterior lobe is developed. It is distinguished from other *Dorilas* by the short third costal section of each wing, the stout femora, strong flexor spines and conspicuously pilose body.

♀. *Head* : Front slightly expanded in the middle and a little wider than the face. The front is gray on the sides and has a shining black line down the middle from the ocelli to just above the antennæ. The ocellar

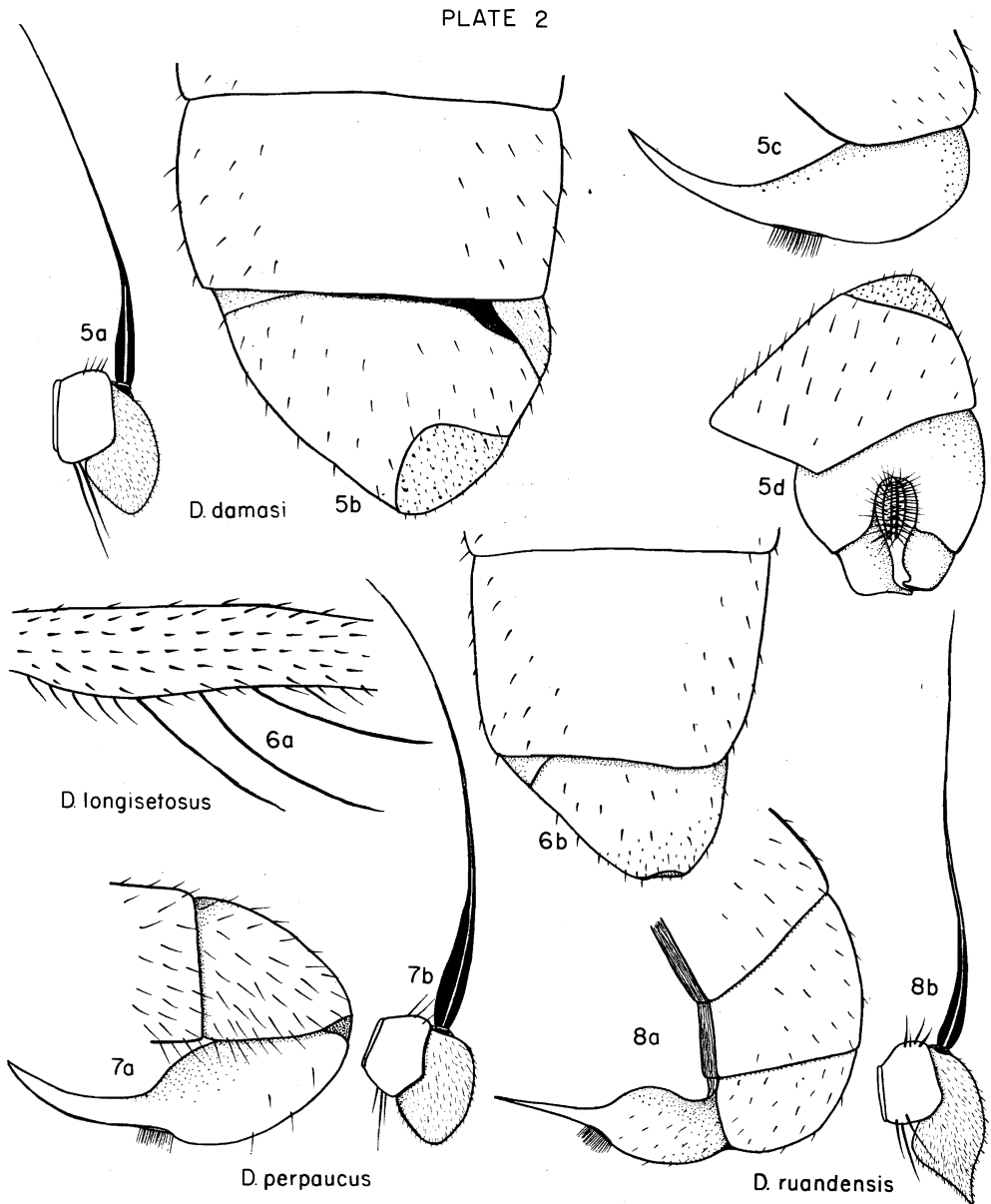


FIG. 5. — *Dorilas (Dorilas) damasi* n. sp. a. antenna; b. male hypopygium, dorsal; c. female ovipositor, lateral; d. male hypopygium, ventral.

FIG. 6. — *Dorilas (Dorilas) longisetosus* n. sp. a. dorsal view of hind tibia; b. male hypopygium, dorsal.

FIG. 7. — *Dorilas (Dorilas) perpaucus* HARDY. a. female ovipositor, lateral; b. antenna.

FIG. 8. — *Dorilas (Dorilas) ruandensis* n. sp. a. female ovipositor, lateral; b. antenna.

triangle and vertex are polished black. The upper portion of the occiput is faintly shining, the lower part is densely gray pollinose. The antennæ are entirely dark colored, the second segment bears moderately long, pale, bristles above and below. The third segment is small and poorly developed, it is obtuse, rounded at the apex (fig. 7b). The third segment is less than twice as large as the second. *Thorax* : polished black on the dorsum, gray on the sides. Humeri and halteres pale yellow. Propleura each with a fan of long pale hairs. Dorsum of thorax rather densely covered with moderately long, erect, whitish hairs. *Legs* : All yellow, except for the brownish coxæ and apical subsegments of tarsi. The femora are rather strongly swollen and the flexor spines are very well developed. The hind tibiæ have several erect bristles on the outside surface but these are not unusually strong. *Wings* : Lightly fumose, the brown stigma filling all of the third costal section. The third section is one-third as long as the fourth and the two combined are not quite as long as the fifth. The *r-m* crossvein is situated at the basal one-fourth of the discal cell. The last section of the fourth vein is rather strongly curved and the apical cell is narrow at its apex. The wing base is not so long attenuated as in *candidulus*. *Abdomen* : Distinctly clavate from a dorsal view, widest at segment five. Entirely polished black and rather thickly covered with moderately long, erect and pale, hairs. The hind margin of the sixth segment is straight, not excised or concave. *Ovipositor* : The base is oblong and polished black. The piercer is short and rather thick, it is about equal in length to its base and curved upward (fig. 7a). The piercer extends to the base of the fourth abdominal segment.

Length : body, 4,0 mm; wings, 5,0 mm.

♂ unknown.

HOLOTYPE ♀ : Kashwa (entre Ngesho-Bishakishaki), alt. 2.000 m, 7-23.I.1935.

Type returned to the Institut des Parcs Nationaux du Congo Belge.

### **Dorilas (Dorilas) ruandensis** n. sp.

(Figs. 8a-b.)

This species is related to *D. congoensis* HARDY and is distinguished by the short third costal section of the wing, the straight last section of the fourth vein, the more pointed third antennal segment and the all black thorax.

♀. *Head* : Front expanded in the median portion and slightly wider than the face; the face is normal in width. The upper third to one-half of the front is shining black, the lower portion and all of the face is silvery pubescent. The upper portion of the occiput is brown, the remainder is gray. Antennæ brownish with a faint tinge of yellow, the second segment with long, pale, bristles above and below. The third segment is short

acuminate to acute, pointed at apex but not drawn out (fig. 8b). *Thorax* : Polished black in ground color, rather densely covered with grayish brown pollen. The sides have a yellow tinge to the ground color and are gray pollinose. The humeri are black with a yellowish hind margin. The halteres are chiefly yellow, the knobs are slightly brownish. The propleura each have a fan of long, pale, hairs. The dorsocentral and marginal scutellar hairs are short and inconspicuous. *Legs* : All yellow, except for the brownish to black coxæ and apical subsegments of tarsi. Femora moderately thickened, flexor spines rather strong on all legs. Hind tibiae without unusually strong bristles on the outer surface. *Wings* : Hyaline or nearly so. The third costal section is very short only about one-third as long as the fourth. The stigma is dark brown and fills all of the costal section. The third and fourth combined are not quite equal in length to the fifth section. The *r-m* crossvein is situated just beyond the basal third of the discal cell and the last section of the fourth vein is straight. The last section of the fifth vein is slightly longer than the *m* crossvein. *Abdomen* : The sides are nearly straight, very slightly widest at about segment five. First tergum gray pollinose, with a row of long hairs on each side. The remainder of the abdomen is rather lightly grayish brown pollinose and sparsely covered with short erect hairs. The hind margin of the sixth tergum is straight. *Ovipositor* : Base oblong and brown to black in color. The piercer is yellow and straight, about equal in length to its base (fig. 8a), and extending to about the base of the third abdominal segment.

Length : body, 3,5 mm; wings, 4,6 mm.

♂. The eyes are joined for about half the length of the front. The front is dull grayish and has a subshining spot in the middle. The third costal section is not quite as short as in the females, it is one-half as long as the fourth. The tip of the abdomen is broken off so the genitalia have not been studied. Agreeing in other respects with the female.

Length : body, 4,0 mm; wings, 5,0 mm.

HOLOTYPE ♀ AND ALLOTYPE ♂ : Ruanda, Kundhuru-ya-Tshuve, Rutabagwe, alt. 2.600 m, 13-14.IX.1934.

PARATYPES, 8 ♀♀ : same as type; Kivu, Munagana (vers Gahinga-Sabinyo), alt. 2.200 m, 18.VIII.1934; Ruanda, Kundhuru-ya-Tshuve (col Gahinga-Sabinyo), Rutabagwe, alt. 2.600 m, 13-14.IX.1934; lac Magera, alt. 2.000 m, 1.III.1934.

Holotype, allotype and four paratypes returned to the Institut des Parcs Nationaux du Congo Belge. Two paratypes deposited in the U. S. National Museum and two in the Bishop Museum.

**Dorilas (Dorilas) visendus n. sp.**

(Figs. 9a-c.)

This species is related to *D. bellulus* HARDY. It is distinguished by the large apical membranous area of the male hypopygium, by having the base of the ninth segment visible from a dorsal view and the base of the female ovipositor globose. The third costal section of each wing is also longer and the *r-m* crossvein is located near the basal third of the discal cell.

♂. *Head* : Eyes joined almost to the ocellar triangle. Frontal triangle about equal in length to the joined portion of the eyes. The front is rather lightly gray pollinose, subshining black down the middle. The face is silvery, the occiput is chiefly gray. The first two antennal segments are yellowish brown, the second has long, brown, bristles above and below. The third segment is short acute, slightly rounded at the apex (fig. 9c) and yellow in color. *Thorax* : Rather lightly brown pollinose on the dorsum, gray on the sides. The humeri are brown to black, the halteres chiefly yellow, with slightly brownish knobs. The propleura each have a fan of fine, pale, hairs and the scutellum has several, short, hairs on its hind margin. *Legs* : Chiefly yellow, coxæ brownish, femora with pale brownish median discolorations. Femora rather slender, flexor spines strongly developed. Hind tibiae with three or four strong, erect, bristles on the outside surfaces just below their middles. *Wings* : Lightly fumose, stigma brown and filling all of the third costal section. The third section is equal to slightly longer than the fourth, the two combined are equal in length to the fifth section. Crossvein *r-m* situated at the basal third of the discal cell. Ultimate section of the fourth vein slightly curved. *Abdomen* : Chiefly polished black, first tergum and bases of second and third terga opaque grayish. First tergum with a row of long black bristles on each side, remainder of abdomen with scattered, short and erect, hairs. The sides of the abdomen are slightly rounded, it is widest at about segments three to four. *Hypopygium* : About half as long as the fifth abdominal segment, with a large membranous area just to the left of the apex. The basal portion of the ninth segment is plainly visible on the right side of the hypopygium as seen from a dorsal view (fig. 9b).

Length : body, 3,5 mm; wings, 4,5 mm.

♀. The front and face are equal in width, the former is entirely silvery on the lower half and shining black above. The upper portion of the front is very slightly narrowed just before the ocellar triangle. The vertex and upper occiput are polished black. The abdomen is yellowed on the sides and venter as in *abdominalis* and *rubrus*. *Ovipositor* : The base is shining black and is globose in shape. The piercer is red, it is short and straight and about equal in length to its base (fig. 9a). The piercer extends to just beyond the apex of the third abdominal segment. The underside of the ovipositor base is slightly tuberculated.

Length : body, 3,0-3,3 mm; wings, 3,8-4,0 mm.



HOLOTYPE ♂ AND ALLOTYPE ♀ : Kitondo (près Gandjo), alt. 2.000 m, 7-23.I.1935.

PARATYPES, 9 ♂♂, 4 ♀♀ : Kanyabayongo (Kabasha), alt. 1.760 m, 6.XII.1934; Rwindi, alt. 1.000 m, 26.XI.1934 and 25.IV.1936 (coll. L. LIPPENS); lac Magera, alt. 2.000 m, 1-3.III.1934; Kivu, Rutshuru, alt. 1.285 m, 7.VI.1935; Kivu, Rutshuru (riv. Musugereza), alt. 1.100 m, 8.VII.1935; Ruanda, Kundhuru-ya-Tshuve, Rutabagwe, alt. 2.600 m, 13-14.IX.1934; Ruanda, Nyabitsindi (entre volc. Visoke-Musule), alt. 2.400 m, 18.II.1935; Ruanda, Kundhuru-ya-Tshuve (col Gahinga-Sabinyo), alt. 2.600 m (bambous), 15.IX.1934.

Type, allotype and seven paratypes have been returned to the Institut des Parcs Nationaux du Congo Belge. Two paratypes have been deposited in the U. S. National Museum; two in the American Museum and two in the Bishop Museum.

### **DORILAS (EUDORYLAS) ACZEL.**

*Eudorylas* ACZEL, 1940, Zool. Anz., 132, 151.

This subgenus is distinguished from typical *Dorilas* by having the propleura bare, without the fans of hairs.

### **Dorilas (Eudorylas) abdominalis (LOEW).**

*Pipunculus abdominalis* LOEW, 1857, Ofvers. Kongl. Vet. Akad. Forhandl., 14, 374.

This species is characterized by its polished, chiefly rufous abdomen, long acuminate third antennal segment, yellow legs and by having an apical membranous area and no dorsal cleft on the male hypopygium.

It was described from Caffraria, S. Africa and has been recorded from numerous localities in South and Central Africa.

Eight specimens were in the collection from the following localities : lac Magera, alt. 2.000 m, 6.III.1934; Kivu, Rutshuru (riv. Rodahira), alt. 1.200 m, 1.VII.1935; escarpement de Kabasha, alt. 1.500 m, 12.XII.1934; Kanyabayongo (Kabasha), alt. 1.760 m, 8.XII.1934; Ruanda, Ruhengeri (sources Kirii), alt. 1.800-1.825 m, 1.X.1934 and Kivu, Rutshuru, alt. 1.285 m, 22.V-4.VI.1934.

### **Dorilas (Eudorylas) decorus n. sp.**

(Figs. 10a-d.)

This species is related to *D. flavicrus* (RAPP) and runs out with that species in the writer's key to the African *Dorilas*. It is distinguished by the very long slender apex of the third antennal segment, the yellow humeri, the lightly brown fumose wings (not « golden yellow ») and by having the stigma not quite filling the third costal section.

♂. *Head* : The eyes are joined on the front for a distance about equal to the length of ten eye facets. Vertical triangle polished black, front and face silvery pubescent. The face is slightly wider than the lower portion of the front. The first two antennal segments are brown, the second has short bristles above and below. The third segment is bright yellow, the long attenuated apical portion is slightly longer than the remainder of the segment (fig. 10d). *Thorax* : Shining black in ground color, lightly brown pollinose on the dorsum, gray on the sides. Humeri yellow, halteres chiefly so, knobs slightly brownish. Propleura bare, scutellum with a few fine inconspicuous hairs on the margin. *Legs* : Entirely yellow except for the brown to blackish coxæ and apical subsegments of the tarsi. Femora slender, the flexor spines are very weak or absent. The extensor hairs are present but are not well developed. The hind tibiæ have no strong bristles on the outer surfaces. *Wings* : Lightly fumose, the stigma brown and not quite filling the third costal section. The fourth section is nearly one and one-half times longer than the third and is only about one-fourth shorter than the fifth section. The *r-m* crossvein is situated at the basal third of the discal cell and the last section of the fourth vein is gently curved. The *m* crossvein is just slightly longer than the last section of the fifth vein. *Abdomen* : Slightly clavate in shape, widest at segments four and five. Entirely shining black but not highly polished. First tergum with a row of long bristles on each side, remainder of abdomen with very sparse short hairs. *Hypopygium* : Symmetrical in shape, with no apical membranous area but with a longitudinal cleft on the right side formed by the base of the ninth segment. The hypopygium, from dorsal view, is slightly longer than the fifth abdominal segment (fig. 10a). The ninth segment is yellow and is longer than wide. The harpagones are irregular in shape. The inner harpago is rather quadrate in shape, is scarcely as long as wide and is folded under at its tip. The outer harpago is produced into a finger-like lobe at its inner apex (fig. 10c).

Length : body, 3,5-4,0 mm; wings, 4,5-5,0 mm.

♀. The front and face are equal in width, the upper half of the front is shining black, the lower portion is gray. The abdomen is slightly clavate as in the male and the sides of the fifth and sixth terga are faintly grayish. *Ovipositor* : The base is small and round and has a longitudinal depression down the middle of the dorsal surface. The piercer is very tiny, slender and straight. It is about equal in length to its base and does not extend past the base of the fifth abdominal segment (fig. 10b).

Length : body, 3,0-3,5 mm; wings, 4,5-5,0 mm.

HOLOTYPE ♂ : vers Rweru (volc. Mikeno), alt. 2.400 m (bambous), 26-27.VII.1934.

ALLOTYPE ♀ : Kivu, Rutshuru (riv. Musugereza), alt. 1.100 m, 4.VII.1935.

PARATYPE, 14 ♂♂, 5 ♀♀ : Same as type; Ruanda, Kibga (volc. Visoke), alt. 2.400 m, 11.II.1935; Tshamugussa (Bweza), alt. 2.250 m (bambous), 10.VIII.1934; Ruanda, Nyabirehe (pied volc. Karisimbi), alt. 2.400 m, 22.II.1934; Ruanda, lac N'Gando (volc. Karisimbi), alt. 2.400 m, 8.III.1935; Shamuheru (volc. Nyamuragira), alt. 1.843 m, 15.VI.1935; Ruanda, Kundhuru-ya-Tshuve (col Gahinga-Sabinyo), alt. 2.600 m (bambous), 15.IX.1934; Ruanda, mont Tamira (près lac N'Gando), alt. 2.600 m, 11.III.1935; lac Édouard, emb. Rwindi, 15.I.1936 (H. DAMAS).

Type, allotype and eleven paratypes returned to the Institut des Parcs Nationaux du Congo Belge. Two paratypes deposited in the U. S. National Museum; two in the American Museum; two in the Snow collection and two in the Bishop Museum.

**Dorilas (Eudorylas) dorsalis** n. sp.

(Figs. 11a-c.)

This species is related to *D. natalensis* HARDY and runs out with that species in couplet 19 of the writer's African *Dorilas* key. The male hypopygia are very different and will readily distinguish the two species. *D. natalensis* has an apical membranous area while *dorsalis* has a long dorsal cleft extending down the middle to its base.

♂. *Head* : Eyes joined for half the length of the front, the junction extends almost to the ocellar triangle. The front is dark gray to blackish pubescent and has a shining black spot in the middle. The face is dull grayish pubescent and is equal in width to the lower part of the front. The antennæ are brown to black. The third segment is slightly tinged with yellowish. The second segment bears rather long bristles above and below, the third is moderately long acuminate at its apex (fig. 11a). *Thorax* : Dull black on the dorsum, densely brown pollinose. The pleura are brown to black in ground color, covered with gray pollen. The humeri are brown, with a faint yellowish tinge. The knobs of the halteres are black, the stems are yellowish. The propleura are bare, the scutellum is almost devoid of hairs. *Legs* : Almost entirely black, with only the knees and very narrow apices of tibiæ yellow. Femora slender, flexor spines and extensor hairs weak. Hind tibiæ with no unusually strong bristles on the outside surfaces. *Wings* : Lightly fumose, stigma filling all of the third costal section. Third section two or more times longer than the fourth. The two combined are not quite as long as the fifth. The *r-m* crossvein is at the basal third of the discal cell and the last section of the fourth vein is straight. The petiole of the cubital cell is very long, almost equal in length to the last section of the fifth vein. *Abdomen* : Rounded on the sides, widest at segments three to four. Entirely opaque, the bases of the terga are brown, the apical half to three-fourths of each tergum is grayish. The first tergum has a row of long bristles on each side, the remainder of the abdomen is very sparsely haired. *Hypopygium* : Rather symmetrical in

shape, equal in length to the fifth abdominal segment. With a narrow, elongated membranous area extending down the middle to its base and bisecting the eighth segment into two equal parts (fig. 11c).

Length : body, 3,0 mm; wings, 3,6-3,8 mm.

♀. Third antennal segment slightly longer acuminate than in male. Front almost entirely polished black, except for a small gray area just above the antennæ. Front expanded in the middle portion and slightly wider than the face. The stigma of each wing is rather pale brown and the third costal section is not quite as long as in the male. In some specimens the fourth section is almost equal to the third and run out in the couplet with *sordidatus* n. sp. The abdomen is more brownish, the apices are very lightly grayed. The hind margin of the sixth tergum is straight, not excised. *Ovipositor* : The base is short and round and is slightly gibbose below. The piercer is straight and slender, it is one and one-half times longer than its base (fig. 11b) and extends to about the apex of the second abdominal segment.

Length : body, 2,0 mm; wings, 2,5 mm.

HOLOTYPE ♂ AND ALLOTYPE : Kivu, Rutshuru (riv. Musugereza), alt. 1.100 m, 8.VII.1935.

PARATYPES, 3 ♂♂, 3 ♀♀ : Same as type; Kivu, Luofu, alt. 1.700 m, 10.XII.1934; Kanyabayongo (Kabasha), alt. 1.700 m, 11.XII.1934; Rwindi, alt. 1.000 m, 20-24.XI.1934; Nyarusambo (Kikere), alt. 2.226 m, 28-29.VI.1934; escarpement de Kabasha, alt. 1.500 m, 14.XII.1934.

Holotype, allotype and three paratypes returned to the Institut des Parcs Nationaux du Congo Belge. One paratype deposited in the U. S. National Museum and two in the Bishop Museum.

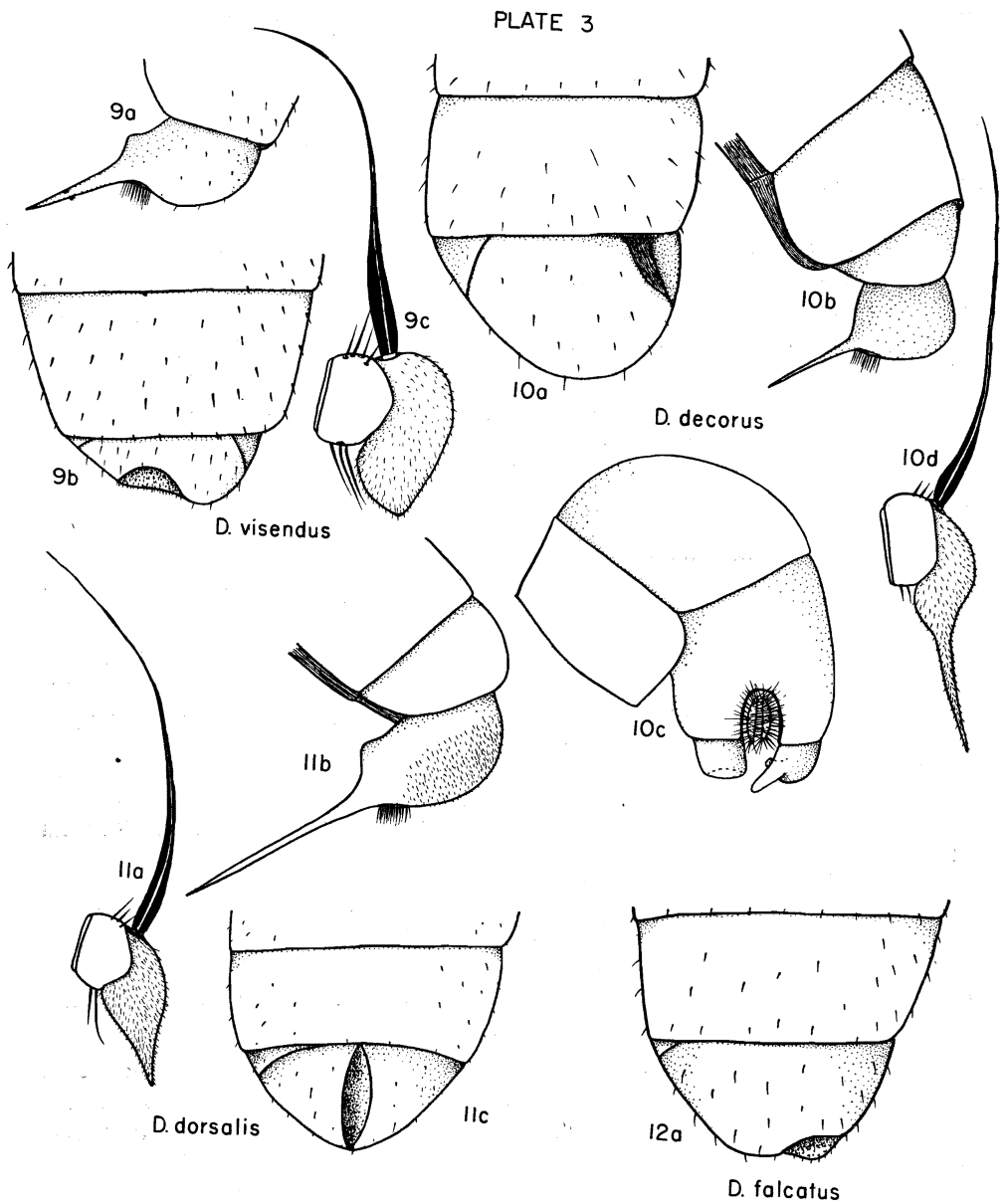
### **Dorilas (Eudorylas) falcatus HARDY.**

(Fig. 12a.)

*Dorilas falcatus* HARDY, 1949, Inst. Roy. Sci. Nat. Belg., Mém. 2<sup>e</sup> série, fasc. 36, p. 41.

This species is related to *dorsalis* n. sp. and is distinguished by the acute third antennal segment, by the apical membranous area and absence of a dorsal cleft on the male hypopygium and the strongly curved female ovipositor.

This is the first description of the male. *Head* : Junction of the eyes about equal to the length of the frontal triangle. The latter is dull gray and has a subshining gibbosity down the middle. The face is equal in width to the front. Antenna brown to black, the second segment has moderately long bristles above and below. The third segment is short acute at its apex. *Thorax* ; Brownish pollinose on the dorsum, gray on the sides. The humeri and knobs of the halteres are brown to black. The scutellum



- FIG. 9. — *Dorilas (Dorilas) visendus* n. sp. a. female ovipositor, lateral; b. male hypopygium, dorsal; c. antenna.
- FIG. 10. — *Dorilas (Eudorylas) decorus* n. sp. a. male hypopygium, dorsal; b. female ovipositor, lateral; c. male hypopygium, ventral; d. antenna.
- FIG. 11. — *Dorilas (Eudorylas) dorsalis* n. sp. a. antenna; b. female ovipositor, lateral; c. male hypopygium, dorsal.
- FIG. 12. — *Dorilas (Eudorylas) falcatus* HARDY. a. male hypopygium, dorsal.

has very distinct hairs on its hind margin. *Legs* : Chiefly black, only knees, apices of tibiae and the basal tarsal segments yellow. Femora moderately stout, flexor spines present. *Wings* : Hyaline or nearly so, stigma filling almost all of the third costal section. Third section about two times longer than the fourth. Crossvein at basal third of the discal cell. *Abdomen* : The specimen at hand is somewhat greased. The abdomen is entirely opaque, chiefly brownish pollinose. The first tergum is gray, the other terga appear to have light gray hind margins and more distinctly grayed sides. The sides of the abdomen are rounded, it is widest at about segment three. *Hypopygium* : About equal in length to the fifth segment and with a large apical membranous area (fig. 12a).

Length : body, 4,0 mm; wings, 4,8 mm.

TYPE LOCALITY : Obuasi, Ashanti.

Type in British Museum.

Two specimens were in the collection from the following localities : S. lac Édouard, riv. Rwindi, alt. 1.000 m, 4.II.1936 (coll. L. LIPPENS) and Katanda, alt. 950 m, 30.XI.1934.

#### ***Dorilas (Eudorylas) galeatus* HARDY.**

*Dorilas galeatus* HARDY, 1949, Inst. Roy. Sci. Nat. Belg., Mém. 2<sup>e</sup> série, fasc. 36, p. 36.

This species is related to *mikenensis* n. sp. but the male hypopygium has a large apical membranous area and no dorsal cleft and the third section of the costa is longer than the fourth.

One male specimen was in the collection from escarpement de Kabasha, alt. 1.500 m, 14.XII.1934. The species has previously been known only from Pondoland and Natal.

#### ***Dorilas (Eudorylas) ghesquierei* n. sp.**

(Figs. 13a-c.)

This species is related to *turneri* HARDY. It is distinguished by having the hypopygium much greater developed and with an apical membranous area. The third antennal segment is also more pointed at the apex and the last section of the fourth vein is not strongly curved.

♂. *Head* : The junction of the compound eyes is rather short, it is equal to the combined length of nine eye facets. The vertex and upper portion of the front is densely gray pubescent and has a subshining black ridge extending down the middle. The face is equal in width to the front, it is shining black on the lower half and silvery gray pubescent above. The third antennal segment is brownish, tinged with yellow at the tip. It is short acuminate (fig. 13c) and densely pubescent. *Thorax* : Mesonotum and scutellum polished black, pleura chiefly gray pollinose. Propleura and

scutellum bare, dorsocentral hairs very weak. Humeri and halteres dark brown to black. *Legs* : Chiefly black, narrow apices of femora and tibiae and bases of tibiae yellow. Tarsi yellow-brown to blackish. Hind trochanters polished brown, with a few pale hairs below. The femora are moderately stout, the flexor spines and extensor bristles are rather well developed. The hind tibiae are not strongly curved or swollen and have no strong bristles on the outer edge. *Wings* : Faintly fumose, the stigma dark brown and filling most of the third costal section. The third section is equal in length to the fourth and the two combined are not quite equal to the length of the fifth section. The *r-m* crossvein is situated at the basal one-third of the discal cell and the last section of the fourth vein is just slightly curved. The apical cell is rather strongly narrowed at its tip, at the wing margin it is about half as wide as the *r-m* crossvein is long. The last section of the fifth vein is equal in length to the *m* crossvein. *Abdomen* : Very sparsely pilose, almost entirely polished black on the dorsum, only the bases of the first two terga are pollinose. The sides are slightly rounded, it is widest at segments three and four. The first tergum has a row of four or five strong bristles on each side. The sixth and seventh terga are not visible from a dorsal view. *Hypopygium* : Subshining brown, as seen from above. Almost equal in length to the fifth segment and with a large apical membranous area, this is not plainly visible from a direct dorsal view (fig 13b). The coxopodite is dark brown to black, the harpagones are yellow and broad and blunt at apices. From an end view the membranous area covers the whole apex of the eighth segment.

Length : body, 3,5 mm; wings, 4,0 mm.

♀. The front and face are about equal in width and the former has a subshining black line extending down the middle. The femora are broadly yellow at their apices, narrowly so at their bases; the flexor spines are strongly developed. The tibiae and first four tarsal subsegments are yellow. The abdomen is entirely polished black, the hind margin of the sixth tergum is not excised. *Ovipositor* : The base is shining black and oblong in shape. The piercer is reddish, about equal in length to its base and strongly curved upward (fig. 13a). The piercer extends to about the apex of the third abdominal segment.

Length : body, 3,4 mm; wings, 3,8 mm.

HOLOTYPE ♂ : [Eala, Belgian Congo, XI.1936 (J. GHESQUIÈRE)].

ALLOTYPE ♀ : Kibati (alt. 1.900 m), 12-13.I.1934. One ♀ specimen is in the collection which apparently belongs here, the head is lost however and its identity is not certain. It is from Nyasheke (volc. Nyamuragira), alt. 1.820 m, 14-26.VI.1935.

Type returned to the Institut Royal des Sciences Naturelles de Belgique. Allotype and the mentioned female returned to the Institut des Parcs Nationaux du Congo Belge, Bruxelles.

**Dorilas (Eudorylas) inornatus** HARDY.

(Figs. 14a-b.)

*Dorilas inornatus* HARDY, 1949, Inst. Roy. Sci. Nat. Belg., Mém. 2<sup>e</sup> série, fasc. 36, p. 37.

This species is readily distinguished by the long bristle-like apex of the third antennal segment.

Two female specimens were in the collection which apparently belong here. Following is the first description of the female :

*Head* : Front slightly narrower than the face, gray on the sides and with a polished black line extending down the middle from the ocelli to the gibbose portion, this narrows down greatly below the middle of the front. Antennæ brown to blackish, the second segment with very short bristles above and below. The bristle-like apex of the third segment is equal in length to the remainder of the segment (fig. 14a). *Thorax* : Grayish brown on the dorsum, gray on the sides. Humeri yellow, knobs of halteres brown. *Wings* : Almost hyaline, stigma filling all of the third costal section. Third and fourth sections equal in length and the two combined are one and one-half longer than the fifth section. The *r-m* crossvein is at the basal third of the discal cell and the last section of the fourth vein is almost straight. *Abdomen* : Entirely opaque, the terga are gray on the sides and hind margins and brown pollinose on the anterior margins. The hind margin of the sixth tergum is straight. *Ovipositor* : The base is small and globose and has a faint longitudinal furrow down the dorsum. The piercer is about one and one-half times longer than its base, is very slender and straight or nearly so (fig. 14b). The piercer extends about to the base of the fifth abdominal segment.

Length : body, 3,5 mm; wings, 4,5 mm.

TYPE LOCALITY : Naivasha.

Type in British Museum.

Additional records : vers Rweru (volc. Mikeno, alt. 2.400 m (bambous), 26-27.VII.1934 and escarpement de Kabasha, alt. 1.500 m, 14.XII.1934. Specimens have also been studied (Institut Royal des Sciences Naturelles de Belgique) from : Rutshuru, IV-XII.1937 (J. GHESQUIÈRE) and [Élisabethville, Belgian Congo, 14.IV.1939 (H. J. BRÉDO)].

**Dorilas (Eudorylas) libratus** HARDY.

(Fig. 15a.)

*Dorilas libratus* HARDY, 1949, Inst. Roy. Sci. Nat. Belg., Mém. 2<sup>e</sup> série, fasc. 36, p. 41.

This species is somewhat related to *mutillatus* LOEW, it is distinguished by the lack of an apical membranous area on the male hypopygium, by the greatly developed inner harpago and the brown fumose wings.



## PLATE 4

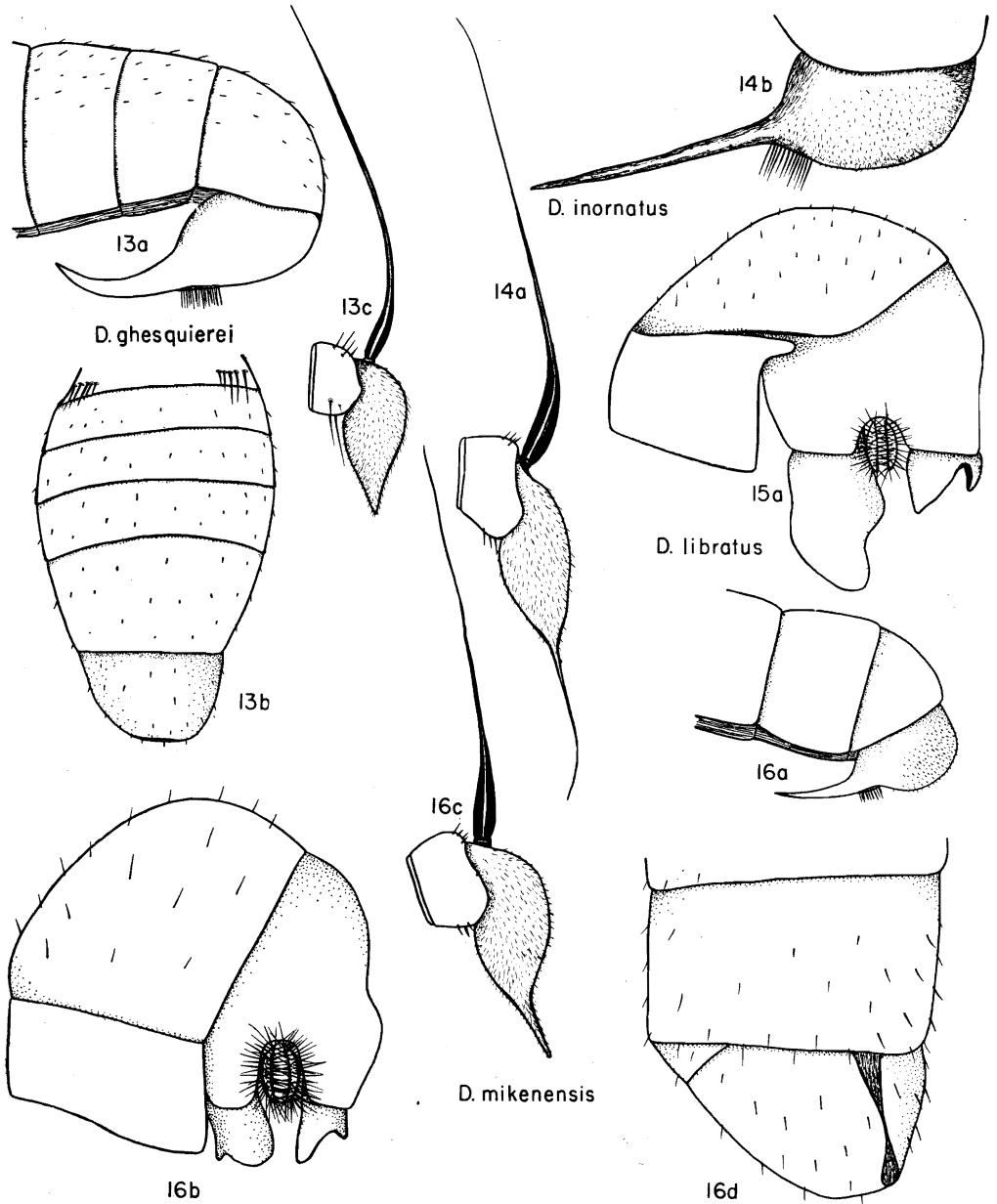


FIG. 13. — *Dorilas (Eudorylas) ghesquierei* n. sp. a. female ovipositor, lateral; b. male abdomen, dorsal; c. antenna.

FIG. 14. — *Dorilas (Eudorylas) inornatus* HARDY. a. antenna; b. female ovipositor, lateral.

FIG. 15. — *Dorilas (Eudorylas) libratus* HARDY. a. male hypopygium, ventral.

FIG. 16. — *Dorilas (Eudorylas) mikenensis* n. sp. a. female ovipositor, lateral; b. male hypopygium, ventral; c. antenna; d. male hypopygium, dorsal.

Following is the first description of the ventral structures of the male hypopygium. The ninth segment is about as wide as long and has a broad « U » shaped concavity in the middle of the hind margin. The harpagones are very irregular and asymmetrical. The inner harpago is greatly developed, it is two times longer than the outer and nearly as long as the ninth segment. The inner harpago is rounded at its apex. The outer is divided into two rather acutely pointed lobes (fig. 15a).

Previously known only from South Africa. Two male specimens were in the collection from the following localities : Tshamugussa (Bweza), alt. 2.250 m (bambous), 10.VIII.1934 and Ruanda, Kundhuru-ya-Tshuve (col Gahinga-Sabinyo), alt. 2.600 m (bambous), 15.IX.1934.

**Dorilas (Eudorylas) mikenensis** n. sp.

(Figs. 16a-d.)

This species is most closely related to *D. mutillatus* (LOEW). It runs out in couplet 17 of the writer's key to the African *Dorilas* and is distinguished from all the related species by having a dorsal cleft down the right side of the hypopygium but no apical membranous area; by the long acuminate brown to black, third antennal segment; by having the third costal section shorter than the fourth and the *r-m* crossvein at the basal third of the discal cell. Some specimens run out in couplet 59 and are distinguished by having no membranous area on the hypopygium.

♂. *Head* : Eyes joined for about half the length of the front. Front gray, slightly subshining in the median portion. Face equal in width, to slightly wider than the front and silvery gray pubescent. Ocellar triangle polished black, upper half of the occiput brownish pollinose. Antennæ chiefly dark colored, second segment with short black bristles above and below. Third segment yellow brown to black, attenuated at the apex. This slender portion is equal to half the remainder of the segment (fig. 16c). *Thorax* : Densely brown pollinose on the dorsum, except for a gray spot beside each humerus. The humeri are yellow, covered with gray pollin. The pleura are gray, the halteres chiefly brown to black. The propleura are bare, the scutellum has just a few, fine, very inconspicuous hairs on the hind margin. *Legs* : Coxæ, tronchanters, apical subsegments of tarsi and the femora (except for yellow bases and apices) black; femora sometimes with just median discolorations of brown. The tibiæ and the first four tarsal subsegments are yellow. The femora are moderately thickened and the flexor bristles are rather well developed on the first two pairs, they are very weak on the hind femora. The hind tibiæ have no strong bristles on the outside surfaces. *Wings* : Almost hyaline, the stigma is dark brown and not quite filling all of the third costal section. The fourth section is slightly longer to one and one-half times longer than the third and almost equal in length to the fifth. The *r-m* crossvein is situated at the basal third

of the discal cell and the last section of the fourth vein is straight, or nearly so. *Abdomen* : Almost straight, slightly widest at segments three to four. Dorsum densely grayish brown pollinose, sides more grayish. First tergum with a row of long black bristles on each side, remainder of abdomen nearly bare. *Hypopygium* : About equal in length to the fifth abdominal segment, rather symmetrical in shape, with no apical membranous area but with a longitudinal cleft down the right side (fig. 16d). From a ventral view the ninth segment is longer than wide. The harpagones are irregular in shape and each has a small lobe on its outer edge at or near the apex. The outer harpago is much smaller than the inner and is tapered at its apex (fig. 16b).

Length : body, 4,0 mm; wings, 5,0 mm.

♀. The front is about equal in width to the face and is entirely silvery pubescent. *Ovipositor* : The base is globose and rather densely pubescent above. The piercer is short and very slightly curved. It is equal in length to its base and extends to about the apex of the fourth abdominal segment (fig. 16a).

Length : body, 3,5 mm; wings, 4,0 mm.

HOLOTYPE ♂ AND ALLOTYPE ♀ : vers Rweru (volc. Mikeno), alt. 2.400 m (bambous), 26-27.VII.1934.

PARATYPES, 6 ♂♂ and 8 ♀♀ : Same as type; Ruanda, lac N'Gando (pied volc. Karisimbi), alt. 2.400 m, 9.III.1935; Ruanda, Nyabirehe (pied volc. Karisimbi), alt. 2.400 m, 22.II.1934; Kivu, Rutshuru, alt. 1.285 m, 1-6.VI.1935; Kivu, Rutshuru (Buhanya), alt. 1.200 m, 6.VII.1935; Kivu, Rutshuru (Lubirizi), alt. 1.285 m, 13.VIII.1935, and lake Mokoto, c. Kishale, 23.IX.1935 (Mis. H. DAMAS).

Type, allotype and eight paratypes returned to the Institut des Parcs Nationaux du Congo Belge. Two paratypes deposited in the U. S. National Museum, two in the Bishop Museum and two in the Snow Entomological Museum.

### ***Dorilas (Eudorylas) mutillatus* (LOEW).**

(Fig. 17a.)

*Pipunculus mutillatus* LOEW, 1857, Ofver. Kongl. Vet. Akad. Forhandl., 14, 374.

This is a somewhat variable species, best distinguished by the opaque abdomen, the cleft down the right side of the male hypopygium and the apical membranous area. The femora are broadly banded with brown to black and the antennæ are acute at apices.

It might be well to point out some of the variations which have been observed in specimens of this species from various parts of Africa. A few female specimens have been seen with the legs all yellow. The position of the *r-m* crossvein varies in position, from about the middle of the discal

cell to the basal third of this cell. In the unrelaxed specimens there appears to be some variations in the size of the apical membranous area on the hypopygium, although when such specimens have been relaxed no appreciable difference has been seen. The third antennal segment varies from yellowish to brown in color and from acute to short acuminate in shape. The abdomen is usually fasciated with gray but may be almost entirely brownish pollinose. Some female specimens run out with *flexus* HARDY and *trochanteratus* (BECKER) by having the lateral margins of the fifth and sixth terga developed around the venter. The piercer is longer, however, than in these species and is curved upward and the front is entirely silvery pollinose.

Following is the first description of the ventral structures of the male genitalia : The membranous area is large from this view and covers most of the apex. The ninth segment is wider than long and the concavity extends about half its length. The harpagones are moderately developed and asymmetrical. The inner is broad and gently tapered at apex. The outer harpago has a slender finger-like process at the inner side of the apex (fig. 17a).

TYPE LOCALITY : Caffraria.

The species has been identified from numerous localities in south and central Africa, it is probably widespread throughout the Ethiopian region.

Nineteen specimens were in the collection from the following localities : Kivu, Sake (lac Kivu), alt. 1.460 m, 19-22.II.1934; Kanyabayongo (Kabasha), alt. 1.760 m, 6.XII.1934; Kivu, Rutshuru (Lubirizi), alt. 1.285 m, 13.VII.1935; Ruanda, Ruhengeri (sources Kirii), alt. 1.800-1.825 m, 1.X.1934; Ruanda, Nyabirehe (pied volc. Karisimbi), alt. 2.400 m, 22.II.1935; riv. Rutshuru, près confluent Molindi, alt. 1.000 m, 15.V.1934; Rwindi, alt. 1.000 m, 20-24.XI.1934; lac Mugunga, alt. 1.500 m, 1-3.II.1934; Kivu, Kalondo (lac Ndaraga, Mokoto), alt. 1.750 m, 22-27.III.1934.

### **Dorilas (Eudorylas) rubrus** n. sp.

(Figs. 18a-b.)

This species runs out in couplet 36. with *bellulus*, of the writer's key to the African *Dorilas*. It superficially resembles this species very much but has bare propleura and fits in a different subgenus from *bellulus*. It is well characterized by the yellow sides of the abdomen and the dorsal cleft of the hypopygium. It is distinguished from *abdominalis* by the shorter third antennal segment and third costal section of the wing and the very different hypopygium.

♂. *Head* : Eyes joined for about half the length of the front. Vertical triangle polished black, frontal triangle and the face silvery pubescent. Occiput chiefly gray pollinose, subshining black on the upper portion.

First two antennal segments brown, the second with short bristles above and below. The third segment is short acuminate (fig. 18a) and is pale yellow. *Thorax* : Brownish pollinose on the dorsum, gray on the sides. Humeri and halteres yellow, scutellum with a few short hairs on its hind margin. *Legs* : Entirely yellow. Femora rather stout, flexor spines strong, extensor hairs poorly developed. Hind tibiæ slender and rather strongly curved, with no unusually strong bristles on the outer surfaces. *Wings* : Lightly fumose, stigma dark brown and filling all of the third costal section. Third section about one-half as long as the fourth. The two sections combined are nearly one and one-half times longer than the fifth section. The *r-m* crossvein is at the basal two-fifths of the discal cell and the last section of the fifth vein is very slightly curved, almost straight. *Abdomen* : Sides almost straight, slightly widest at about segment three. Terga one to five entirely polished, one to four are red on the sides, the fifth tergum and the median portions of the others are black. The first tergum has a row of long black bristles on each side. The remainder of the abdomen is rather conspicuously covered with erect, short, black hairs. The membrane of the venter is yellowish, the sterna are brown. *Hypopygium* : Entirely opaque, densely covered with microscopic, brown pubescence. From a dorsal view the hypopygium is about as long as the fifth abdominal segment. It is compressed to the right and has a large cleft extending longitudinally down the right side (fig. 18b). The eighth segment also has a small apical membranous area which is visible only in end or ventral view. The sixth and seventh terga are plainly visible from a dorsal view.

Length : body, 4,5 mm; wings, 5,0 mm.

♀ unknown.

HOLOTYPE ♂ and one PARATYPE ♂ : Kivu, Rutshuru (riv. Musugereza), alt. 1.100 m, 4-8.VII.1935.

Both returned to the Institut des Parcs Nationaux du Congo Belge, Bruxelles.

#### ***Dorilas (Eudorylas) sordidatus* n. sp.**

(Figs. 19a-d.)

This species runs out with *D. quadratus* HARDY in couplet 24 of the writer's key to the African *Dorilas*. It does not, however, appear to be closely related to this species. It is best distinguished by its all black legs, humeri and halteres; by the very long petiole of the cubital cell; by the large apical membranous area of the hypopygium and the strong hairs on the scutellum.

♂. *Head* : Eyes joined almost to the ocellar triangle. Front opaque black, subshining black in the median portion. Face dull gray to blackish, about equal in width to the lower part of the front. Antennæ black; second segment with long black bristles above and below; the bristles on the under-

side reach almost to the apex of the third antennal segment. The third segment is short acute at the apex (fig. 19d). *Thorax* : Densely brown pollinose on the dorsum, gray on the sides. Propleura bare, dorsocentral and marginal scutellar hairs well developed. Humeri and halteres black. *Legs* : All black, except for the narrowly yellowish knees and the pulvilli. Femora moderately stout, flexor spines rather well developed. Hind tibiae each with a row of three to five strong erect bristles on the outside surface of the swollen portion. *Wings* : Lightly brown fumose, stigma dark brown and filling all of the third costal section. Third section slightly longer than the fourth, the two sections combined are equal in length to the fifth section. The *r-m* crossvein is near the basal third of the discal cell and the last section of the fourth vein is straight. Petiole of the cubital cell about equal in length to the last section of the fifth vein. *Abdomen* : Entirely opaque, brown on the dorsum, grayish on the sides. Sides slightly rounded, widest at segments three-four. First tergum with a row of long black bristles on the sides, remainder of abdomen rather sparsely covered with distinct black hairs. *Hypopygium* : About three-fourths as long as the fifth abdominal segment, very asymmetrical in shape, with a large apical membranous area and no longitudinal cleft on the dorsum (fig. 19a). The ninth segment has a broadly « V » shaped cleft on its hind margin and the posterior lateral margins are acute. The harpagones are large, well developed and dished out (spoon-shaped) on their inner margins (fig. 19c).

Length : body, 3,5 mm; wings, 4,6 mm.

♀. The specimen at hand has the head broken off so the head characters have not been studied. The abdomen is more grayish brown on the dorsum and is distinctly grayed on the sides and hind corners of the terga. *Ovipositor* : The base is small and round. The piercer is long, slender and straight. It is two times longer than its base (fig. 19b) and extends to the base of the second abdominal segment.

Length : body, 3,0 mm; wings, 3,5 mm.

HOLOTYPE ♂ : Kivu, Kinyamahura (Djomba), alt. 1.800 m, 23.VIII.1934.

ALLOTYPE ♀ : vers mont Kamatembe, vers alt. 2.300 m, 7-23.I.1935.

PARATYPES, 2 ♂♂ : Same as allotype; Nyasheke (volc. Nyamuragira), alt. 1.820 m, 14-26.VI.1935.

Type, allotype and one paratype returned to the Institut des Parcs Nationaux du Congo Belge. One paratype deposited in the U. S. National Museum.

## PLATE 5

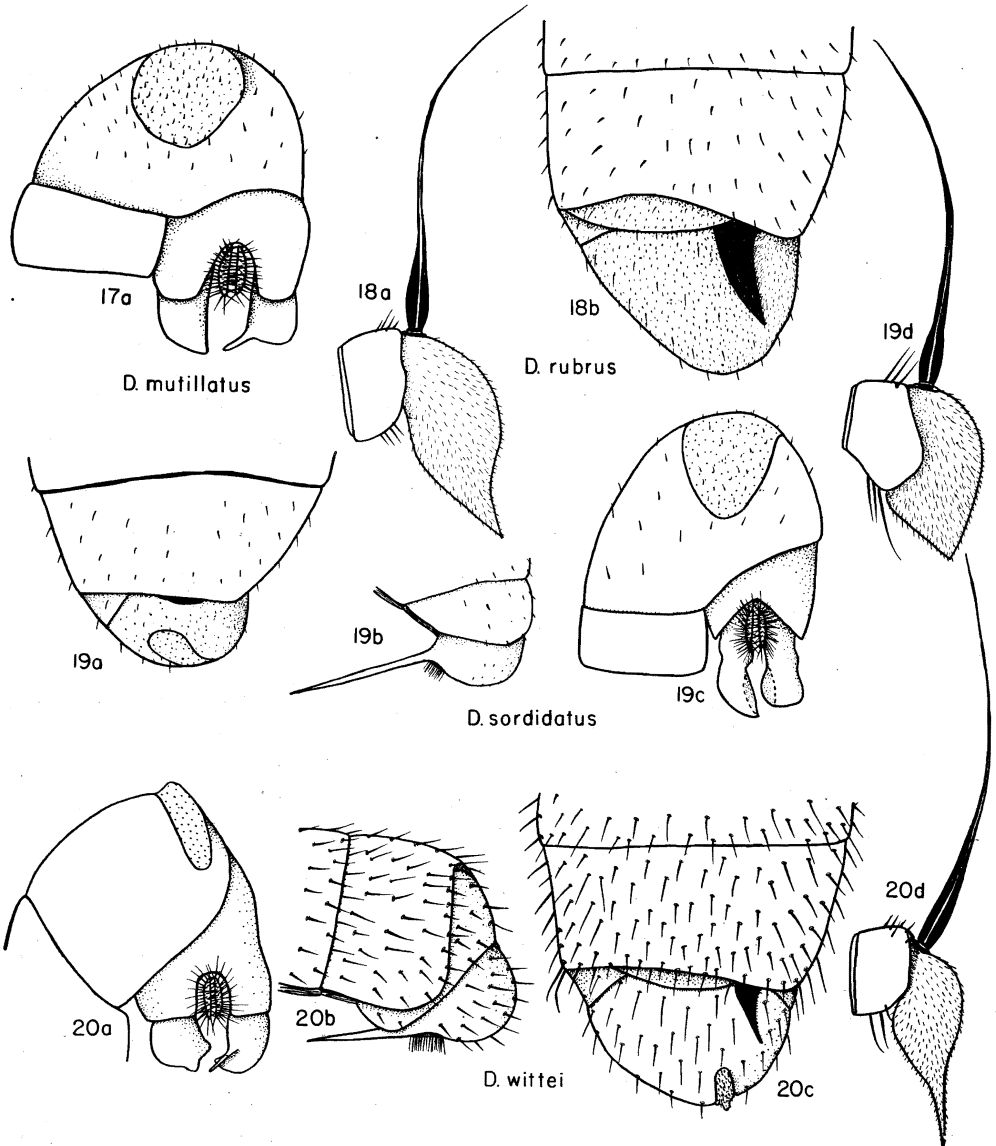


FIG. 17. — *Dorilas (Eudorylas) mutillatus* (LOEW). a. male hypopygium, ventral.  
 FIG. 18. — *Dorilas (Eudorylas) rubrus* n. sp. a. antenna; b. male hypopygium, dorsal.  
 FIG. 19. — *Dorilas (Eudorylas) sordidatus* n. sp. a. male hypopygium, dorsal; b. female ovipositor, lateral; c. male hypopygium, ventral; d. antenna.  
 FIG. 20. — *Dorilas (Eudorylas) wittei* n. sp. a. male hypopygium, ventral; b. female ovipositor, lateral; c. male hypopygium, dorsal; d. antenna.

**Dorilas (Eudorylas) wittei** n. sp.

(Figs. 20a-d.)

This species runs to couplet 32 of the writer's African *Dorilas* key, and fits near *D. albivillosus* HARDY because of the covering of bristles on the abdomen. It differs greatly from this species and actually belongs in a different subgenus by having the propleura bare. The vestiture of the abdomen is black, not white, and the wing and genital characters are very different from *albivillosus*.

♂. *Head* : Eyes very narrowly separated on the front, they are very closely approximated in the median part of the front for a distance equal to about eight eye facets. Upper portion of the front, vertex and upper half of the occiput highly polished black. Lower portion of the front and the face silvery gray pubescent. Face slightly wider than the front. First two antennal segments brown, the second has short, black bristles above and below. The third segment is brownish tinged with yellow, it is long acuminate at its apex (fig. 20d). *Thorax* : The mesonotum is rather densely brown pollinose, the pleura are gray. The scutellum is bare of pollen, highly polished and bearing numerous fine hairs on the disk as well as around the margin. The dorsocentral hairs are well developed down the mesonotum. The humeri and halteres are yellow. *Legs* : Chiefly yellow, femora usually discolored with brown on their median portions. The femora are slender, the flexor spines are rather weak. The hind tibiae have no unusually strong, erect, bristles on their outside surfaces. *Wings* : Lightly fumose, stigma filling all of the third costal section. Third section equal in length to the fourth, the two sections combined are slightly longer than the fifth. The *r-m* crossvein is situated at the basal one-third to one-fourth of the discal cell. The last section of the fourth vein is just slightly curved. *Abdomen* : Entirely polished black on the dorsum, densely covered with rather long, erect, black bristles. The abdomen is very slightly clavate in shape, it is widest at segments four and five. *Hypopygium* : Shining brown to blackish, almost equal in length to the fifth abdominal segment. Somewhat compressed to the right and with an oblong membranous area just to the right of the apex and a basal cleft on the right side (fig. 20c). The base of the ninth segment is just barely visible from a dorsal view. The sixth and the seventh terga are also visible from above. The harpagones are very irregular in shape, they are short and broad, not much longer than wide. The outer harpago has a long slender lobe developed from its inner margin just below the middle (fig. 20a). The inner harpago has no such lobe but has a gibbosity on the inner edge and another at its apex.

Length : body, 3,2-3,6 mm; wings, 4,4-4,8 mm.



♀. Face and front about equal in width, the latter shining black on the upper half, gray pollinose below. The upper half of the occiput and the vertex are shining black as in the male. The abdomen is just slightly clavate, it is widest at the fifth abdominal segment. The hind margin of the sixth tergum is straight, not excised. *Ovipositor* : The base is shining black and globose in shape. The piercer is slender and straight, it is not much longer than its short base and extends to about the base of the fifth segment (fig. 20b). The sides of the sixth tergum are developed onto the venter and form a receptacle for the ovipositor.

Length : body, 3,5 mm; wings, 4,8 mm.

HOLOTYPE ♂ : Ruanda, Kundhuru-ya-Tshuve (col Gahinga-Sabinyo), alt. 2.600 m (bambous), 15.IX.1934.

ALLOTYPE ♀ : Same as holotype, but 18.IX.1934.

PARATYPES, 27 ♂♂, 25 ♀♀ : Same as type; Ruanda, Kundhuru-ya-Tshuve, Rutabagwe, alt. 2.600 m, 13-14.IX.1934; Ruanda, Kanseze (pied volc. Karisimbi), alt. 2.400 m, 4.III.1935; mont Sesero, près Bitashimwa (bambous), alt. 2.000 m, 1-2.VIII.1934; Nyakibumba (près Kikere), alt. 2.250 m, 5.VII.1934; Nyarusambo (Kikere), alt. 2.226 m, 28-29.VII.1934; vers Rweru (volc. Mikenno), alt. 2.400 m (bambous), 26-27.VII.1934; riv. Bishakishaki (Kamatembe), alt. 2.100 m, 11-22.IV.1934; Kitonda (près Gandjo), alt. 2.000 m, 7-23.I.1935; Kashwa (entre Ngesho-Bishakishaki), alt. 2.000 m, 7-23.VII.1935; Munagana (vers Gahinga-Sabinyo), alt. 2.200 m, 18.VIII.1934; sommet Visoke, 13-15.II.1935.

The type, allotype and forty paratypes have been returned to the Institut des Parcs Nationaux du Congo Belge. Three have been deposited in the U. S. National Museum, two in the American Museum, two in the Snow Entomological collection and five in the Bishop Museum.

**Dorilas (Eudorylas) n. sp. (poor condition).**

One male specimen without a head appears to be undescribed. It is related to *D. dorsalis* n. sp. but the legs are chiefly yellow, except for broad brown to black bands on the femora. The membranous area of the hypopygium is narrow and extends onto the dorsum of the eighth segment but does not reach more than half its length. The third costal section is only about one and one-half times longer than the fourth and the petiole of the cubital cell is short.

The specimen is from Rwindi, alt. 1.000 m, 20-24.XI.1934.

**WITTELLA** new genus.

This genus appears to be intermediate between *Dorilas* and *Dorylomorpha*. It is readily distinguished from either by the long attenuated wing base, the anal lobe ends about half way between the humeral crossvein and the forking of the radial sector. The axillary excision is absent and there is no developed posterior lobe of the wing (fig. 21b). In the *Dorilas* and *Dorylomorpha* which have been studied, the wing base is moderately broad, not at all attenuated until after the humeral crossvein. The axillary excision is present at the meeting of the anal lobe and the posterior lobe, approximately opposite the humeral crossvein (fig. 3e).

The third costal section of the wing is very short, about one-fourth as long as the fourth section and the *r-m* crossvein is situated at the basal one-fourth to one-fifth of the discal cell. These last two characters ally it to *Dorylomorpha* but the males have a distinct stigma at the apex of the third costal section; in the female the stigma is very faint, hardly discernable. The thorax and abdomen are highly polished as in many *Dorylomorpha* but the upper portion of the occiput is as in *Dorilas*, not noticeably broadened or swollen. The abdomen is not so distinctly clavate as in *Dorylomorpha*.

GENOTYPE : *Wittella candidula* (HARDY).

**Wittella candidula** (HARDY) n. combination.

(Figs. 21a-c.)

*Dorilas (Eudorylas) candidulus* HARDY, 1949, Inst. Roy. Sci. Nat. Belg., 2<sup>e</sup> série, fasc. 36, p. 25.

This species is very readily recognized by the attenuated wing base, the highly polished thorax and abdomen, all yellow legs, very short third costal section of the wing, stigma almost lacking, short ultimate section of the fifth vein and very widely open apical cell.

The antennæ were broken on the type male. The tiny first segment is brown, the second is brownish yellow and has long yellow bristles above and below. The third segment is bright yellow, rather small and rounded at the apex (fig. 21a).

The propleura each have a fan of very pale hairs and are not bare, as was reported in the original description. The hairs are so fine and inconspicuous that they are very difficult to see unless the head is detached. The propleural hairs could not be detected on the type specimen.

Following is the first description of the female : *Head* : Front and face about equal in width and entirely silvery pubescent except for the extreme upper portion of the front. Front rather strongly narrowed just before the ocellar triangle, this narrowed portion is polished black, as is the vertex and upper part of the occiput. *Thorax* and *abdomen* : Entirely polished, metallic black on the dorsum, yellowish brown on the pleura and brown

on the venter. Abdomen slightly clavate, widest at segment five. The hind margin of the sixth tergum is straight. *Ovipositor* : The base is yellowish brown and rather globose, it is covered with whitish pubescence on the upper portion. The piercer is shorter than its base, is straight and strongly tapered to a sharp point (fig. 21c). The piercer extends to about the middle of the fourth abdominal segment.

Length : body, 4,0 mm; wings, 5,3 mm.

TYPE LOCALITY : Naivasha.

Type in British Museum.

There were five specimens in the collection from the following localities : vers Rweru, volc. Mikeno (bambous), alt. 2.400 m, 3.VII.1934; Shamuheru (volc. Nyamuragira), alt. 1.843 m, 15.VI.1935; lac Mokoto, Bitu, 23.VIII.1935 (Mis. H. DAMAS) and [lac Kivu, île Idjwi, Luvominga, 27.IX.1935 (Mis. H. DAMAS)].

### TÖMÖSVÁRYELLA ACZEL.

*Tömösváryella* ACZEL, 1939, Zool. Anz., 125, 22-23.

The members of this genus are characterized by having no stigmata in the wings; the *r-m* crossvein is usually near the middle of the discal cell and the third section of the costa is shorter than the fourth. The abdomen is not enlarged posteriorly in either sex.

There were seven species present in the collection, five of these appear to be undescribed.

#### KEY TO SPECIES BASED CHIEFLY ON MALES.

1. Crossvein *r-m* situated near the base of the discal cell. Cubital cell without a petiole ..... *basalis* n. sp.
- Crossvein *r-m* near the middle of the discal cell. Cubital cell with a moderately long petiole ..... 2
2. Hypopygium symmetrical, with only an indistinct division on the right side and no visible membranous area. Hind trochanters each with a trapezoid shaped, densely white pubescent, process .....  
*subvirescens* (LOEW).
- Hypopygium asymmetrical, with a distinct membranous area. Trochanters not as above ..... 3
3. Hind trochanters armed with strong teeth or processes below ..... 4
- Hind trochanters simple, without such developments ..... 6
4. Hind trochanters each with two processes below. Abdomen not densely bristled ..... 5
- Hind trochanters with just a single development below. Abdomen conspicuously covered with short erect bristles ..... *singula* n. sp.

5. Hind femora each with a well developed process below near base (fig. 27a). Thorax and abdomen highly polished black ... *tridens* n. sp.  
 — Hind femora without such a process (fig. 22a). Thorax and abdomen grayish brown pollinose ..... *africana* HARDY.
6. Hind metatarsi very strongly flattened and broad (fig. 25b). Thorax and abdomen highly polished black and thickly pilose ... *latitarsis* n. sp.  
 — Hind metatarsi not flattened or enlarged, not as broad as the apices of tibiae. Thorax and abdomen grayish brown pollinose, sparsely pilose ..... *congoana* n. sp.

***Tömösváryella africana* HARDY.**

(Fig. 22a.)

*Tömösváryella africana* HARDY, 1949, Inst. Roy. Sci. Nat. Belg., Mém. 2<sup>e</sup> série, fasc. 36, p. 65.

Three specimens are at hand which apparently belong here. They differ slightly from the type in that both of the developments on the hind trochanters are sharp pointed (fig. 22a). In the typical form the second process is obtuse and rounding. The species is characterized by these processes on the hind trochanters and by the apical membranous area and longitudinal cleft through the middle of the male hypopygium.

The species has been known previously only from south and south west Africa. Five specimens were in the collection from the following localities : Ndeko (près Rwindi), alt. 1.082 m, 27.XI.1934; Kivu, Rutshuru, alt. 1.250 m, 4.VII.1935; May-ya-Moto, alt. 950 m, 6.XI.1934; S. lac Édouard, Vitshumbi, alt. 925 m, 15.IV.1936 (coll. L. LIPPENS).

***Tömösváryella basalis* n. sp.**

(Figs. 23a-c.)

This species runs out with *speciosa* HARDY in couplet 1, of the writer's key to the African *Tömösváryella*. It is readily distinguished by having the *r-m* crossvein nearer the base of the discal cell, the ultimate section of the fourth vein straight, cubital cell without a petiole, antennæ black, the aristæ very short, and the thorax and abdomen subshining not metallic. It is the only species known to the writer which has no petiole on the cubital cell.

♀. *Head* : Front very broad, highly polished black except for a small area just above the antennæ. Occiput polished black except for the lower hind margin which is brown pollinose. Face about one-third to one-half narrower than the front and rather strongly narrowed below, just above the mouthparts. Antennæ dark brown to black, second segment with very short bristles above and below, third segment long acuminate at its apex (fig. 23c). The aristæ are very short, only about one and one-half times longer than the third antennal segments. *Thorax* : Subshining black,

## PLATE 6

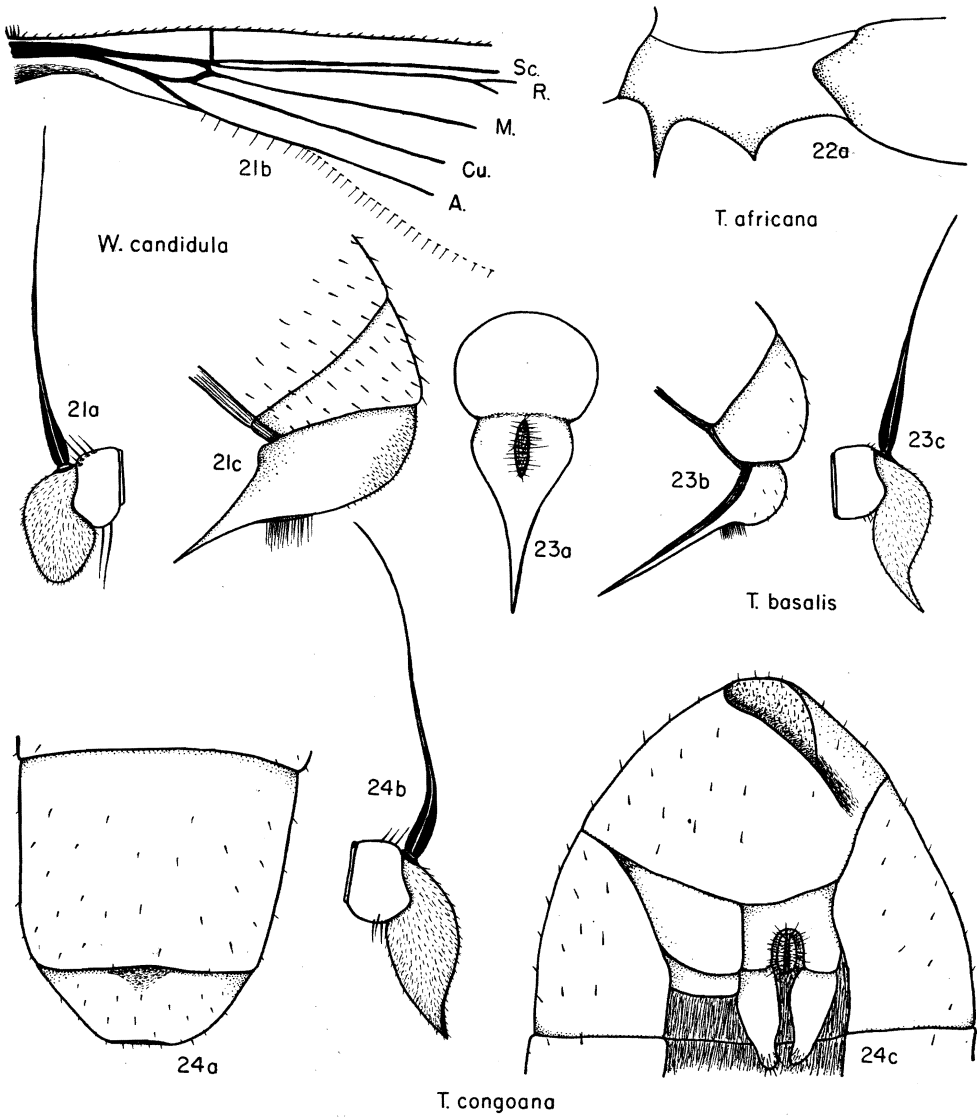


FIG. 21. — *Wittella candidula* (HARDY). a. antenna; b. basal portion of wing; c. female ovipositor, lateral.

FIG. 22. — *Tömösváryella africana* HARDY. a. hind trochanter of male.

FIG. 23. — *Tömösváryella basalis* n. sp. a. female ovipositor, dorsal; b. ovipositor, lateral; c. antenna.

FIG. 24. — *Tömösváryella congoana* n. sp. a. male hypopygium, dorsal; b. antenna; c. male hypopygium, ventral.

rather densely brown pollinose on the dorsum, gray on the sides. Humeri and halteres dark brown to black. Dorsocentral and scutellar hairs very weak or absent. *Legs* : Almost entirely black, only knees narrowly yellowish. Femora slender, flexor spines weak. *Wings* : Lightly fumose, third costal section slightly more than one-half as long as the fourth. The fifth costal section is one and one-third longer than the combined lengths of the third and fourth. The *r-m* crossvein is at the basal fourth of the discal cell and the last section of the fifth vein is straight. The cubital cell is closed right at the costa, it sometimes may be narrowly open. *Abdomen* : Subshining black, rather densely brown pollinose and very sparsely pilose. The sides are slightly rounded, it is widest at about segment three. The abdomen tapers rather strongly toward the apex, from dorsal view and the hind margin of the sixth tergum is straight. *Ovipositor* : Rather strongly flattened dorso-ventrally (fig. 23a). The base is short and rounded, from a lateral view. The piercer two or more times longer than the base and is straight (fig. 23b). The piercer extends to about the apex of the third abdominal segment.

Length : body, 2,3 mm; wings, 2,8 mm.

♂ unknown.

HOLOTYPE ♀ : Ngesho, alt. 2.000 m, 3-6.VI.1934.

PARATYPES, 2 ♀ ♀ : Rutshuru, alt. 1.285 m, 1-6.VI.1935 and Kalondo (lac Ndaraga, Mokoto), alt. 1.750 m, 22-27.III.1934.

Type and one paratype returned to the Institut des Parcs Nationaux du Congo Belge. One paratype deposited in the U. S. National Museum.

### ***Tömösváryella congoana* n. sp.**

(Figs. 24a-c.)

This species is related to *T. cilifemorata* (BECKER) and runs with this species in couplet 12 of the writer's key to African *Tömösváryella*. It is distinguished by the yellow humeri and halteres, the fifth section of the costa shorter and about equal to the third and fourth combined and the hind femora nearly bare beneath.

♂. *Head* : Eyes joined on the front for a distance equal to about the length of twelve to fifteen eye facets. Upper portion of front and the ocellar triangle polished black. Lower portion of front and the face silvery pubescent, the former with a subshining black spot in the central portion. The upper occiput is subshining black, the lower portion is gray. The antennæ are dark brown to black, the second segment has short, black, bristles above and below. The third segment is short acuminate (fig. 24b) and densely white pubescent. *Thorax* : Dull black, dusted with brownish gray pollen on the dorsum, gray on the sides. Humeri and halteres yellow. Dorsocentral and scutellar hairs very weak or absent. *Legs* : Chiefly black,

knees, apices of tibiae and first three to four tarsal subsegments yellow. Hind trochanters without processes or bristles, covered with fine pubescence beneath. Femora moderately stout, flexor spines weak. Hind metatarsi not flattened or enlarged. *Wings* : hyaline, third costal section one-third as long as the fourth, the two combined are equal to slightly longer than the fifth section. The *r-m* crossvein is at the middle of the discal cell and the last section of the fourth vein is slightly curved. The last section of the fifth vein is not quite equal to the length of the *m* crossvein, the petiole of the cubital cell is about half this long. *Abdomen* : Subshining black almost opaque, rather thickly covered with grayish brown pollen. The sides are nearly straight but the fifth segment is tapered. The first tergum has a row of three or four bristles on each side, the remainder of the abdomen is very sparsely pilose. *Hypopygium* : Very short, not at all well developed, as seen from a dorsal view. It is about one-third to one-fourth as long as the fifth segment and has an apical membranous area which is scarcely visible from a dorsal view (fig. 24a). The sixth or seventh segments are not visible from a dorsal view. From a ventral view the membranous area is seen to cover quite a large portion of the apex. The harpagones are symmetrical and rather slender (fig. 24c).

Length : body, 3,6 mm; wings, 4,0 mm.

♀ unknown.

HOLOTYPE ♂ : Katanda, alt. 950 m, 30.XI.1934.

PARATYPES, 2 ♂♂ : Rwindi, alt. 1.000 m, 26.XI.1934 and Ndeko (près Rwindi), alt. 1.082 m, 27.XI.1934.

Type and one paratype returned to the Institut des Parcs Nationaux du Congo Belge. One paratype deposited in the U. S. National Museum.

### ***Tömösváryella latitarsis* n. sp.**

(Figs. 25a-c.)

This species is readily distinguished from all known *Tömösváryella* by the strongly flattened and broad hind metatarsi and by the long slender body. It runs out in couplet 10 of the writer's key to the African *Tömösváryella* but shows no particular affinity to *T. varana* HARDY or other species in this group.

♂. *Head* : Eyes joined on the front for a distance equal to the length of nine eye facets. The upper portion of the front, ocellar triangle, vertex and upper half of the occiput are polished black. The lower portion of the front and the face are moderately gray pubescent. The face is equal in width to the front just above the antennæ. Antennæ dark brown to black, the second segment has very short bristles above and below, the third is long acuminate at its apex (fig. 25a). *Thorax* : Dorsum and propleura highly polished, metallic black, remainder of pleura gray pollinose.

Humeri and halteres yellow. Dorsocentral and marginal hairs of the mesonotum and scutellum well developed, erect and black. *Legs* : Chiefly shining black, apices of femora and tibiæ, bases of tibiæ and the first three to four tarsal subsegments yellow. The femora are moderately stout and the flexor bristles are well developed. The femora are rather thickly covered with long hairs, especially the hind pair. The hind tibiæ are slender, not noticeably thickened in the median portion and very gently curved. There are no unusually strong bristles on the outside surface but the bristles down the dorsal surface are longer and more erect than those on the remainder of each tibia. The hind metatarsi are very flat and are distinctly wider than the apex of the tibia (fig. 25b). *Wings* : Distinctly fumose, the third costal section about one-third as long as the fourth and the fifth section nearly two times longer than the third and fourth combined. The *r-m* crossvein is at the middle of the discal cell and the last section of the fourth vein is straight. *Abdomen* : Entirely polished black and rather thickly covered with erect, dark hairs. The sides are straight or nearly so and the abdomen is just slightly longer than the remainder of the body. *Hypopygium* : About three-fourths as long as the fifth abdominal segment and with a moderately large apical membranous area, which is hardly visible from a dorsal view (fig. 25c). The ninth sternum is black, the harpagones are rather long and slender, the inner is the larger of the two and is swollen at its apex.

Length : body, 4,5 mm; wings, 4,7 mm.

Female unknown.

HOLOTYPE ♂ : Ruanda, Ruhengeri (riv. Penge), alt. 1.800-1.825 m, 29.IX.1934.

Returned to the Institut des Parcs Nationaux du Congo Belge.

### ***Tömösváryella singula* n. sp.**

(Figs. 26a-b.)

This species runs imperfectly near *vicina* (BECKER) in the writer's *Tömösváryella* key, it does not have the symmetrical hypopygium, however, and the processes of the hind trochanters are very different. It appears most closely related to *tridens* n. sp. but the hind trochanters each have just one process below; the hind femora have no such developments, are more slender and the flexor spines are weak; the tibiæ and tarsi are chiefly yellow; the abdomen more densely bristled and the hypopygium has a ventral membranous area which is not visible from a dorsal view.

♂. *Head* : Eyes joined on the front for a distance equal to nine eye facets. Upper portion of the front, ocellar triangle and upper half of the occiput polished black. Lower portion of front and the face silvery pubescent and about equal in width. The antennæ are broken on the specimen at hand, the first two segments are brown to black and the second



## PLATE 7

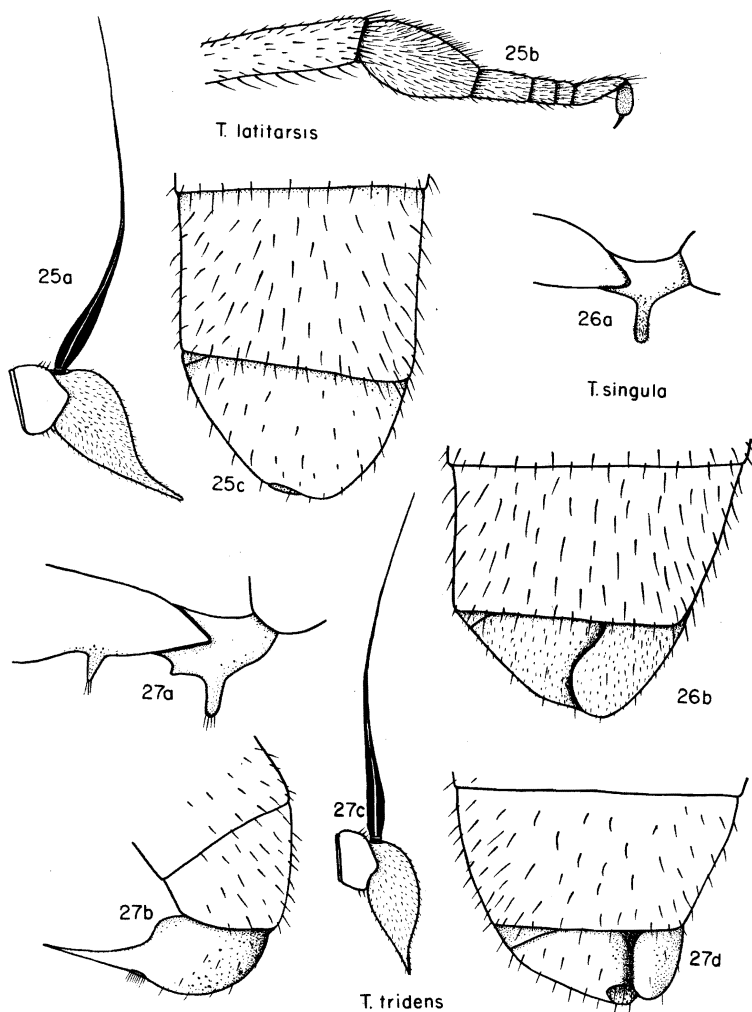


FIG. 25. — *Tömösváryella latitarsis* n. sp. a. antenna; b. hind tarsus of male; c. male hypopygium, dorsal.

FIG. 26. — *Tömösváryella singula* n. sp. a. hind trochanter of male; b. male hypopygium, dorsal.

FIG. 27. — *Tömösváryella tridens* n. sp. a. hind trochanter and base of femur of male; b. female ovipositor, lateral; c. antenna; d. male hypopygium, dorsal.

has very short bristles above and below. *Thorax* : Mesonotum and scutellum polished black with a very faint covering of grayish pollen, hardly obscuring the ground color. The humeri and halteres are yellow. The dorsocentral and scutellar hairs are present but are fine and inconspicuous. *Legs* : Coxæ, trochanters and femora black, except for the yellow apices of the latter. The tibiæ are broadly yellow at their bases and apices and each has a broad brown to black band just beyond the middle. The hind tibiæ are gently curved and slightly flattened and enlarged on the apical halves. The hind basitarsi are not at all flattened or swollen. The hind trochanters each have a large obtuse process below, this is rather densely white pubescent but bears no long setæ at its apex (fig. 26a). *Wings* : Almost hyaline, very faintly fumose. The third costal section is about one-third as long as the fourth and the two combined are about half as long as the fifth. The *r-m* crossvein is located at the middle of the discal cell and the last section of the fourth vein is straight. The last section of the fifth vein is about equal in length to the *m* crossvein. The petiole of the cubital cell is rather short, it is about equal to slightly shorter than the *r-m* crossvein. *Abdomen* : Entirely polished black and rather thickly covered with short, erect bristles. The sides of the abdomen are straight or nearly so. *Hypopygium* : Rather symmetrical but more developed on the right side. The membranous area is not visible from a dorsal view and the dorsum is divided into almost equal parts by a longitudinal furrow (or overlapping) down the middle (fig. 26b). The hypopygium is opaque, rather thickly covered with grayish pubescence.

Length : body, 2,5 mm; wings, 2,7 mm.

♀ unknown.

HOLOTYPE ♂ : Kivu, Rutshuru, alt. 1.250 m, 4.VII.1935.

Type returned to the Institut des Parcs Nationaux du Congo Belge.

#### ***Tömösváryella subvirescens* (LOEW).**

*Pipunculus subvirescens* LOEW, 1872, Berl. Ento. Zeitschr., 16, 87.

This species is well defined, readily distinguished by the symmetrical hypopygium of the male and by the trapezoid, densely white pubescent, process on each hind trochanter.

Specimens in the collection have shown some variations in the shape of the trochanteral process and in some specimens it is slightly more produced into an obtuse apex, roughly triangular in shape. This may be the triangular projection that BECKER mentioned in his description of *T. vicina* (BECKER) and his species may prove to be a synonym of *subvirescens*.

The species ranges throughout much of the world and has been recorded from several localities in south and north Africa.

Eleven specimens were in the collection from the following localities : Kalondo (lac Ndaraga, Mokoto), alt. 1.750 m, 22-27.III.1934; Rutshuru, alt. 1.285 m, 7.VI.1935; Katanda, alt. 950 m, 30.XI.1934; [Uele, Monga, alt. 450 m, 18.IV-8.V.1935]; Lukulu (Kivu), 15.VII.1935 (Mis. H. DAMAS); S. lac Édouard, riv. Rwindi and camp Rwindi, 7.II-25.IV.1936 (Coll. L. LIPPENS); S. lac Édouard, Kamande, alt. 925 m, 8.IV.1936 (Coll. L. LIPPENS).

***Tömösváryella tridens* n. sp.**

(Figs. 27a-d.)

This species runs out in couplet 6 of the writer's key to the African *Tömösváryella*. It is related to *africana* HARDY and is readily distinguished by the highly polished thorax and abdomen; the presence of a strong tooth at the base of each hind femur; the processes on the trochanters and the male genitalia are very different in form and development.

♂. *Head* : The eyes are joined for just a short distance on the front, the junction is equal to the length of about six eye facets. The upper portion of the front, the ocellar triangle and upper half of the occiput are polished black, the lower portions of the front and occiput and the face are silvery gray. The front and face are about equal in width. The antennæ are brown to blackish, the second segment has very short bristles above and below. The third segment is moderately acuminate (fig. 27c) and densely white pubescent. *Thorax* : Mesonotum and scutellum polished black, hind portion of the pleura gray, the front part is shining black. The humeri and halteres are yellow, the knobs of the latter are faintly discolored. The dorsocentral hairs are very distinct, the scutellum is bare or nearly so. *Legs* : Almost entirely shining black, only the knees yellow. Each hind trochanter has a pair of processes beneath, the one in the middle is rather elongate and rounded at apex. The second process is near the base of the trochanter and is small and rather inconspicuous. Each hind femur has a strong tooth-like process near its base below (fig. 27a). The two larger processes of the hind legs possess long setae at their apices. The femora are moderately stout and the flexor spines are very strongly developed, the extensor hairs are also well developed. The hind tibiae are distinctly arcuate and are slightly enlarged at their apices. The tarsi are not noticeably flattened or unusually thick. *Wings* : The third costal section is about one-third as long as the fourth, the two combined are not much more than half as long as the fifth section. The *r-m* crossvein is situated just before the middle of the discal cell and the last section of the fourth vein is straight. The last section of the fifth vein is only one-half to three-fourths as long as the *m* crossvein. *Abdomen* : Highly polished, metallic black, the sides are nearly straight. The first tergum has a row of strong black bristles on each side, the remainder of the abdomen is sparsely but distinctly pilose. *Hypopygium* : Rather rounded at the apex and with a

conspicuous apical membranous area and a longitudinal depressed area toward the right side (fig. 27d). From a dorsal view the hypopygium is slightly over half as long as the fifth abdominal segment.

Length : body, 3,0-3,3 mm; wings, 3,2-3,6 mm.

♀. Front polished black on the upper half, silvery below; expanded in the median portion and slightly wider than the face. The sides of the abdomen are nearly straight, it is just slightly widest at segments three to four. The hind margin of the sixth tergum is straight. *Ovipositor* : The base is polished black, oval in shape and very slightly gibbose beneath. The piercer is short and straight, or nearly so (fig. 27b). It is about equal in length to its base and extends almost to the base of the fourth abdominal segment.

Length : body, 3,0 mm; wings, 3,2 mm.

HOLOTYPE ♂ : Rutshuru, 1.285 m, 16.X.1934.

ALLOTYPE ♀ : same locality as type, alt. 1.250 m, 4.VII.1935.

PARATYPES, 2 ♂♂, 1 ♀ : one, same locality as type, 6-8.VI.1934, one same as type, 23-30.XI.1935; one, Rutshuru (riv. Kanzarue), alt. 1.200 m, 16.VII.1935.

Type, allotype and two paratypes returned to the Institut des Parcs Nationaux du Congo Belge. One paratype deposited in the U. S. National Museum.

---

## INDEX ARRANGED ALPHABETICALLY.

### GENERA, SUB-GENERA.

	Pages.		Pages.
Beckerias ACZEL ... ..	5	Dorilas subg. ... ..	13
Cephalosphæra subg. ... ..	11	Eudorylas subg. ... ..	24
Chalarus WALKER ... ..	5	Tömösváryella ACZEL ... ..	42
Dorilas MEIGEN ... ..	6	Wittella n. gen. . . . .	41

### SPECIES.

	Pages.		Pages.
abdominalis [Dorilas (Eudorylas)].	24	longisetosus [Dorilas (Dorilas)] ...	18
africana (Tömösváryella) ... ..	43	lubuti [Dorilas (Dorilas)] ... ..	19
angustifacies [Dorilas (Dorilas)] ...	13	lucidus [Dorilas (Cephalosphæra)].	11
basalis (Tömösváryella) ... ..	43	magnispinosus [Dorilas (Cephalosphæra)] ... ..	12
bellulus [Dorilas (Dorilas)] ... ..	15	mikenensis [Dorilas (Eudorylas)] .	33
candidula (Wittella) ... ..	41	mutillatus [Dorilas (Eudorylas)] ...	34
congoana (Tömösváryella) . . . . .	45	perpaucus [Dorilas (Dorilas)] . . . .	19
conspicuosus [Dorilas (Dorilas)] . . .	15	ruandensis [Dorilas (Dorilas)] . . . .	21
damasi [Dorilas (Dorilas)] . . . . .	17	rubrus [Dorilas (Eudorylas)] ... ..	35
decorus [Dorilas (Eudorylas)] . . . .	24	singula (Tömösváryella) ... ..	47
dorsalis [Dorilas (Eudorylas)] . . . .	26	sordidatus [Dorilas (Eudorylas)] ...	36
falcatus [Dorilas (Eudorylas)] . . . .	27	spurius (Chalarus) . . . . .	5
galeatus [Dorilas (Eudorylas)] . . . .	29	subvirescens (Tömösváryella) . . . .	49
ghesquierei [Dorilas (Eudorylas)] . .	29	tridens (Tömösváryella) ... ..	50
inchoatus (Beckerias) ... ..	5	visendus [Dorilas (Dorilas)] ... ..	23
inornatus [Dorilas (Eudorylas)] ... ..	31	wittei [Dorilas (Eudorylas)] ... ..	39
latitarsis (Tömösváryella) . . . . .	46		
libratus [Dorilas (Eudorylas)] . . . .	31		

---

## CONTENTS

---

	Pages.
INTRODUCTION ... ..	3
Key to genera known from the Belgian Congo ... ..	4
Genera <i>Chalarus</i> and <i>Beckerias</i> ... ..	5
Key to <i>Dorilas</i> . ... ..	6-11
<i>Dorilas</i> ( <i>Cephalosphæra</i> ) ... ..	11
<i>Dorilas</i> ( <i>Dorilas</i> ) ... ..	13
<i>Dorilas</i> ( <i>Eudorylas</i> ) ... ..	24
<i>Wittella</i> ... ..	41
<i>Tömösváryella</i> . ... ..	42
INDEX ARRANGED ALPHABETICALLY ... ..	52

