

PARC NATIONAL DE LA GARAMBA. — MISSION H. DE SAEGER

en collaboration avec

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Fascicule 24 (3)

BIBIONIDAE
(DIPTERA NEMATOCERA)
AND
DORILAIIDAE
(PIPUNCULIDAE: DIPTERA-CYCLORRHAPHA) (1)

BY

D. ELMO HARDY (Hawaii)

I am much indebted to Dr. V. VAN STRAELEN and H. DE SAEGER of the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi » for the privilege of studying this most interesting collection. This thorough exploration has greatly increased our knowledge of the fauna of the Congo. For more complete details on the collection records, refer to Fascicule 5 of the « Exploration du Parc National de la Garamba », 1956. Unless otherwise indicated, all of the specimens recorded were collected by H. DE SAEGER.

Family BIBIONIDAE.

Bibionidae were poorly represented in the collection made by this expedition; only thirteen specimens were taken. These represent three species, all belonging to the genus *Plecia* WIEDEMANN. At least one species of *Bibio*, three or more species of *Philia*, and about ten species of *Plecia* should occur in this area. For monographic studies of the African *Bibionidae*, refer to HARDY (1950a, 1950b, 1951 and 1952).

The following were represented in this collection .

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Plecia bilobata HARDY.

Plecia bilobata HARDY, 1948, Brit. Mus. Ruwenzori Exped., 1934-1935, 1(6) : 113, fig. 4, *a-b*.

This species fits in the complex which is characterized by having the mesonotum and scutellum entirely rufous and the remainder of the body black. It is readily differentiated by the distinctive male genitalia as shown in the original figures and in figure 5, HARDY (1950b : 7).

The species is widely distributed and apparently common throughout central and eastern Africa; I have recorded it from many localities in Uganda, Congo, Tanganyika, Sierra Leone, and Abyssinia.

One male specimen is in the collection labelled Aka/2, 22-V-1952, No. 3514. One female specimen of the *bilobata* complex is also on hand and cannot be correctly identified without the male but is probably this species; it is labelled PFSK/20/3, 10-VI-1952, No. 3631 (J. VERSCHUREN).

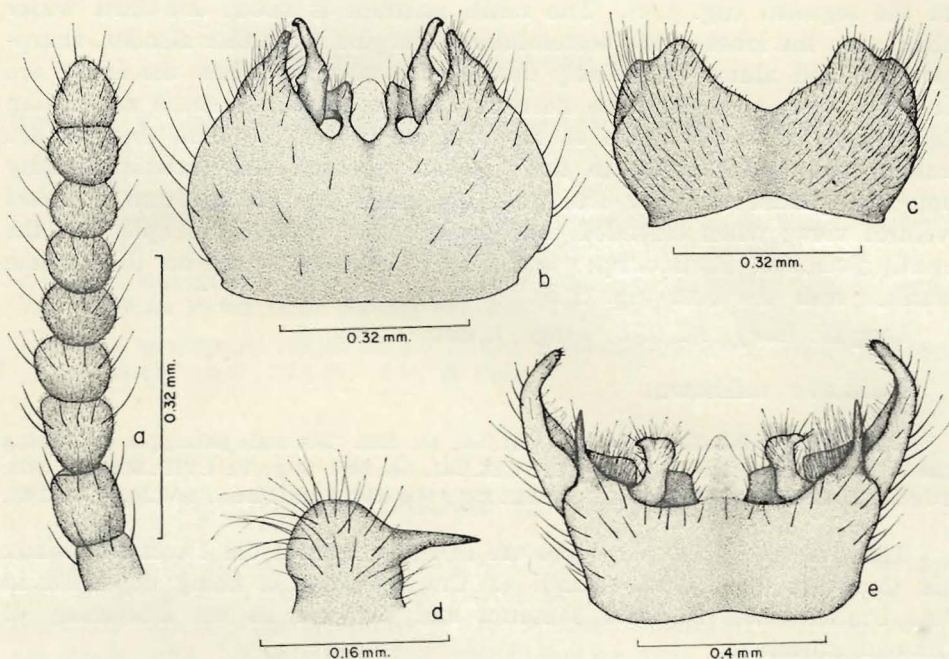
Plecia paenerubescens n. sp.

(Fig. 1, a-c.)

This species is closely related to *erubescens* SPEISER and differs by having the posterior lateral margins of the ninth sternum sharply pointed, rather than being rounded and obtuse, and the male claspers more slender and curved outward (fig. 1, b; cf. fig. 3, b, HARDY, 1952 : 77). This may possibly be an aberration of *erubescens* or the specimen previously studied may not have been typical. On the basis of the differences seen in the specimens at hand, however, it appears to be a distinct species.

Male: A rather variable species typically with the hind two-thirds to one-half of the mesonotum rufous and the front portion dark brown to black. Most specimens will key to couplet 21 in HARDY (1952 : 75) and are differentiated from *P. freemani* HARDY and *ruficollis* FABRICIUS by the sharp-pointed, rather slender, posterolateral lobes of the ninth sternum (fig. 1, b). The coloration of the mesonotum is quite variable and one specimen is at hand which is entirely dark brown to black with just a faint tinge of rufous in the ground color of the posterior portion of the mesonotum. This specimen would run to couplet 8 (Page 73 of the above reference) with *erubescens*. Head: Entirely black, including the appendages. The ocellar tubercle is prominent. Each ocellus is equal in diameter to two to three rows of eye facets. The mouth parts are inconspicuous, folded beneath the head when not in use. The palpi are moderately elongate, the second and fifth segments are approximately equal in length, each is nearly two times longer than the fourth segment and the third is about one-third longer than the fourth. The flagellum of the antenna consists of seven distinct segments (fig. 1, a), the apical portion is obviously

made up of two closely-joined segments. Thorax : On the type, the anterior third of the mesonotum is dark brown to black, the remainder is orange. The scutellum is brown to black, tinged faintly with rufous in the ground color. The pleura are entirely black. As mentioned above, the coloration of the mesonotum varies considerably, in some specimens



(Fig. 1, d-e.)

FIG. 1. — a, b, c : *Plecia paenerubescens* n. sp.;
d, e : *Plecia redunca* HARDY.

a : antenna; b : male genitalia, ventral view;
c : ninth tergum, dorsal view.

d : clasper of male, lateral view; e : male genitalia, ventral view.

the black coloration covers the anterior half and in one specimen the entire mesonotum is black. The mesonotum is opaque, covered with yellow to gray-brown pubescence. The mesonotal furrows are distinct and extend the entire length of the mesonotum to the prescutellar depression. The halteres are black. Legs : Entirely black, densely black haired. I see nothing distinctive about the leg characters, the basitarsi are about two-fifths as long as the tibiae. Wings : Evenly infuscated with pale brown, slightly darker along the anterior margin, the stigma is scarcely

differentiated. Vein $R2+3$ curves rather sharply and enters the costa at an angle of about 60° to vein $R4+5$. Abdomen : Entirely subshining black, rather thickly black pilose and covered with yellow-brown pubescence. The ninth tergum is nearly two times wider than long, the posterolateral margins are indistinctly lobate, and the posterior median portion is gently concave; this concavity extends almost one-half the length of the segment (fig. 1, c). The ninth sternum is about one-third wider than long, the lobes of the posterolateral margins are rather slender, sharp-pointed, and almost completely obscure the claspers when the latter are in their normal position; the sternum also has a pair of small submedian lobes just inside the bases of the claspers (fig. 1, b). The claspers are rather long and slender, in their normal position they extend dorsally into the genital chamber and only the bases are visible from a direct ventral view; when extended they project well beyond the apices of the ninth sternum. Each clasper has a small pointed bump on the outside surface near the base (fig. 1, b).

Length : Body, 4,4 mm; wings, 5 mm.

Female unknown.

Holotype male labelled II/id/8b, 4.VIII.1951, No. 2210. Six male paratypes containing the following collection data : II/fd/18, 8.IX.1951, No. 2395; II/ge/10, 4.VIII.1952, No. 3878; II/gd/8, 13.XII.1951, No. 2901; Pali*/8, 27.IX.1952, No. 4101; and II/hc/8, 5.VI.1951, No. 1866.

The type and three paratypes are in the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ». One paratype is being deposited in the United States National Museum and two are in the University of Hawaii collection.

***Plecia redunca* HARDY.**

(Fig. 1, d-e.)

Plecia redunca HARDY, 1952, Journ. Kans. Ent. Soc. 25(2-3) : 84, figs. 8, a-b.

This species belongs in the complex which is characterized by having the mesonotum predominantly rufous with a large black spot on the anterior portion. It is related to *P. quadrata* HARDY but is differentiated by the slender pointed apices of the ninth tergum of the male and by the spine-like processes on the posterolateral margins of the ninth sternum. Refer to figures 8a and 8b in the original description. The strongly forcipate lobes of the ninth tergum, the prominent spines on the posterolateral margins of the sternum, and the distinctive claspers of the male will readily differentiate this from other species known from this region. One characteristic feature of the claspers was omitted in the original description, each has a long sharp-pointed lobe extending dorsally from the inner surface, this is not visible from dorsal view and has to be viewed from the side (fig. 1, d) or from an end view. The spine-like lobes on the posterolateral margins

of the sternum are somewhat variable in length. In one of the specimens at hand they extend 1,5 times the length of the claspers (fig. 1, e) and in the other they extend just slightly beyond the apices of the claspers.

Four specimens are in the collection labelled as follows : Ndelele/R., 22.IX.1952, No. 4068; and PFSK/20/3, 10.VI.1952, No. 3631.

BIBIONID REFERENCES CITED.

- HARDY, D. E., 1950a, A Monographic Study of the African *Bibionidae* (Diptera). Part I : Introduction and Genus *Bibio* GEOFFROY [*Jour. Kansas Ent. Soc.* 23 (4) : 137-153, 13 figs.]
- 1950b, Exploration du Parc National Albert. Mission G. F. DE WITTE (1933-1935). [*Fasc. 65, Bibionidae (Diptera-Nematocera)*, pp. 3-23, 35 figs.]
- 1951, A Monographic Study of the African *Bibionidae* (Diptera). Part II : Genus *Philia* MEIGEN [*Jour. Kansas Ent. Soc.*, 24 (2) : 74-94, 18 figs.]
- 1952, A Monographic Study of the African *Bibionidae* (Diptera). Part III : Genus *Plecia*. [*Ibid.*, 25 (2-3) : 72-91, 31 figs.]

Family DORILAIIDAE (PIPUNCULIDAE).

This collection contained four hundred and six specimens of *Dorilaidae* and is probably a fairly representative sampling of this family in the Garamba region. Thirty species are represented, including fourteen which are apparently undescribed, but not including two new species which are not being described until additional specimens can be studied. All of the dorilaidids which have been seen from this region belong in two genera : *Dorilas* MEIGEN, with two subgenera, and *Tomosvaryella* ACZÉL. For a key to the genera known from the Congo refer to HARDY (1950 : 4).

Unfortunately, no information is available concerning the host relationships and economic importance of dorilaid flies in Africa. The Congo is especially rich in species and these flies must be of considerable importance as parasites of leafhoppers and other *Homoptera*.

Genus DORILAS MEIGEN.

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

For synonymy refer to HARDY (1959, *South African Animal Life, Diptera Dorilaidae-Pipunculidae* 6 : 391).

The members of this genus are characterized by having a distinct stigma present in the third costal section of the wing, the wing venation not

reduced, and the wing base not strongly attenuated; by lacking ocellar bristles; and by having the occiput expanded and the head hemispherical in shape.

Type of the genus : *Pipunculus campestris* LATREILLE.

In the following key to the species of the genus *Dorilas* the subgenera *Dorilas* and *Eudorylas* are not segregated into distinct groups since the characters used for separating these (the presence or absence of a fan of hairs on the propleuron) are often obscured by the head and sometimes difficult to see.

REVISED KEY TO THE SPECIES OF *DORILAS*
KNOWN FROM THE CONGO, AND INCLUDING RUANDA-URUNDI.

- 1 Vein *M*1+2 with an appendix beyond the *m* crossvein. Subgenus *Cephalosphaera* ENDERLEIN 2
- Vein *M*1+2 without an appendix 6
- 2 (1) Legs yellow, except for a tinge of brown on the coxae and on the apices of the tarsi 3
- At least the femora broadly banded with black 5
- 3 (2) Third costal section equal to, or shorter than, the fourth and much shorter than the fifth section 4
- Third costal section two times longer than the fourth and equal in length to the fifth *pallidifemoratis* HARDY.
- 4 (3) Third costal section very short, one-third to one-fourth as long as the fourth section. Femora slender, flexor spines weak *lucidus* HARDY.
- Third costal section equal in length to the fourth. Femora very stout, each with five to seven pairs of large flexor spines. Middle femora with a row of closely-placed bristles on the outside surface near the apex *magnispinosus* HARDY.
- 5 (2) Third costal section three to four times longer than the fourth and two times longer than the fifth. Basal one-third of the wings hyaline, apical two-thirds fumose *collarti* HARDY.
- Third costal section about one-third longer than the fourth, fifth section longer than the third. Wings uniformly fumose *francoisi* HARDY.
- 6 (1) Eyes of male distinctly separated on the front. Large, robust species. Third and fourth costal section short; the two sections combined are about one-half as long as the fifth costal section.

- Vein *M1+2* strongly curved upward beyond the *r-m* crossvein (fig. 14, d). Eighth segment of male largely membranous (fig. 14, c) ...
(Eudorylas) sinuosus HARDY.
- Not as above 7
- 7 (6) Abdomen at least partially polished, at least the apices of some of the segments are bare of pollen 8
- Abdomen subshining to opaque, entirely pollinose 33
- 8 (7) Face of both sexes distinctly narrowed, one-half or less as wide as the lower portion of the front 9
- Face normal, as wide as front 11
- 9 (8) Thorax and abdomen entirely polished black on the dorsum, bare of pollen except on the base of the first tergum and sometimes on the narrow basal portion of the second tergum. Base of third costal section hyaline 10
- Thorax and abdomen subshining, predominantly dusted with brown, only the apices of the last two or three abdominal terga are polished, bare of pollen. Stigma filling all of the third costal section. Male genitalia as in figure 2, a *(Dorilas) angustifacies* HARDY.
- 10 (9) Abdomen rufous on the sides; third costal section with a distinct crossvein at the base of the stigma (fig. 3, a). Female ovipositor curved. Male genitalia as in figure 3, b ... *(Dorilas) damasi* HARDY.
- Abdomen black. No crossvein present at the base of the stigma. Female ovipositor straight. Male genitalia as in figure 2, d
(Dorilas) conspectus HARDY.
- 11 (8) Sides of abdomen yellow to rufous 12
- Abdomen entirely black 16
- 12 (11) Propleura each with a fan of long hairs (*Dorilas*) 13
- Propleura bare (*Eudorylas*) 15
- 13 (12) Third antennal segment short acuminate. Sides of mesonotum and the entire pleura yellowish. Males with the hypopygium large, symmetrical, equal in length to the fifth abdominal segment and lacking a membranous area on the eighth segment
(Dorilas) pallidipleura (CURRAN).
- Third antennal segment short, acute to obtuse. Thorax entirely black. Females run here 14
- 14 (13) Third costal section about equal in length to the fourth. The *r-m* crossvein is situated at the basal third of cell 1st *M2*. Third antennal segment short acute, rounded at apex. Base of ovipositor globose *(Dorilas) visendus* HARDY.

- Third costal section about half as long as fourth. Crossvein *r-m* situated near the middle of cell 1st *M*₂. Third antennal segment pointed at apex. Ovipositor base elongated
(*Dorilas bellulus* HARDY.
- 15 (12) Third antennal segment short acuminate. Male hypopygium with a large dorsal cleft on the right side, besides a small, round, apical membranous area. Flexor spines strong. Female ovipositor curved (*Eudorylas rubrus* HARDY.
- Third antennal segment long acuminate. Male hypopygium with an oblong apical membranous area and usually with an apical keel but with no dorsal cleft. Femora slender, flexor spines weak. Ovipositor straight (*Eudorylas abdominalis* (LOEW).
- 16 (11) Legs predominantly yellow, at most with faint discolorations of brown on the femora 17
- At least the femora predominantly black 29
- 17 (16) Mesonotum and abdomen highly polished black, devoid of pollen. 18
- Thorax entirely pollinose 20
- 18 (17) Propleura each with a fan of hairs (*Dorilas*) 19
- Propleura bare. Male genitalia as in figure 11, c
(*Eudorylas megacanthus* n. sp.
- 19 (18) Third costal section about equal in length to the fourth. Flexor spines of femora weak, poorly developed. Third antennal segment yellow, acute at apex. Ovipositor straight ... (*Dorilas saegeri* n. sp.
- Third costal section very short, about one-third to one-fourth as long as the fourth section. Flexor spines very well developed. Third antennal segment brown, obtuse below. Ovipositor curved
(*Dorilas perpaucus* HARDY.
- 20 (17) Abdomen densely covered with erect setae. Third antennal segment long acuminate. The outer clasper of the male has a slender, finger-like subapical projection on the inner surface
(*Eudorylas wittei* HARDY.
- Abdomen nearly bare, not conspicuously setose, except on the sides of the first tergum. Third antennal segment usually acute to short acuminate. Male claspers not as above 21
- 21 (20) Front and hind tibiae each with very strong erect bristles in the middle of the outside surface, those of the hind legs are especially developed and are two times longer than the width of the tibia. Extensor hairs on femora long and conspicuous
(*Dorilas longisetosus* HARDY.

- Front tibiae lacking such bristles. Erect bristles sometimes present on the hind pair but they are not longer than the width of the tibia. The extensor hairs are not conspicuous 22
- 22 (21) Third antennal segment acuminate. Male hypopygium rather symmetrical with a distinct cleft on the right side but with no membranous area 23
- Third antennal segment obtuse to acute. Hypopygium with an apical membranous area (except in *bequaerti* which has no apparent membranous area or dorsal cleft) 24
- 23 (22) Third antennal segment very long acuminate, developed into a long slender point at apex which is longer than the remainder of the segment. Humeri yellow (*Eudorylas*) *decorus* HARDY.
- Third antennal segment short acuminate, tapered to the apex. Humeri brown. (Known only from Kenya, subgenus unknown)
flavicrus (RAPP).
- 24 (22) Third antennal segment obtuse, rounded at apex. Third costal section two times longer than the fourth 25
- Third antennal segment acute. Third costal section about equal or slightly shorter than the fourth 26
- 25 (24) Propleura with a fan of hairs. Last section of vein *M1+2* moderately curved. Only hind margins of abdominal terga polished
(*Dorilus*) *vinnulus* HARDY.
- Propleura bare. Last section of vein *M1+2* straight. Terga three to five entirely polished black (*Eudorylas*) *modicus* HARDY.
- 26 (24) 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 (*Dorilas*) *bequaerti* (CURRAN).
- Abdomen almost entirely polished. Hypopygium shorter than the fifth segment and with a conspicuous membranous area 27
- 27 (26) Male hypopygium with the membranous area occupying the entire right side of the eighth segment. Claspers each with a small subapical tooth on inner edge (HARDY, 1952b : 63, fig. 3, b)
(*Dorilas*) *navus* HARDY.
- Not as above 28
- 28 (27) Male hypopygium short, rather rounded as seen from a dorsal view and with a large apical membranous area. Ninth segment plainly visible from above. Third section of the costa equal in length to the fourth. Crossvein *r-m* situated near the basal third of cell 1st *M2* (*Dorilas*) *visendus* HARDY.

- Male hypopygium about three-fourths as long as the fifth segment and tapered toward the apex, with a small membranous area at the apex and the ninth segment not visible from a dorsal view. The third section of the costa is one-half as long as the fourth. The *r-m* crossvein is situated near the middle of cell 1st *M2*
(*Dorilas bellulus* HARDY.
- 29 (16) Mesonotum, scutellum, and abdomen entirely polished black. Propleura bare 30
- Mesonotum and scutellum opaque, heavily dusted with gray-brown pollen. Propleural fan present 31
- 30 (29) Legs predominantly black. Antennae and humeri dark brown. Flexor spines of femora weak, poorly developed. Male genitalia as in figure 10, c. Female ovipositor straight
(*Eudorylas ghesquierei* HARDY.
- Legs predominantly yellow, with a broad brown or black band on each femur. Third antennal segment and humeri yellow. Flexor spines well developed on all femora (fig. 9, b). Male genitalia as in figure 9, d. Female ovipositor curved (fig. 9, e)
(*Eudorylas garambensis* n. sp.
- 31 (29) Entire abdomen polished black. Third antennal segment moderately long acuminate. Male genitalia as in figure 4, b, ninth segment two times wider than long (*Dorilas hemistilbus* n. sp.
- The first three terga predominantly or entirely opaque brown to black, only the apical segments polished. Third antennal segment short acute. Male genitalia not as above 32
- 32 (31) Legs predominantly yellow, femora discolored with brown medianly and lacking strong extensor hairs. Crossvein *r-m* situated near the basal third of cell 1st *M2*. Third antennal segment yellow. Male genitalia as in figure 4, e. (Some male specimens may run here) ...
(*Dorilas visendus* HARDY.
- Legs predominantly black, yellow only at extreme apices of femora and tibiae and bases of tibiae. Femora with strong black extensor hairs. Third antennal segment brown to black
(*Dorilas extimus* HARDY.
- 33 (7) Legs entirely yellow, femora discolored with brown in *definitus*. 34
- At least the femora with broad brown to black bands, or legs chiefly black 41
- 34 (33) Front of female very narrow, one-half as wide as face. Third antennal segment bright yellow, moderately acute at apex. Female ovipositor curved upward. Last section of vein *M1+2* strongly curved. Only female known (*Eudorylas angustus* HARDY.

- Not as above 35
- 35 (34) Propleural fan absent (*Eudorylas*). Third antennal segment long acuminate, the apex is slender, drawn out 36
- Propleural fan present (*Dorilas*). Third antennal segment short acuminate to acute, the apex is not attenuated 39
- 36 (35) First two pairs of tibiae each with a strong ventral spine just below the apex. First two pairs of femora each with a flap of tissue on the underside of the apex which projects downwards and is spine-like in appearance (see HARDY, 1952a : 5, fig. 3)
(*Eudorylas abruptus* HARDY.
- Tibial spurs and femoral flaps lacking 37
- 37 (36) Third costal section shorter than the fourth. Male hypopygium lacking an apical membranous area but with a dorsal cleft on the right side (*Eudorylas mikenensis* HARDY.
- Third costal section longer than the fourth. Hypopygium with a large apical membranous area 38
- 38 (37) Hypopygium with a dorsal cleft on the right side. Femora discolored with brown in the median portions. Crossvein *r-m* situated at the basal two-fifths of cell 1st *M2*. Last section of vein *M1+2* straight. Sixth tergum not visible from dorsal view (fig. 7, b) (*Eudorylas definitus* n. sp.
- Hypopygium lacking a dorsal cleft. Femora all yellow. Crossvein *r-m* situated at basal third of cell 1st *M2*. Last section of vein *M1+2* gently curved. Sixth segment plainly visible from dorsal view (*Eudorylas galeatus* HARDY.
- 39 (35) Third costal section slightly longer than the fourth. Last section of vein *M1+2* strongly curved 40
- Third section of costa one-third to one-half as long as the fourth. Last section of vein *M1+2* straight (*Dorilas ruandensis* HARDY.
- 40 (39) Male hypopygium tapering to a blunt apex (no apparent membranous area present) (*Dorilas lubuti* (CURRAN).
- Male hypopygium not tapered and with a large apical membranous area (*Dorilas congoensis* HARDY.
- 41 (33) Third antennal segment prolonged into a bristle-like apex, which is equal or longer than the remainder of the segment 42
- Third antennal segment not bristle-like at apex 43
- 42 (41) Male hypopygium strongly developed, longer than fifth abdominal segment and as seen from a dorsal view with a large membranous area extending longitudinally through the median portion to the base of the eighth segment (*Eudorylas discretus* HARDY.

- Male hypopygium shorter than the fifth abdominal segment and with the membranous area confined to the apex of the eighth segment (*Eudorylas*) *inornatus* HARDY.
- 43 (41) Third costal section two to three times longer than the fourth ... 44
- Third costal section not over one-half longer than the fourth, usually equal or distinctly shorter than this section. If, as in the case of *D. unanimsus*, the third costal section is 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. 45
- 44 (43) Third antennal segment acuminate. Male hypopygium with a median cleft extending to its base. Female ovipositor long and straight. The last section of vein *M1+2* straight (*Eudorylas*) *dorsalis* HARDY.
- Third antennal segment acute. Male hypopygium with no dorsal cleft and with an apical membranous area. Female ovipositor curved. Last section of vein *M1+2* curved (*Eudorylas*) *falcatus* HARDY.
- 45 (43) Third section of costa often one-half longer than fourth. Third antennal segment long acuminate, especially in the female (fig. 15, a). Flexor spines well developed on all femora. Female ovipositor strongly curved upward (fig. 15, e). Male hypopygium equal in length to the fifth abdominal segment and with a large apical membranous area (fig. 15, c). The claspers are as in figure 15, d ... (*Eudorylas*) *unanimsus* HARDY.
- Not as above 46
- 46 (45) Claspers of male with the apices strongly attenuated and bent outward, extending transversally to the remainder of the clasper (fig. 6, c) (*Eudorylas*) *apiculatus* n. sp.
- Not as above 47
- 47 (46) Legs predominantly black. Petiole of cubital cell very long, almost equal to or longer than the last section of vein *M3+4* 48
- At least tibiae and tarsi chiefly yellow. Petiole of cubital cell normal, about one-half as long as the last section of vein *M3+4* 49
- 48 (47) Third antennal segment very long acuminate. Male genitalia as in fig. 13, e (*Eudorylas*) *quasidorsalis* n. sp.
- Third antennal segment short acute. Male genitalia as in figures 19, a and 19, c (HARDY, 1950 : 38) (*Eudorylas*) *sordidatus* HARDY.

- 49 (47) Wings distinctly brown fumose. Male hypopygium without an apical membranous area. Inner clasper greatly developed, two times longer than the outer (refer to fig. 15, a, HARDY, 1950 : 32; mislabelled *libratus*) (*Eudorylas*) *conformis* HARDY.
- Wings hyaline or nearly so. Hypopygium lacking an apical membranous area only in *mikenensis*. Claspers not as above 50
- 50 (49) Propleura bare 51
- Propleural fan present. Only females known, ovipositor short and straight (see fig. 10, HARDY, 1952a : 11) (*Dorylas*) *cautus* HARDY.
- 51 (50) Third antennal segment long acuminate. Male hypopygium without an apical membranous area. Ninth segment of male very well developed, occupying much of the right side of the eighth segment. Genitalia as shown in HARDY, 1950 : 32, figure 16, d (*Eudorylas*) *mikenensis* HARDY.
- Third antennal segment acute to short acuminate. Hypopygium with a large apical membranous area and the ninth segment not extended. Genitalia as shown in HARDY, 1950 : 38, figure 17, a (*Eudorylas*) *mutillatus* (LOEW).

Subgenus **DORILAS.**

Members of this subgenus are differentiated from other *Dorilas* which lack an appendix on vein *M1+2* by having a fan of hairs present on each propleuron.

Five species are in the present collection.

Dorilas (Dorilas) angustifacies HARDY.

(Fig. 2, a.)

Dorilas (Dorilas) angustifacies HARDY, 1949, Mem. Inst. royal Sc. Nat. Belg., 2nd Series, Fasc. 36 : 20, figs. 7, a-c.

This species fits near *D. damasi* HARDY and *conspicuosus* HARDY because of the narrow face of both sexes. However, it is readily differentiated by having the abdomen predominantly opaque, polished only on the apices of the terga. The male genitalia are also different as shown in figures 2, a and 2, d.

Comparatively small, predominantly dark colored species. The third antennal segment is yellow, sometimes tinged with brown, and is short acute to obtuse at apex. The face is greatly narrowed on the lower portion, at the narrowest part it is scarcely one-half as wide as the front above the antenna. The thorax is black in ground color, rather densely brown

pollinose on the dorsum, gray on the sides. The scutellum is more lightly pollinose, faintly shining. The humeri are dark brown to black and the halteres are yellow, tinged with brown on their knobs. A distinct propleural fan is present. The femora are almost entirely dark brown to black, broadly yellow at their apices and narrowly so at their bases.

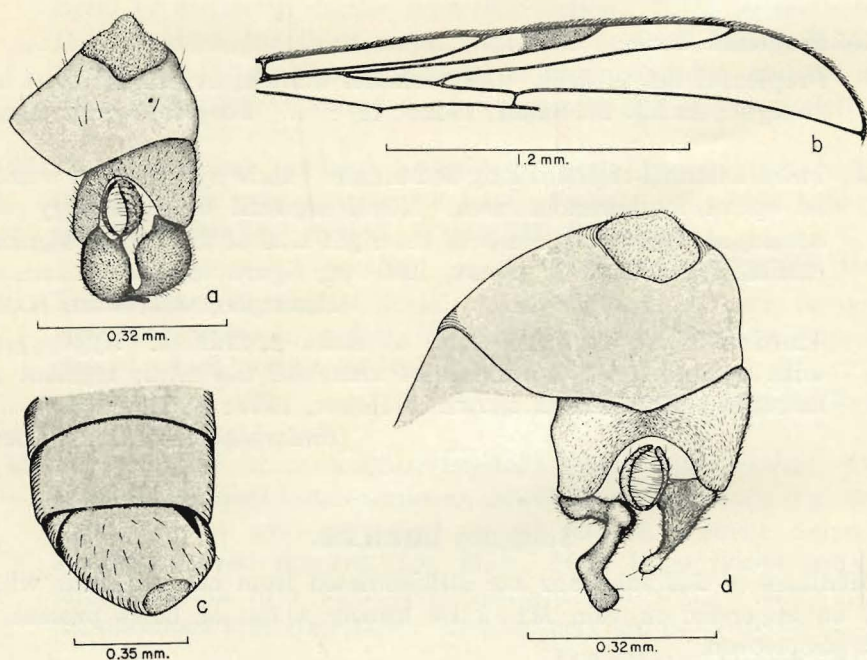


FIG. 2. — a : *Dorilas (Dorilas) angustifacies* HARDY;
 b, c, d : *Dorilas (Dorilas) conspectus* HARDY.
 a : male genitalia ventral.
 b : wing, anterior half; c : apex of male abdomen,
 dorsal view; d : male genitalia, ventral.

The wings are distinctly tinged with brown. The third and fourth costal sections are approximately equal in length and the two sections combined are nearly one-half longer than the fifth section. The *r-m* crossvein is situated at the basal third of cell 1st *M2* and the last section of vein *M1+2* is moderately curved. The abdomen is typically almost entirely brown pollinose, slightly gray on the sides; the apical portion of the fifth tergum is polished black; the narrow apex of the fourth tergum is usually polished; and occasionally the narrow apices of the third and the second terga are polished black. The hypopygium is slightly developed to the right side and has a moderate-sized membranous area covering the apex. From a

ventral view, the ninth tergum is wider than long and is deeply cleft almost to its base. The claspers are broad, rather quadrate in shape, and each is attenuated into a hook-like point on its inner apex (fig. 2, a).

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

Type locality, Cape Province Somerset East, South Africa. Type in the British Museum (Natural History).

Four specimens are in the collection containing the following data : II/fd/10, 20.XII.1951, No. 2935; II/fd/17, 14.XII.1951, No. 2910; PpK/55/d/8, 19.XI.1951, No. 2768; and PpK/12/d/9, 2.I.1952, No. 2972.

Dorilas (*Dorilas*) *conspicuos* HARDY.

(Fig. 2, b-d.)

Dorilas (*Dorilas*) *conspicuos* HARDY, 1949, Mem. Inst. royal. Sc. Nat. Belg., 2nd Series, Fasc. 36 : 27, figs. 13, a-b.

This species is readily characterized by the highly polished abdomen and mesonotum; by the comparatively narrow face; the short, acute to slightly obtuse, third antennal segment; and by the male genital characters (figs. 2, c, 2, d). It should be noted that the propleural fan of hairs is small and inconspicuous in *conspicuos*, usually made up of two to four fine pale hairs which are very easily overlooked; in some specimens I have been unable to find the propleural fan and it is almost impossible to detect in any of the specimens without removing the head, unless the head is pulled away from the body far enough that a strong light can be shined on the propleura. This definitely seems to be an intergrade between the two subgenera, *Dorilas* and *Eudorylas*, certainly some specimens of *conspicuos* might easily be put in the latter subgenus by mistake. In the male the face narrows to about the width of two rows of eye facets, about one-half as wide as at the broadest portion of the front; in the female the face is extremely narrow, at the narrowest point it is scarcely wider than one eye facet. The basal segments of the antennae are tinged with brown. The third segment is rather small, entirely yellow and subacute at apex. The vertex and upper occiput are highly polished. The humeri are brown to black, tinged lightly with yellow. The entire dorsal portion of the thorax, including the metanotum is polished. The pleura are predominantly gray pollinose. The wings are faintly fumose, the third and fourth costal sections are approximately equal in length and the stigma fills only the apical two-thirds of the third section (fig. 2, b). In my supplemental description of this species (HARDY, 1950 : 16) I indicated that some specimens have been studied which have a distinct supernumerary crossvein in the third costal section and would thus fall in ACZÉL's genus *Collinias* (I have synonymized this with *Dorilas*, 1950 : 6). I now question this statement since the crossvein does not seem to be present in any of the large series of specimens which I have on hand. *D. damasi* HARDY

closely resembles *conspetus* and does have this crossvein, I probably had these confused in my earlier treatment. The original description of *conspetus* indicates that only terga three to five are polished black and that the first tergum is gray and the second is lightly brownish pollinose; in the large series of specimens which I have now studied the abdomen is typically highly polished, gray only at the base of the first tergum. As seen from a dorsal view the male hypopygium is almost equal in length to the fifth abdominal segment, is rather symmetrical, with a small sub-apical membranous area and with a small basal cleft present on the right side (fig. 2, c). The ninth segment is not usually visible from a dorsal view. The male claspers are quite irregular and the shape is entirely dependent upon the angle from which they are viewed, figure 2, d is more accurate for this species than figure 4, b given in HARDY (1950 : 14). The base of the ovipositor is globose, the piercer is straight and extends about to the base of the third abdominal segment.

Type locality, Ashanti, West Africa (Ghana).

Type in the British Museum (Natural History).

This species is probably widely distributed throughout Central Africa. It is apparently common throughout the Congo and I have also recorded it from Ruanda-Urundi.

Length : The body averages 3 mm; wing averages 3,5 mm.

About 75 specimens are in the collection, these contain the following collection data : II/fd/17, 28.V.1951, No. 1824; PpK/60/d/8, 18.XII.1951, No. 2924; Ndelele/K/115, 3.XII.1951, No. 2842; Pali"/8, 27.IX.1952, No. 4101; Makpe/8, 5.XI.1951, No. 2718; II/PpK/52/d/9, 28 X.1951, No. 2679; II/fd/17, 27.VIII.1952, No. 3983; II/id/8, 17.XI.1951, No. 2765; PpK/9/g/9, 10.IX.1952, No. 4044; II/fd/17, 7.V.1952, No. 3431; II/fc/18, 24.XI.1951, No. 2806; II/gd/17, 30.VI.1952, No. 3719; II/gd/8, 6.VIII.1951, No. 2211; II/fd/18, 21.XII.1951, No. 2939; PFNK/12/9, 24.VII.1952, No. 3820; II/fc/6, 10.X.1951, No. 2575; II/gd/4, 20.VII.1951, No. 2134; II/dd/9, 7.VII.1952, No. 3758; PpK/12/d/9, 2.I.1952, No. 2972; II/fd/17, 25.VI.1951, No. 1970; II/jd/9, 16.VIII.1952, No. 3944; II/fd/17, 4.IX.1951, No. 2380; II/gd/4, 30.X.1951, No. 2701; II/gc/8, 10.VII.1952, No. 3765; II/lf/9, 21.VIII.1951, No. 2299; II/fd/17, 19.I.1952, No. 3030; II/fd/17, 3.I.1952, No. 2991; PpK/55/d/8, 19.XI.1951, No. 2768; II/fd/17, 14.XI.1951, No. 2761; II/cc/9, 5.II.1952, No. 3096; PFSK/22/8, 10.VI.1952, No. 3608; Makpe/8, 5.XI.1951, No. 2718; II/id/8, 31.X.1951, No. 2708; II/le/8, 8.IX.1952, No. 4040; II/fd/17, 28.V.1951, No. 1824; II/gd/18, 13.XII.1951, No. 2901; and II/jd/9, 16.VIII.1952, No. 3944.

Dorilas (Dorilas) damasi HARDY.

(Fig. 3, a-b.)

Dorilas (Dorilas) damasi HARDY, Inst. des Parcs Nat. du Congo et du Ruanda-Urundi, Expl. du Parc Nat. Albert, Mission G. F. DE WITTE (1933-1935), Fasc. 62 : 17, figs. 5, a-d.

This species fits near *D. conspetus* HARDY because of the entirely polished mesonotum and abdomen, and the narrowed face. It is readily differentiated by having the abdomen rufous on the sides; by having a

distinct crossvein at the base of the stigma (fig. 3, a); by the curved female ovipositor; and by the striking differences in the male genitalia as shown in figures 3, b and 2, d. The presence of a crossvein in the subcostal cell appears to be distinctive and constant for this species, I had earlier thought that this was variable and found only in some specimens. The large series of specimens at hand all have this crossvein well developed. These would fit in ACZÉL's genus *Collinias* but to the present I am unable to see that

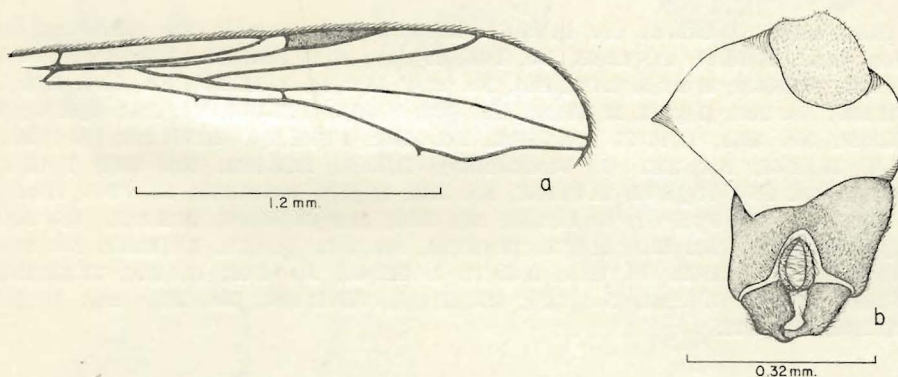


FIG. 3. — *Dorilas (Dorilas) damasi* HARDY.

a : wing; b : male genitalia, ventral.

this character is even of subgeneric importance; I doubt that the few species which exhibit this character have any other characters in common. The abdomen of *damasi* is rarely all black or with but a faint tinge of rufous on the sides; two specimens are on hand which are this way, they fit *damasi* in other details. The specimens which I had previously recorded (1950 : 16) as *conspicuosus* with a distinct supernumerary crossvein in the subcostal cell were very probably aberrant specimens of *damasi*.

This species fits the description of *conspicuosus* in most details. The third antennal segment on most of the specimens at hand, however, is distinctly tinged with brown. The wings are faintly fumose. The third costal section is slightly longer than the fourth and the stigma, which is distinctly set off at its base by a crossvein, occupies about the apical three-fourths of the subcostal cell. The *r-m* crossvein is situated near the basal third of cell 1st *M*₂ (fig. 3, a). The male hypopygium is about three-fourths as long as the fifth abdominal segment and has a moderately large apical membranous area. The claspers are rather broad, curved inward, slightly hook-like at their apices (fig. 3, b). The degree of development of this hook-like portion varies slightly in some of the specimens on hand. The point of the outer clasper is more developed than in the specimen

which was illustrated in figure 5, d (HARDY, 1950 : 20). The female ovipositor is much like that of *conspectus* but is usually curved upward.

Length : Body, 3-3,5 mm; wings, 3,5-4 mm.

Type locality, lac Mokoto, Albert National Park, Congo. This species has been recorded from numerous localities in the Eastern Congo and from Ruanda-Urundi.

Type in the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ».

Thirty-seven specimens are in the collection, these contain the following collection data : II/fd/17, 25.VI.1925, No. 1970; II/cd/8, 30.IV.1951, No. 1639; PpK/55/d/8, 19.XI.1951, No. 2678; II/hd/8, 3.VIII.1951, No. 2195; II/fc/17, 25.IX.1951, No. 2471; II/fc/3, 16.VII.1951, No. 2102; II/gd/4, 12.IX.1952, No. 4054; II/dd/8, 6.IX.1951, No. 2383; PpK/9/g/9, 10.IX.1952, No. 4044; II/id/17, 25.IX.1952, No. 4083; PFNK/7/9, 28.VII.1952, No. 3842; II/fd/6, 15.I.1952, No. 3011 (J. VERSCHUREN); II/ke/9, 12.X.1951, No. 2602; II/fd/17, 24.IX.1951, No. 2468; II/gd/17, 30.VI.1952, No. 3719; II/gc/8, 10.VII.1952, No. 3765; II/cc/9, 5.II.1952, No. 3096; PpK/12/d/9, 2.I.1952, No. 2972; II/PpK/52/d/9, 28.X.1951, No. 2679; Makpe/8, 5.XI.1951, No. 2718; II/fc/6, 13.VI.1951, No. 1911; II/dd/9, 7.VII.1952, No. 3758; mont Moyo, 29.VII.1952, No. 3844; II/fd/17, 2.VII.1951, No. 2032; II/fd/18, 21.XII.1951, No. 2939; II/fd/17, 7.V.1952, No. 3431; PFNK/12/9, 24.VII.1952, No. 3820; and II/id/9, 11.VII.1952, No. 3773.

Dorilas (Dorilas) hemistilbus n. sp.

(Fig. 4, a-d.)

This species resembles *D. visendus* HARDY but is readily differentiated by having the abdomen entirely polished black; the third antennal segment moderately acuminate; the *r-m* crossvein near the middle of cell 1st *M*₂; by the broad black bands on the femora; and by the striking differences in the male genitalia as shown in figures 4, b and 4, e.

Male. Head : The eyes are joined on the front for a distance about equal to the lower portion of the front. The portion of the front just above the antennae is predominantly silvery gray, with a shining black line down the median portion. The face is entirely silvery gray pubescent and is equal in width to the lower portion of the front. The antennae are brown to black, the third segment is moderately acuminate below (fig. 4, a). The upper portion of the front and the ocellar triangle are shining black. The vertex and the upper occiput are opaque gray-brown. The remainder of the occiput is densely gray pollinose. Thorax : Entirely opaque, black in ground color, densely gray-brown pollinose on the dorsum, gray on the sides and over the metanotum. The humeri are brown to black, the halteres are yellow, sometimes tinged with brown at apices. The propleural fan is well developed. Legs : The coxae and the apical joints of the tarsi are brown, the legs are otherwise yellow except for a broad, dark brown to black band around each femur. The flexor spines are rather poorly developed on the femora. No strong erect hairs are present

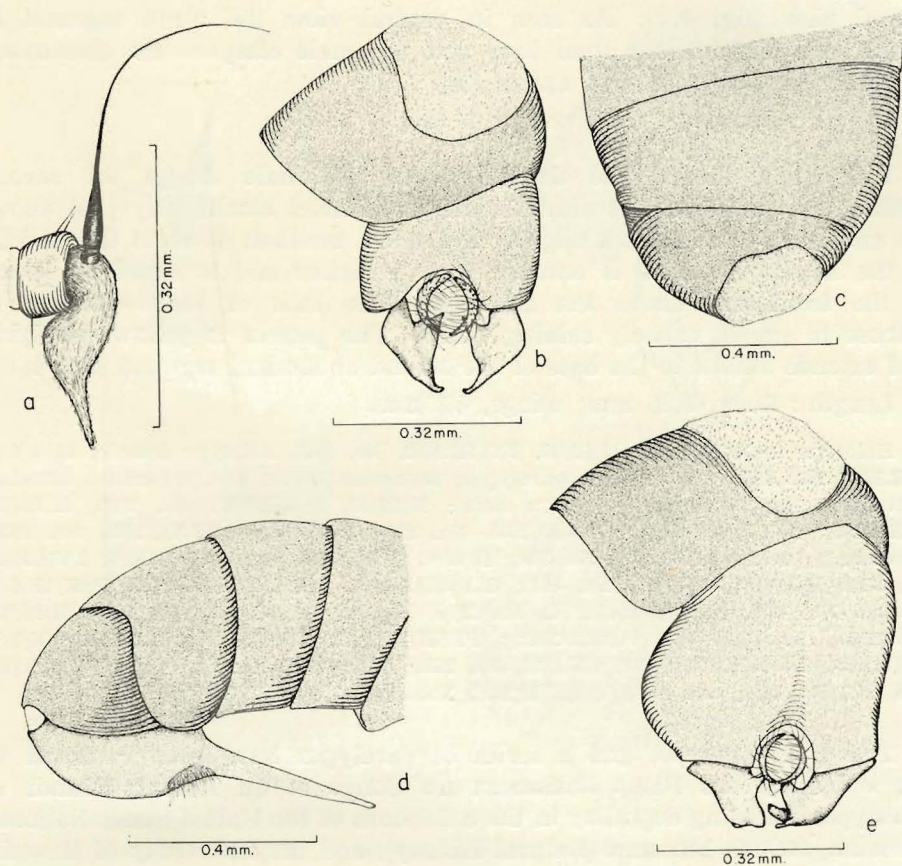


FIG. 4. — a, b, c, d : *Dorilas (Dorilas) hemistilbus* n. sp.
e : *Dorilas (Dorilas) visendus* HARDY.

a : antenna; b : male genitalia, ventral; c : apex of male abdomen, dorsal; d : female abdomen, lateral.

e : male genitalia, ventral.

on the swollen portion of the hind tibia. Wings : The third costal section is one-half to two-thirds longer than the fourth and the two sections combined are 1,25 times longer than the fifth costal section. The stigma fills all of the third costal section. The *r-m* crossvein is situated at the middle of cell 1st *M2* and the last section of vein *M1+2* is moderately curved. Abdomen : entirely polished black except for the basal portion of the first tergum and often with a rather light dusting of gray over the first tergum. The hypopygium is two-thirds to three-fourths as long as the fifth abdominal segment and has a very large apical membranous area which extends over the entire apex and is readily visible from

dorsal view (fig. 4, c). As seen in ventral view the ninth segment is nearly two times wider than long and the male claspers are attenuated to rather slender points at apices (fig. 4, b).

Length : Body, 3,5 mm; wings, 5 mm.

Female. Fitting the description of the male except for sexual differences. The front is almost entirely polished black, gray just above the antennae. The front is slightly expanded, broadest at about the middle of the head. The face is entirely gray pollinose and is equal in width to the front just above the antennae. The base of the ovipositor is globose in shape, entirely shining black. The piercer is yellow, straight, and extends almost to the base of the second abdominal segment (fig. 4, d).

Length : Body, 3,25 mm; wings, 4,3 mm.

Holotype male labelled II/fd/17, 27.VIII.1952, No. 3983. Allotype female, II/d/d/8, 6.IX.1951, No. 2383. Thirty-four paratypes, seventeen males and seventeen females, containing the following collection data : II/fd/17, 14.XII.1951, No. 2910; II/fd/18, 21.XII.1951, No. 2939; Makpe/8, 5.XI.1951, No. 2718; PpK/60/d/8, 18.XII.1951, No. 2924; Garamba/2 (source), 6.VI.1952, No. 3583; II/id/9, 16.VII.1952, No. 3805; II/id/9, 2.VII.1952, No. 3720; II/fd/18, 6.IX.1952, No. 4038; II/PpK/55/d/9, 28.X.1951, No. 2679; PpK/12/d/9, 2.I.1952, No. 2972; II/fd/5, 25.X.1951, No. 2678; II/gc/15, 17.XII.1951, No. 2917; II/fd/17, 25.VI.1951, No. 1970 (J. VERSCHUREN); PFNK/12/9, 24.VII.1952, No. 3820; PpK/8/9, 15.VII.1952, No. 3792; II/fd/18, 8.X.1951, No. 2554; II/fd/17, 25.IX.1952, No. 4083; II/fc/18, 12.X.1951, No. 2653; and II/id/9, 16.VII.1952, No. 3805.

The type, allotype, and a series of paratypes have been returned to the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ». Paratypes are being deposited in the collections of the United States National Museum, British Museum (Natural History), and the University of Hawaii.

Dorilas (Dorilas) saegeri n. sp.

(Fig. 5, a-d.)

This species runs near *D. perpaucus* HARDY but is differentiated by having the third costal section approximately equal in length to the fourth, not greatly shortened; by the distinctly acute, yellow, third antennal segment; by the poorly developed flexor spines on the femora; and by the straight ovipositor of the female (fig. 5, d). It also superficially resembles *D. (Eudorylas) megacanthus* n. sp. but fits in a different subgenus and the two are not related.

Male. Head : The face is predominantly silvery gray pubescent, the lower median portion is shining black. The face is about equal in width to the widest portion of the front. The lower portion of the front is silvery gray, shining in the median part. The junction of the compound eyes is about equal in length to the lower portion of the front. The occipital triangle, upper front, vertex, and upper portion of the

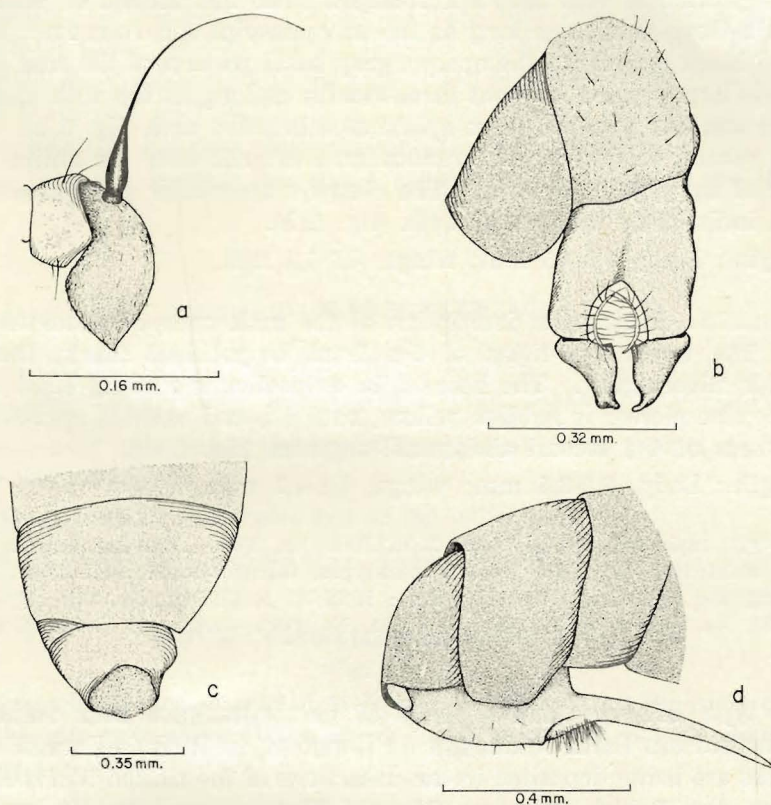


FIG. 5. — *Dorilas (Dorilas) saegeri* n. sp.

a : antenna; b : apex of male abdomen, ventral; c : male genitalia, dorsal;
d : female ovipositor, lateral.

occiput are polished black. The occiput is otherwise silvery gray pollinose. The two basal segments of the antennae are brown. The third segment is yellow, and is acute at apex (fig. 5, a). **Thorax:** Almost entirely polished black, dusted with gray on the posterior halves of the pleura, the extreme lateral and anterior margins of the mesonotum and the humeri. The humeri are brown in ground color, very faintly tinged with yellow. The propleural fan is very well developed. The halteres are yellow. **Legs:** Entirely yellow except for a tinge of brown on the coxae. The femora are slender, the flexor spines are very poorly developed. **Wings:** Hyaline or nearly so. The third costal section is approximately equal in length to the fourth and the two sections combined are approximately equal in length to the fifth section. The stigma fills the entire third costal section. The *r-m* crossvein is situated near the middle of cell 1st *M2*.

The last section of vein $M1+2$ is straight. The last section of vein $M3+4$ is about three-fourths as long as the m crossvein. **Abdomen** : Entirely polished black except for the opaque gray basal portion of the first tergum. The male hypopygium is about three-fourths as long as the fifth abdominal segment and has a rather large apical membranous area (fig. 5, c). As seen from a ventral view the membranous area extends over the entire ventral portion of the eighth segment. The claspers are rather straight-sided and each is indistinctly bilobate at apex (fig. 5, b).

Length : Body, 3,3-3,5 mm; wings, 4,2-4,4 mm.

Female. Fitting the description of the male except for sexual differences. The upper two-fifths of the front is polished black, the lower portion is silvery gray. The base of the ovipositor is shining black, oblong in shape; the piercer is reddish yellow, straight, and extends approximately to the base of the second abdominal segment (fig. 5, d).

Length : Body, 3,2-3,4 mm; wings, 4,1-4,3 mm.

Holotype male labelled II/fd/18, 21.XII.1951, No. 2939. Allotype female labelled II/fd/10, 20.XII.1951, No. 2935. Twenty paratypes, thirteen males and seven females, containing the following collection data : II/fd/17, 14.XII.1951, No. 2910; PpK/60/d/8, 18.XII.1951, No. 2924; II/PpK/52/d/9, 28.X.1951, No. 2679; Garamba/2 (source), 6.VI.1952, No. 3583.

The type, allotype, and a series of paratypes have been returned to the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ». The paratypes are being deposited in the collections of the United States National Museum, the British Museum (Natural History), and the University of Hawaii.

Dorilas (Dorilas) visendus HARDY.

(Fig. 4, e.)

Dorilas (Dorilas) visendus HARDY, 1950, Inst. des Parcs Nat. du Congo et du Ruanda-Urundi 62 : 23, figs. 9, a-c.

This species was not present in the collection at hand although I have recorded it from a number of localities in the eastern portion of the Congo and it possibly does occur in the Garamba region. For the purpose of comparing with *D. hemistilbus* n. sp. it is desirable to briefly treat this species in this paper. The internal structures of the male genitalia have not been previously described or figured. In my supplemental description (1952 : 48, fig. 14) I gave additional notes on the genitalia based upon a paratype but these observations were made *in situ* and the statement that the « claspers are short and simple, they appear to be uniform in size and shape », needs to be modified. I have now dissected the paratype specimen mentioned above and the claspers are comparati-

vely slender, curved upward rather strongly and each has a short tooth-like development on the inner median margin (ig. 4, e). The ninth segment is as long as wide and has a clear area extending longitudinally down the median portion.

Type locality, Kitondo, Albert National Park, Congo.

Type in the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ».

Subgenus **EUDORYLAS** ACZÉL.

Eudorylas ACZÉL, 1940, Zool. Anz. 132, (7-8) : 151.

Dorilas (*Eudorylas*) ACZÉL, HARDY, 1943, Univ. Kans. Sci. Bull. 29(1) : 55.

Members of this subgenus are differentiated from typical *Dorilas* by lacking the propleural fan.

Eleven species of *Eudorylas* are in the collection.

Type of subgenus : *Pipunculus opacus* FALLÉN.

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

(Fig. 6, a-c.)

This species is closely related to *D. dorsalis* HARDY but the male claspers are strikingly different and the third costal section is not so elongate as in *dorsalis*.

Male. A predominantly black, almost entirely opaque, species polished only on the inner surfaces of the femora and in the middle portion of the front. Head : The antennae are black, the third segment is short acuminate (fig. 6, a). The lower portion of the front is gray except for the shining black spot in the middle. The face is densely silvery gray pubescent and is equal in width to the lower portion of the front. Thorax : Shining black in ground color, rather densely dusted with brown, and the apices of the halteres are tinged with brown. Legs : Predominantly black, yellow on the narrow apices of the femora and tibiae and rather broadly yellow on the bases of the tibiae; the tarsi are yellow-brown. No conspicuous erect hairs are present on the outside of the swollen portion of the hind tibia. Wings : Hyaline. The third costal section is approximately one-half longer than the fourth and the two sections combined are about two-thirds as long as the fifth costal section. The stigma fills all of the third costal section. The *r-m* crossvein is situated near the basal third of cell 1st *M2* and the last section of vein *M1+2* is straight. The last section of vein *Cul + 1st A* is two-thirds to three-fourths as long as the last section of vein *M3+4*. Abdomen : Opaque black, covered with brown pollen on the dorsum, the apices of

the terga are faintly dusted with gray. The apical membranous area almost completely bisects the eighth tergum as seen from a dorsal view (fig. 6, b). Each clasper has an attenuated point at the outer apex which extends outward transversely to the remainder of the clasper (fig. 6, c).

Length : Body, 3,2 mm; wings, 3,5 mm.

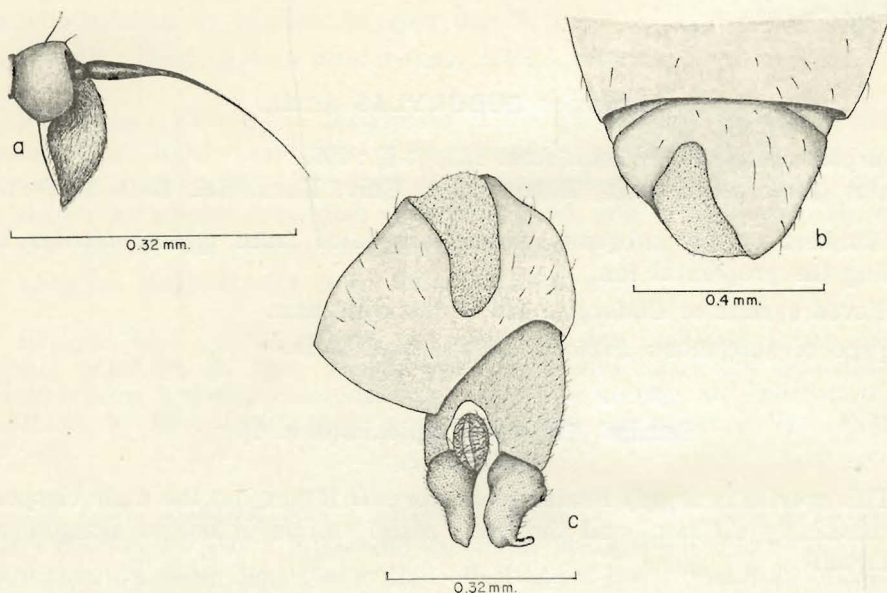


FIG. 6. — *Dorilas (Eudorylas) apiculatus* n. sp.

a : antenna; b : apex of male abdomen, dorsal; c : male genitalia, ventral.

Female unknown.

Holotype male labelled Pidigala, 23.IV.1952, No. 3358.

Type returned to the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ».

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

(Fig. 7, a-d.)

This species appears to be closely related to *D. (E.) galeatus* HARDY from South Africa. It is differentiated from *galeatus* by having a distinct dorsal cleft on the right side of the male hypopygium; by having the *r-m* crossvein situated just before the middle of cell 1st *M2*; the femora discolored with brown in the median portions; the last section of vein *M1+2*

straight; the third costal section of the wing distinctly shorter than the fifth; and the sixth abdominal segment (fig. 7, b). THORAX: Shining black in ground color, dusted with gray-brown pollen on the dorsum, gray on the sides. The humeri and halteres are yellow, the knobs of the latter are faintly tinged with brown. Legs: Predominantly yellow,

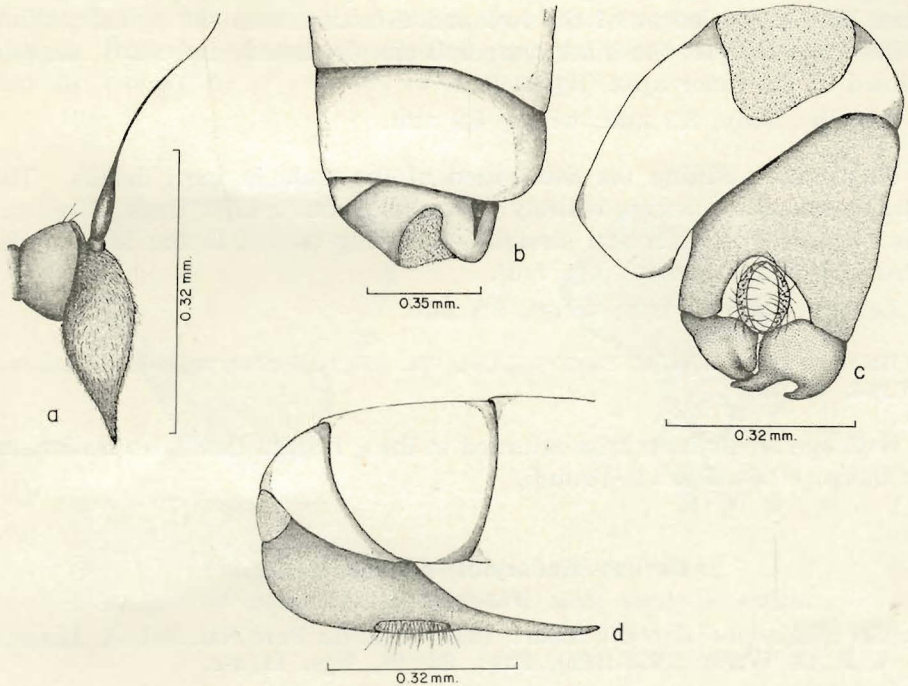


FIG. 7. — *Dorilas (Eudorylas) definitus* n. sp.

a : antenna; b : apex of male abdomen, dorsal view; c : male genitalia, ventral;
d : female ovipositor, lateral.

tinged with brown in the median portions of the femora. The femora are slender, the flexor spines are poorly developed. No conspicuous setae are situated on the swollen portion of the hind tibia. Wings: Hyaline, the third costal section is one-half to two-thirds longer than the fourth section and is approximately three-fourths to four-fifths as long as the fifth costal section. The *r-m* crossvein is situated near the basal two-fifths of cell 1st *M2*. The last section of vein *M1+2* is straight. The last section of vein *M3+4* is about equal in length to the *m* crossvein. Vein *Cul + 1st A* is about two-thirds as long as the last section of vein *M3+4*. Abdomen: Entirely opaque brown to black, rather densely brown

pollinose, gray over the first tergum and on the posterolateral margins of the other abdominal terga. The hypopygium is two-thirds to three-fourths as long as the fifth abdominal segment and as seen from a dorsal view has a large apical membranous area, plus a distinct apical cleft on the right side (fig. 7, b). As seen from a ventral view the membranous area almost completely bisects the eighth segment. The ninth segment is slightly wider than long. The outer clasper is bilobed at apex, the inner lobe is the longer of the two and extends across the apical portion of the inner clasper; the inner clasper is simple, broad, and short, slightly pointed at the inner apex (fig. 7, c).

Length : Body, 3,5 mm; wings, 4,2 mm.

Female. Fitting the description of the male in most details. The third antennal segment is entirely yellow with but a faint tinge of brown. The ovipositor is short and straight, extending almost to the base of the third abdominal segment (fig. 7, d).

Length : Body, 3 mm; wings, 3,8 mm.

Holotype male labelled 1/a/3, 7.II.1950, No. 199 and allotype female Inimvua, 20.V.1952, No. 3488.

Both specimens have been returned to the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi.

***Dorilas (Eudorylas) dorsalis* HARDY.**

(Fig. 8, a-b.)

Dorilas (Eudorylas) dorsalis HARDY, 1950, Expl. du Parc Nat. Albert, Mission G. F. DE WITTE (1933-1935), Fasc. 62 : 26, figs. 11, a-c.

This entirely opaque species is differentiated by the distinctive male genitalia, with the membranous area extending down the median portion of the dorsum almost to the base of the segment and from a dorsal view dividing the eighth tergum into two equal parts; also by having the male claspers rather broad at bases and attenuated apically (fig. 8, b). I now believe that the female specimens which I had originally thought were associated with the males of this species very probably belong to a closely related species and may possibly belong to the species which I am here describing as *quasidorsalis*. Apparently there is some sexual dimorphism in the shape of the third antennal segment but I question whether there should be so much as is shown by these specimens. The males of *dorsalis* look very much like those of *quasidorsalis*; however, the much deeper basal extension of the membranous area on the eighth segment (fig. 8, a), the differences in the male claspers (fig. 8, b), and shorter third antennal segment will readily differentiate it. I am unable to associate females with the male specimens at hand and it is possible that they are confused

in the series which I am now referring to *quasidorsalis*. The elongate third costal section of the wing appears to be a distinctive feature of *dorsalis* and *quasidorsalis*, although at least in the case of the latter species some variation has been seen. The third antennal segment is moderately acuminate in typical *dorsalis*, in the two specimens at hand the third segment is acute at the apex. The stigma fills all of the third costal section and the third section is approximately two times longer than the fourth, the two sections combined are almost as long as the fifth costal section. The *r-m* crossvein is situated near the basal third of cell 1st *M*₂, and the last section of vein *M*₁+2 is straight.

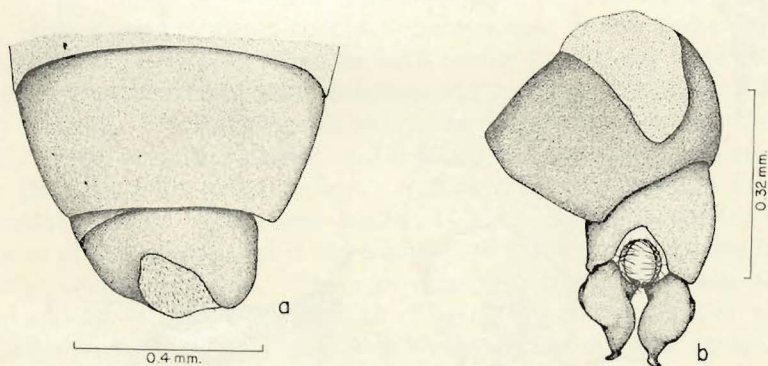


FIG. 8. — *Dorilas (Eudorylas) dorsalis* HARDY.

a : apex of male abdomen, dorsal; b : male genitalia, ventral.

Length : Body, 3-3,3 mm; wings, 3,6-3,9 mm.

Type locality, Kivu, Rutshuru, Albert National Park, Congo.

Type in the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ».

Two male specimens are in the collection containing the following collection data : II/db/8, 6.II.1952, No. 3099; and II/gd/9, 8.XI.1951, No. 2740.

Notation. — The genitalia drawings have been made from a paratype male specimen from Kivu, Congo. The genitalia of the specimens from the Garamba differs slightly in the shape of the basal portion of each clasper although I doubt that the differences seen are of any significance. It will be necessary to examine many more specimens, and to correctly associate the sexes, before the *dorsalis* complex of species can be clearly understood.

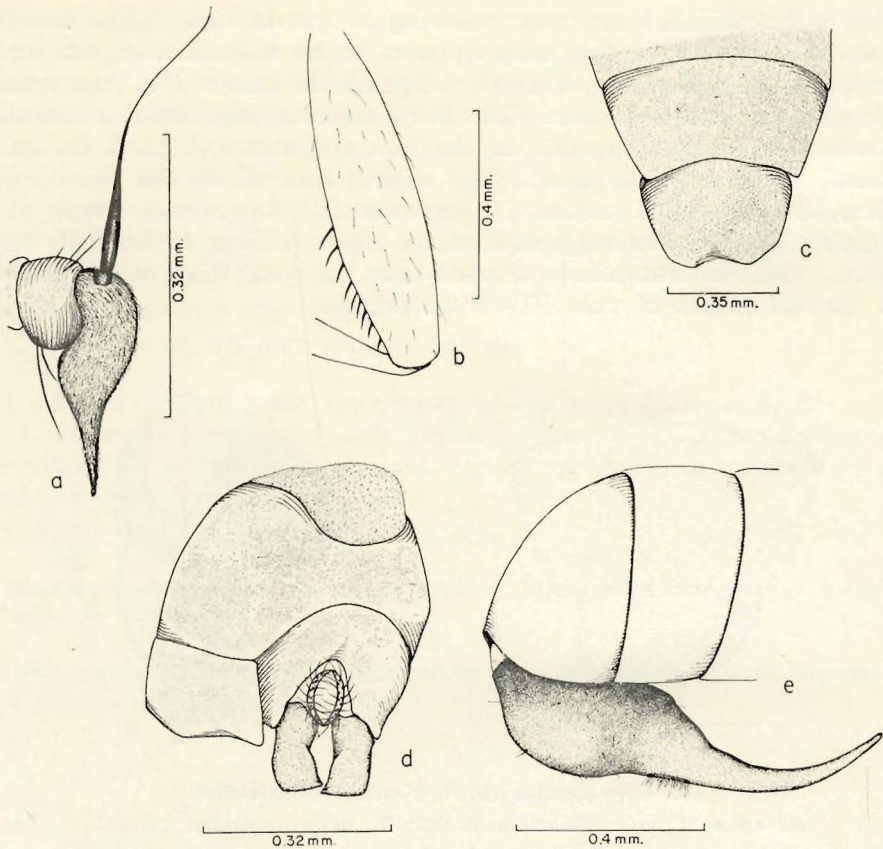


FIG. 9. — *Dorilas (Eudorylas) garambensis* n. sp.
 a : antenna of female; b : hind femur, male; c : apex of male abdomen, dorsal;
 d : male genitalia, ventral; e : female ovipositor, lateral.

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

(Fig. 9, a-e.)

This species is rather closely related to *ghesquierei* HARDY and is differentiated by having very strong flexor spines on all femora (fig. 9, b); by the predominantly yellow legs, with a broad band of brown or black on each femur; by the yellow third antennal segment; and by the yellow humeri.

Male. Head : The compound eyes are joined on the front for a distance about equal to the lower portion of the front. The lower portion of the front and most of the face is silvery gray pubescent, a shining black line extends down the median portion of the face. The face is equal to or

slightly wider than the front. The upper portion of the front, the ocellar triangle, the vertex and the upper portion of the occiput, are shining black; the occiput is otherwise silvery gray pollinose. **Thorax** : Mesonotum and scutellum entirely polished black except for gray dusting on the anterior corners behind the humeri. A line of fine dorsocentral hairs extends down each side of the mesonotum. The humeri are yellow, densely covered with gray pollen. The anterior two-thirds of the mesopleuron is shining brown to black, the lower portion of the sternopleuron is subshining brown to black, the pleura are otherwise gray pollinose. The metanotum is gray pollinose. **Legs** : The coxae are brown, tinged lightly with yellow. The trochanters, tibiae, and tarsi, except the apical segment, are entirely yellow. The femora are broadly yellow at their bases, narrowly so at their apices, with a broad brown to black band covering the apical two-thirds of the segment. The apical half of each femur has strong flexor spines on each of the posteroventral and anteroventral surfaces (fig. 9, b). **Wings** : Faintly fumose. The third costal section is slightly longer than the fourth, typically about one-third longer, and the two sections combined are slightly shorter than the fifth costal section. A stigma extends through most of the third costal section. The basal portion is often distinctly darker than the remainder of the stigma and is somewhat indicative of the crossvein present in species such as *damasi*. The *r-m* crossvein is situated near the basal third of cell 1st *M*₂. The last section of vein *M*₁+2 is straight or nearly so. The abdomen is entirely polished black on the dorsum except for the gray basal portion of the first tergum and except for a gray pollinose area extending over the median portion of the second tergum. The male hypopygium is subshining, gray-brown pollinose, about three-fourths as long as the fifth abdominal segment and with a large apical membranous area (fig. 9, c). The claspers are rather broad, blunt at apices, and slightly curved on the inner margins (fig. 9, d).

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

Female. Fitting the description of the male except for sexual differences and also fitting the description which had been given for the female of *ghesquierei* (1950 : 30, fig. 13, a). The third antennal segment is slightly more acuminate than in the male (fig. 9, a). The upper two-thirds of the front is polished black and a thin black line extends down the median portion of the front almost to the antennae. The face is entirely gray pubescent and is as broad as the front. The basal portion of the stigma appears to be slightly thickened, simulating a crossvein in some lights. The wings are entirely hyaline, lacking the distinct tinge present in the males. The base of the ovipositor is shining black and oblong in shape. The piercer is yellow to rufous, curved upward, and extends approximately to the base of the second abdominal segment (fig. 9, e).

Holotype male labelled II/gd/4, 30.X.1951, No. 2701. Allotype female labelled II/fd/17, 13 II.1952, No. 3125. Three paratypes, one male and two females, containing the following collection data : II/f/17, 20.I.1951, No. 1144; II/fd/10, 20.XII.1951, No. 2935; and II/jd/11, 1.IX.1952, No. 4008.

Type, allotype, and one paratype returned to the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ». One paratype is being deposited in the United States National Museum and one is in the University of Hawaii collection.

Dorilas (Eudorylas) ghesquierei HARDY.

(Fig. 10, a-d.)

Dorilas (Eudorylas) ghesquierei HARDY, 1950, Expl. du Parc Nat. Albert, Mission G. F. DE WITTE (1933-1935), Fasc. 62 : 29, figs 13, a-c.

This species differs from all known dark-legged *Dorilas (Eudorylas)* from the Congo by having the dorsum of the thorax and the abdomen polished black.

This species is closely related to *D. garambensis* n. sp. and the two may possibly have been confused in the past. The female specimen which was set up as the allotype of *ghesquierei* (from Kibati, Albert National Park, Congo) was evidently misplaced and apparently is the female of *garambensis*. *D. ghesquierei* is differentiated by the predominantly black legs, the dark brown to black antennae and humeri, and by the rather weak flexor spines on the femora; as in figure 10, b.

A moderate-sized predominantly black species, polished black on the dorsal surfaces except for a light dusting of gray on the extreme anterior margin of the mesonotum and on the base of the first abdominal tergum. The metanotum and the pleura are gray. The face is moderately broad, equal in width to the widest portion of the front. The third antennal segment is moderately acuminate (see HARDY, 1950 : 32, fig. 13, c), the sharpness of the point varies slightly and is somewhat longer in the females. In the specimens at hand, the antennae and the humeri are entirely dark colored in both sexes and the femora and tibiae of all legs are almost entirely shining black. The third costal section is approximately equal to the fourth and the two sections combined are just slightly shorter than the fifth section. The *r-m* crossvein is situated at the basal third of cell 1st *M*₂, and the last section of vein *M*₁₊₂ is slightly curved. The hypopygium is two-thirds to three-fourths as long as the fifth abdominal tergum and has a very large apical membranous area. The ventral aspects of the genitalia have not previously been described. The membranous portion extends over the entire apex and at least half the length of the right side of the eighth segment. The claspers are rather quadrate in shape, truncate at their apices (fig. 10, c). The female of this species fits the description of the male except that the third antennal

segment is slightly more acuminate (fig. 10, a). The upper two-thirds of the front is polished black, the lower third is gray. The face is about equal in width to the front and is predominantly shining black, gray on the upper third and with a narrow gray line extending down each eye margin. The base of the ovipositor is polished black. The piercer is yellow and straight, extending almost to the base of the second abdominal segment (fig. 10, d).

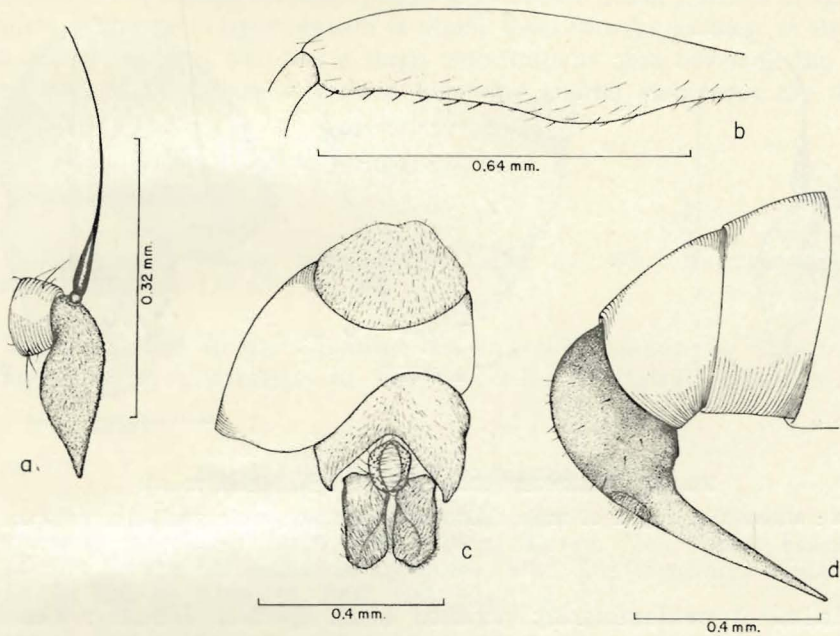


FIG. 10. — *Dorilas (Eudorylas) ghesquierei* HARDY.

a : antenna of female; b : hind femur; c : male genitalia, ventral;
d : female ovipositor, lateral.

Length : Body, 3,3-3,5 mm; wings, 3,8-4 mm.

Type locality, Eala, Congo.

Type in the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi.

This species has been recorded from several localities in the eastern portion of the Congo.

Six specimens were in the collection containing the following collection data : II/d, 5.I.1951, No. 1048 (J. VERSCHUREN); II/gd/11, 4.IX.1952, No. 4036; II/fd/17, 25.VI.1951, No. 1970; II/id/10, 11.IX.1951, No. 2419; II/fd/11, 18.IX.1951, No. 2447; and II/hc/8, 23.IV.1951, No. 1590 (J. VERSCHUREN).

Dorilas (Eudorylas) megacanthus n. sp.

(Fig. 11, a-c.)

This species rather closely resembles *D. (Dorilas) saegeri* n. sp. but fits in a different subgenus by having no propleural fan; the strong spines on the femora and the very different male genitalia (fig. 11, c) will readily differentiate this species.

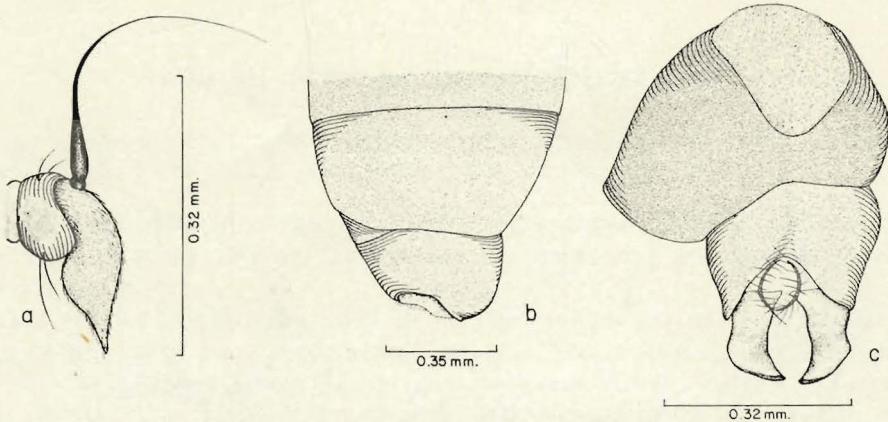


FIG. 11. — *Dorilas (Eudorylas) megacanthus* n. sp.

a : antenna; b : apex of male abdomen, dorsal; c : male genitalia, ventral.

Male. A predominantly polished black species. Head : The eyes are joined on the front for a distance about equal to the lower portion of the front. The lower portion of the front is entirely silvery gray pubescent and the face is predominantly so, shining black in the median portion only on the lower two-fifths. The upper portion of the front, the ocellar triangle, the vertex and upper occiput are shining black; the remainder of the occiput is silvery gray. The first two antennal segments are brown, the third is yellow, tinged faintly with brown; the third segment is short, acuminate at the apex (fig. 11, a). The face is equal in width to the widest portion of the front. Thorax : Polished black on the dorsum, predominantly gray on the sides and over the metanotum; the front portion of the mesopleuron is polished brown to black and the lower portion of the sternopleuron is subshining brown to black. The humeri are yellow covered with gray pollen. The halteres are yellow. Legs : Entirely yellow except for a tinge of brown on the coxae and on the apices of the tarsi. The femora are moderately thickened and each has a strong row of about eight flexor spines extending down each anteroventral and each posteroventral surface on the apical two-fifths of the segment; the length

of the spines is equal to about two-thirds the width of the tibia. Wings : Slightly fumose. The third costal section is about one-third longer than the fourth and the stigma fills the apical five-sixths of the third section. The fifth costal section is about 1,2 times longer than the combined lengths of the third and fourth sections. The proportions are 110 to 94. The *r-m* crossvein is situated near the basal two-fifths of cell 1st *M2* and the last section of vein *M1+2* is slightly curved. Abdomen : Entirely polished black except for the opaque gray-brown basal portion of the first tergum. The male hypopygium is about three-fourths as long as the fifth abdominal segment and has a large membranous area covering the entire apex (fig. 11, b). From a ventral view the genital structures are shaped as in figure 11, c.

Length : Body, 3,5 mm; wings, 4,2 mm.

Female unknown.

Holotype male labelled Ndelele/R, 24.IX.1952, No. 4075. One male paratype labelled PpK/51/g/9, 2.IV.1952, No. 3277.

Type returned to the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi », paratype in the University of Hawaii collection.

Dorilas (Eudorylas) mutillatus (LOEW).

(Fig. 12, a-c.)

Pipunculus mutillatus LOEW, 1857, Öfver. Kongl. Vet. Akad. Förhandl., 14 : 374 (misspelled *mutilatus* by LOEW, 1860, Dipterenfauna Sudafrikas, 1 : 283 and by KERTESZ, 1909, Cat. Dipt., 6 : 377).

Dorilas (Eudorylas) mutillatus (LOEW), HARDY, 1949, Mem. Inst. roy. des Sc. nat. de Belg., 2nd Ser., Fasc. 36 : 44, figs 29, a-c.

An entirely opaque gray-brown pollinose species, differentiated by the distinct cleft on the right side of the male hypopygium, in combination with the apical membranous area (fig. 12, a) and the distinctive characteristics of the male claspers (fig. 12, b). The third antennal segment is acute to short acuminate and is brown, tinged with yellow. The humeri are yellow, tinged faintly with brown. The femora are broadly banded with dark brown or black. The tibiae and tarsi are predominantly yellow. The third and fourth costal sections are approximately equal in length and the stigma fills all of the third section. The *r-m* crossvein is typically situated at the basal two-fifths of cell 1st *M2*. From a dorsal view the hypopygium is as in figure 12, a, from a ventral view it is as in figure 12, b. The inner clasper is broad and blunt at apex, the outer clasper is attenuated into a slender point on the inner apex. In some specimens, a lobe is developed on the inner apex of the inner clasper. The female ovipositor is short and curved, as in figure 12, c. The third antennal

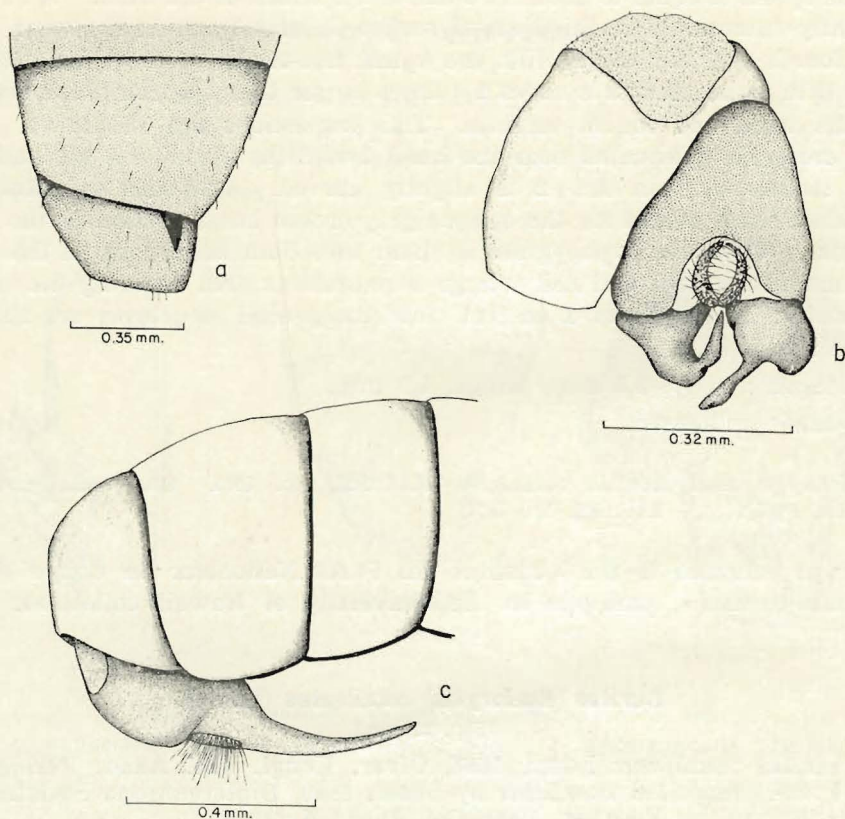


FIG. 12. — *Dorilas (Eudorylas) mutillatus* (LOEW).

a : apex of male abdomen, dorsal; b : male genitalia, ventral;
c : female abdomen, lateral.

segment of the female is usually more distinctly acuminate than in the male. Also, the legs are usually more extensively yellow in the female.

The body averages 4 mm and the wings average about 4,5 mm.

Type locality, Caffraria.

The type is probably in the Zoological Museum, Berlin.

I have recorded this from numerous localities over the Congo and throughout South Africa, the species is obviously widely distributed.

Eleven specimens are in the collection, they contain the following collection data : II/fd/12, 5.VIII.1952, No. 3884; II/fd/18, 8.X.1951, No. 2555; II/fd/17, 14.XII.1951, No. 2910; PpK/10/d/10, 5.III.1952, No. 3167; PpK/12/d/9, 2.I.1952, No. 2972; Iso/III, 26.IX.1952, No. 4100; PpK/60/d/8, 18.XII.1951, No. 2924; II/PpK/52/d/9, 28.X.1951, No. 2679; I/b/3, 28.XII.1949, No. 75; I/c/2", 3.I.1950, No. 195; and II/fd/10, 20.XII.1951, No. 2935.

Dorilas (Eudorylas) quasidorsalis n. sp.

(Fig. 13, a-g.)

This species fits very close to *dorsalis* and is differentiated by the characteristics of the male genitalia and by the long acuminate third antennal segment (fig. 13, a-b).

Male. An entirely opaque, dark colored species. **Head :** The compound eyes are joined on the top of the head for a distance equal to about one-half the length of the front. The lower portion of the front is silvery gray except for a shining black spot in the median portion. The upper portion of the front and the ocellar triangle are shining black. The vertex and the upper occiput are rather heavily dusted with brown pollen, the remainder of the occiput is densely gray pollinose. The face is entirely silvery gray and is equal in width to the widest portion of the front. The antennae are dark brown to black. The third segment is moderately long acuminate below (fig. 13, b). **Thorax :** Shining black in ground color, rather densely dusted with gray-brown on the dorsum, gray on the sides. The humeri are yellow, tinged faintly with brown. The halteres are tinged with brown at their apices. **Legs :** Predominantly black, the apices of the femora and tibiae are narrowly yellow, and the bases of the tibiae are rather broadly yellow; the tarsi are yellow, tinged with brown. The hind tibia has one moderately strong, erect, posterior hair on the swollen portion. **Wings :** Hyaline, except for the darkened stigma. The third costal section is approximately two times longer than the fourth (fig. 13, d), and the two sections combined are subequal to the fifth costal section. The *r-m* cross-vein is situated near the basal two-fifths of cell 1st *M2* and the last section of vein *M1+2* is straight. The last section of vein *M3+4* is about five-sixths as long as the *m* crossvein and the last section of vein *Cul+1st A* is about four-fifths as long as the last section of vein *M3+4*. **Abdomen :** Entirely opaque, dark brown to black, faintly dusted with gray at the apices of the terga. As seen from a dorsal view, the membranous area over the apex of the eighth segment bisects the segment about half way to its base (fig. 13, c). This may possibly be variable; in two paratype specimens the membranous area extends much closer to the base of the segment, more nearly like that of typical *dorsalis*. From a ventral view the claspers of the type are as in figure 13, e. The basal portions are broad, nearly quadrate and the inner apices are attenuated. It should be noted that in the two above-mentioned paratypes the claspers also show a slightly different shape than the type. The bases are more distinctly lobate as in figure 13, f. More specimens will need to be studied before the range of variation for this species is understood.

Length : Body, 3,3 mm; wings, 3,9 mm.

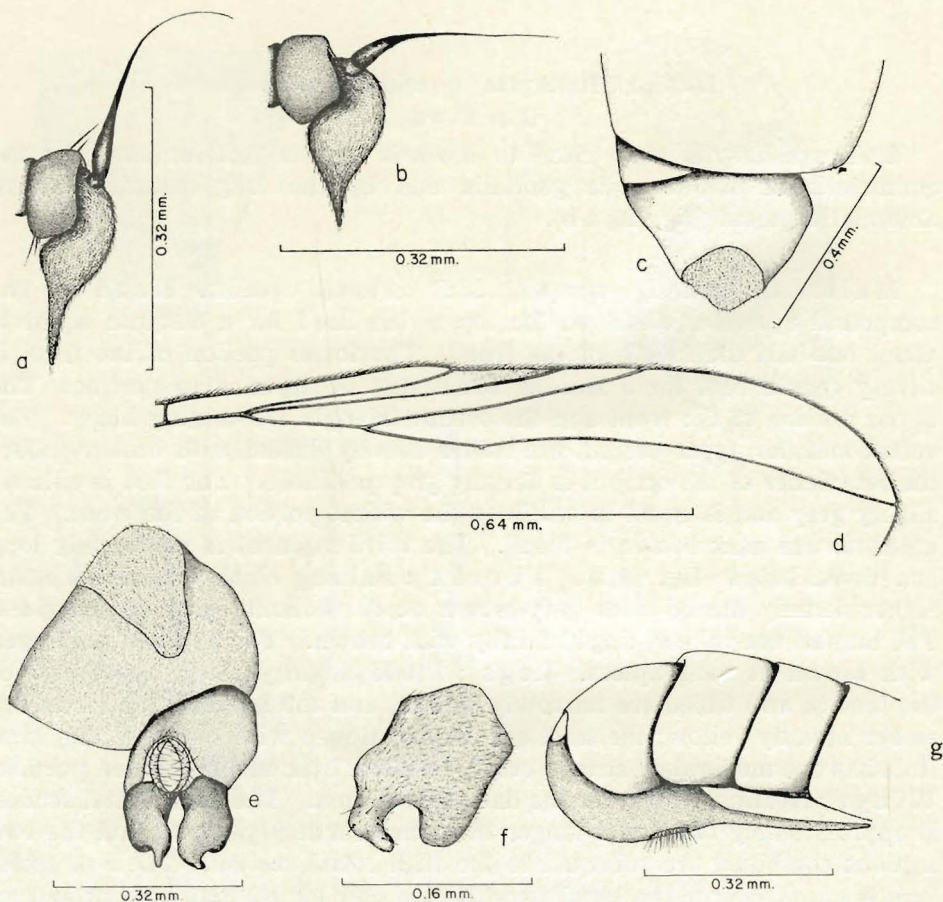


FIG. 13. — *Dorilas (Eudorylas) quasidorsalis* n. sp.

a : antenna of female; b : antenna of male; c : apex of abdomen, dorsal;
 d : anterior margin of wing; e : male genitalia, ventral; f : right clasper;
 g : abdomen of female, lateral.

Female. The female specimens at hand which appear to belong with the above males show some sexual dimorphism and it is impossible to be absolutely sure that they are properly placed. They fit the above description in most respects, differing, however, in that the front is broadened in the median portion and the upper three-fourths to four-fifths is polished black. The third antennal segment is longer acuminate below (fig. 13, a). The thorax and abdomen are more heavily dusted with gray. The third costal section varies from about equal to the fourth to about one-half longer than the fourth. The ovipositor is straight, extending to about the apex of the second abdominal segment (fig. 13, g).

Length : Body, 2,65 mm; wings, 2,75-3 mm.

Holotype male labelled II/fd/18, 21.XII.1951, No. 2939. Allotype female labelled II/gd/4, 22.VIII.1952, No. 3964. Nine paratypes, three males and six females, containing the following collection data : One same as type; II/gc/8, 30.IV.1952, No. 3402; II/fc/18, 24.XI.1951, No. 2806; II/fd/17, 28.I.1952, No. 3067; II/gd/10, 8.VIII.1952, No. 3909; II/gc/8, 10.VII.1952, No. 3765; II/fd/18, 28.VI.1952, No. 3708; and II/le/8, 3.V.1952, No. 3417.

The type, allotype, and five paratypes have been returned to the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ». The remainder of the paratypes are being deposited in the United States National Museum and the University of Hawaii collections.

Dorilas (Eudorylas) rubrus HARDY.

(Fig. 14, a-b.)

Dorilas (Eudorylas) rubrus HARDY, 1950, Expl. du Parc Nat. Albert, Mission G. F. DE WITTE (1933-1935), Fasc. 62 : 35, figs 18, a-b.

A female specimen at hand apparently is this species; it differs slightly, however, from the original description by having the third costal section slightly over one-half as long as the fourth and the two sections combined only slightly longer than the fifth section. Also, the third antennal segment is more moderately acuminate (fig. 14, a), and the specimen is smaller than was recorded for the male.

The female has not previously been described, the following notes are based upon the specimen at hand. The thorax is rather densely brownish pollinose on the dorsum, gray on the sides. The first five abdominal terga are entirely polished, yellow on the sides, brown down the median portion. The sixth tergum is brown to black over the dorsal portion, yellow on the sides; the entire sixth tergum is rather densely covered with gray-brown pubescence. The front is almost entirely gray, shining black just beneath the ocelli. The face is densely silvery gray pubescent and is slightly wider than the front. The first two antennal segments are yellow-brown, the third segment is yellow, moderately acuminate (fig. 14, a). The legs are entirely yellow except for the brown to black apical segment of each tarsus. Flexor spines are strongly developed on all femora (rather similar to the fig. 9, b). The fourth costal section of the wing is about two-thirds longer than the third and the two sections combined are just slightly longer than the fifth section. The *r-m* crossvein is situated at the basal two-fifths of cell 1st *M2*. The last section of vein *M1+2* is straight or nearly so. The base of the ovipositor is globose, reddish brown to black in ground color, lightly dusted with gray pollen. The piercer is yellow, strongly curved, extending to the base of the fourth abdominal segment (fig. 14, b).

Length : Body, 3 mm; wings, 3,5 mm.

The specimen at hand is labelled Makpe/8, 5.XI.1951, No. 2718.

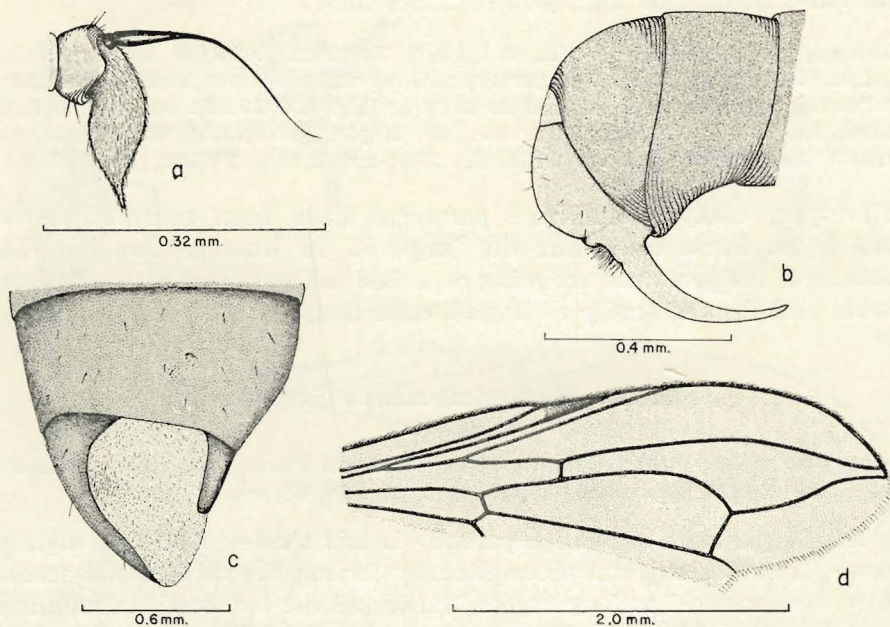


FIG. 14. — a, b : *Dorilas (Eudorylas) rubrus* HARDY;
 c, d : *Dorilas (Eudorylas) sinuosus* HARDY.
 a : antenna; b : female ovipositor, lateral;
 c : apex of male abdomen, dorsal; d : wing (posterior
 margin not drawn).

***Dorilas (Eudorylas) sinuosus* HARDY.**

(Fig. 14, c-d.)

Dorilas (Eudorylas) sinuosus HARDY, 1949, Mém. Inst. royal des Sc. nat. de Belg., 2nd Series, Fasc. 36 : 56, figs. 40, a-c.

Dorilas (Eudorylas) bredoi HARDY, 1949, Bull. Inst. royal des Sc. nat. de Belg., 25(39) : 1, figs. 1, a-c. New synonymy.

This unusual species is readily differentiated from all other known *Dorilas* from the Congo by having the compound eyes of the male distinctly separated on the front; by the distinctive wing venation; and by the male genital characters.

The third antennal segment is brown to black, tinged faintly with yellow, and is obtuse to short acute below. The third and fourth costal sections are approximately equal in length and the two sections combined are about half as long as the fifth costal section. Vein *M*₁₊₂ is strongly arcuate between the *r-m* and the *m* crossveins (fig. 14, d). The body is

entirely shining black in ground color, rather faintly gray-brown pollinose on the dorsum, gray on the sides; the shining ground color shows through but there are no polished areas on the dorsum. The femora are almost entirely black and the tibiae are marked with brown to black in the median portions of the segments. The male hypopygium is strongly developed, nearly one-half longer than the fifth abdominal segment; a large membranous area extends over the apex from the dorsal to the ventral margin of the eighth segment and often a keel-like development is present in the median portion of the membranous area (fig. 14, c). For additional descriptive details, refer to the original and to HARDY (1952 : 65, fig. 4).

Length : Body, 5,25-6,2 mm; wings, 4,6-5,4 mm.

The female was described as *D. bredoi* HARDY (1949 b : 1, figs 1, a-c). It fits the description of the male in most details. The ovipositor is straight and slender, extending to the apex of the fourth abdominal segment.

Type locality, Umbilo, Durban.

Type in the Commonwealth Institute of Entomology, London.

I have previously recorded (1952 b : 65) this from the Upemba National Park.

Two male specimens in the collection at hand contain the following data : I/a/1, 13.II.1950, No. 205; and PFSK/8/d/9, 25.III.1952, No. 5229.

***Dorilas (Eudorylas) unanimus* HARDY.**

(Fig. 15, a-e.)

Dorilas (Eudorylas) unanimus HARDY, 1949, Bull. Inst. royal des Sc. nat. de Belg., 25(39) : 4, figs 3, a-c.

A series of females are on hand which fit my concept of this species (HARDY, 1952 a : 13, fig. 9). A male specimen is present which apparently belongs here, it fits all of the described characteristics of this species except that the third antennal segment is less acuminate. It is possible that this may be a variable character and evidently it is typical for the third antennal segment to be longer acuminate in the female (fig. 15, a) than in the male (fig. 15, b). The comparative lengths of the third and fourth costal sections do not seem to be an important character in characterizing *unanimus*. In the original description it was indicated that the third costal section is one-half longer than the fourth. In the specimens which have been seen since that description it is obvious that this is somewhat variable, especially in the females, and often the third section will be equal or but slightly longer than the fourth. The long acuminate third antennal segment, curved ovipositor (fig. 15, e), and strong flexor spines will differentiate the female. The male is recognized by the rather large hypopygium, which is approximately equal in length to the fifth abdominal segment, which has no dorsal cleft on the right side, and which has a large apical membranous area

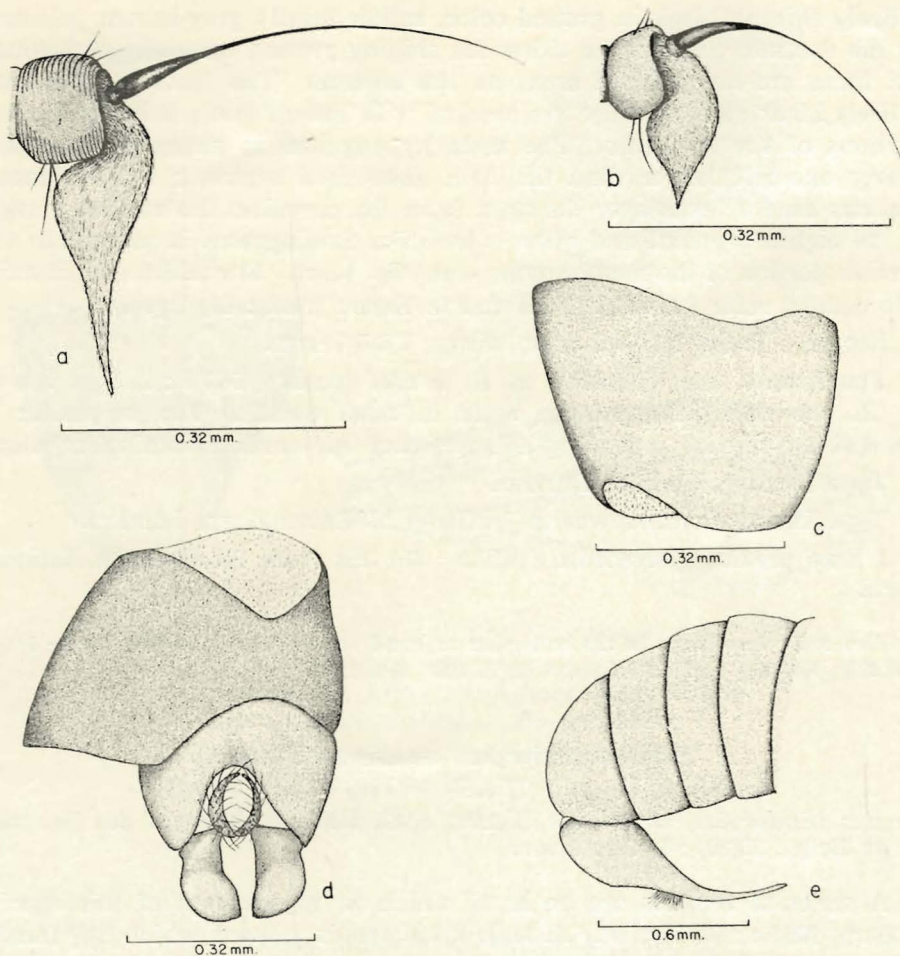


FIG. 15. — *Dorilas (Eudorylas) unanimus* HARDY.

a : antenna of female; b : antenna of male; c : apex of abdomen, dorsal;
d : male genitalia, ventral; e : female abdomen, lateral.

(fig. 15, c). From a ventral view the male genitalia are as in figure 15, d (based upon the somewhat aberrant specimen mentioned above, this may possibly be misidentified). The claspers are broad and blunt, rounded at apices. It should be noted that the male specimen discussed here is considerably smaller than was the type and it is possible that two species are involved.

The female specimens at hand measure 4,3-4,6 mm for the body and 4,5-5,3 mm for the wings; the male specimen mentioned above measures,

body, 3,75 mm; wings, 4 mm. The original description of the type male indicated that the body measured 5,4 mm and the wings 6,5 mm.

Six specimens are in the collection, including the one atypical male mentioned above, containing the following data : II/gd/4, 19.X.1951, No. 2616; II/fd/17, 14.XI.1951, No. 2761; II/gd/17, 30.VI.1952, No. 3719; PpK/12/d/9, 2.I.1952, No. 2972; II/gd/8, 10.IV.1952, No. 3313; and (male specimen) II/fd/17, 9.VI.1951, No. 1888.

Type locality, Rutshuru, Congo.

Type in the « Institut royal des Sciences naturelles », Belgium.

The species has been recorded from several localities in the eastern portion of the Congo.

Dorilas (Eudorylas) n. sp. ?, species A.

(Fig. 16, a-b.)

One female specimen on hand, in rather poor condition, represents an apparently undescribed species which is very similar in most respects to *D. megacanthus* n. sp. It differs strikingly, however, by having the third antennal segment long acuminate (fig. 16, a) and the femora slender with weak flexor spines.

Fitting the description of *D. megacanthus* in most respects, except for the characters mentioned above. The upper two-thirds of the front is black in the specimen at hand, the upper third being polished, the median third being opaque; the lower third of the front is gray pubescent. The face is broad, equal to or slightly wider than the front. The third and fourth costal sections are approximately equal in length and the two sections combined are about one-third longer than the fifth costal section. The stigma fills almost all of the third costal section. The fifth abdominal segment is rather elongate, about two-thirds longer than the fourth. The sixth segment is poorly developed, scarcely visible from a direct dorsal view. The ovipositor is very short, inconspicuous, extending almost to the base of the fifth abdominal segment (fig. 16, b).

Length : Body, 3,2 mm; wings, 4 mm.

The one specimen in the collection is labelled Aka/2, 22.V.1952, No. 3154.

Dorilas (Eudorylas) n. sp. ? B, related to *mutillatus*.

(Fig. 16, c.)

This species appears to be closely related to *mutillatus* and fits the characteristics of that species in most respects. The details of the body coloring, the wing venation, and the ovipositor appear almost identical. It differs, however, in having a long acuminate third antennal segment (fig. 16, c), the attenuated portion is approximately equal to the remainder

of the third segment. Also, the legs are predominantly darker, the femora are almost entirely black, and the tibiae are extensively brown.

Length : Body, 3,3 mm; wings, 3,7 mm.

One female in the collection labelled PpK/12/d/9, 2.I.1952, No. 2972.

Dorilas (Eudorylas) ssp ? Poor condition.

Three specimens on hand are in poor condition and cannot be identified to species. They contain the following collection data : II/gc/11, 13.XI.1951, No. 2757; PFSK/22/8, 10.VI.1952, No. 3608; and Aka/2, 19.V.1952, No. 3476.

Genus **TOMOSVARYELLA** ACZÉL.

Tomosvaryella ACZÉL, 1939, Zool. Anzeiger, 125 : 22.

Members of this genus are characterized by lacking a stigma in the wing; by having the *r-m* crossvein usually near the middle of cell 1st *M*₂; the hind margin of the eyes not concave; and the abdomen not strongly clavate posteriorly.

Fourteen species are present in the collection.

Type of the genus : *Pipunculus sylvaticus* MEIGEN.

REVISED KEY TO THE *TOMOSVARYELLA* KNOWN FROM
THE CONGO, BASED CHIEFLY UPON MALES.

- | | | |
|-------|--|-----------------------------|
| 1 | Crossvein <i>r-m</i> situated near the middle of cell 1st <i>M</i> ₂ . Cubital cell with a moderately long petiole | 2 |
| — | Crossvein <i>r-m</i> situated near the base of cell 1st <i>M</i> ₂ . Cubital cell lacking a petiole | <i>basalis</i> HARDY. |
| 2 (1) | Hind trochanter of male with a trapezoid shaped, densely white pubescent, ventral process. Male hypopygium symmetrical, rounded, with the membranous area confined to the right side of the eighth segment | <i>subvirescens</i> (LOEW). |
| — | Hind trochanter without such a flat-topped process. If the male hypopygium is symmetrical (<i>T. vicina</i>) the hind trochanter has a triangular shaped process (fig. 27, a) | 3 |
| 3 (2) | Hind trochanter of male with one or two distinct ventral processes or a protuberance | 4 |
| — | Hind trochanter smooth ventrally, not tuberculate | 11 |
| 4 (3) | Hind trochanter of male with two ventral processes (fig. 17, a) ... | 10 |
| — | Only one ventral process on the hind trochanter | 5 |

- 5 (4) Mesonotum, metanotum, and abdomen entirely polished black ... 6
 — Mesonotum and abdomen subshining, lightly brown pollinose; metanotum and pleura gray pollinose 7
 6 (5) The process on the hind trochanter is moderately long, straight-sided (fig. 25, a). Male genitalia as in figure 25, c. Crossvein *r-m* situated at the middle of cell 1st *M2* *singula* HARDY.

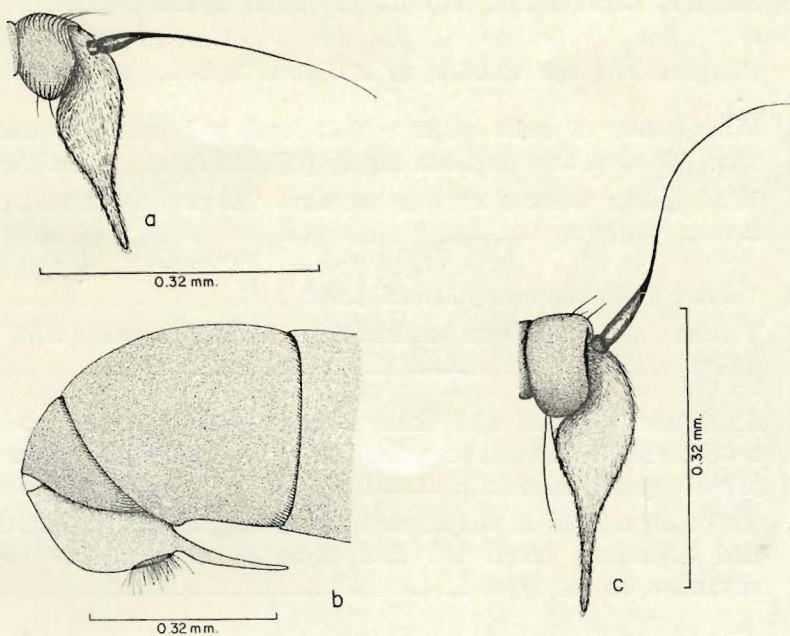


FIG. 16. — *Dorilas (Eudorylas)* n. sp. ?
 Species A : a : antenna; b : female ovipositor, lateral.
 Species B : c : antenna.

- The process on the hind trochanter is triangular in shape (fig. 26, b). Genitalia as in figure 26, c. Crossvein *r-m* situated near the basal third of cell 1st *M2* *torosa* n. sp.
 7 (5) Hypopygium symmetrical, evenly rounded as seen from dorsal view, similar to that of *subvirescens* with the membranous area confined to the right side (fig. 27, c). Hind trochanter with a triangular-shaped process ventrally (fig. 27, a). Male claspers as in figure 21, b *vicina* (BECKER).

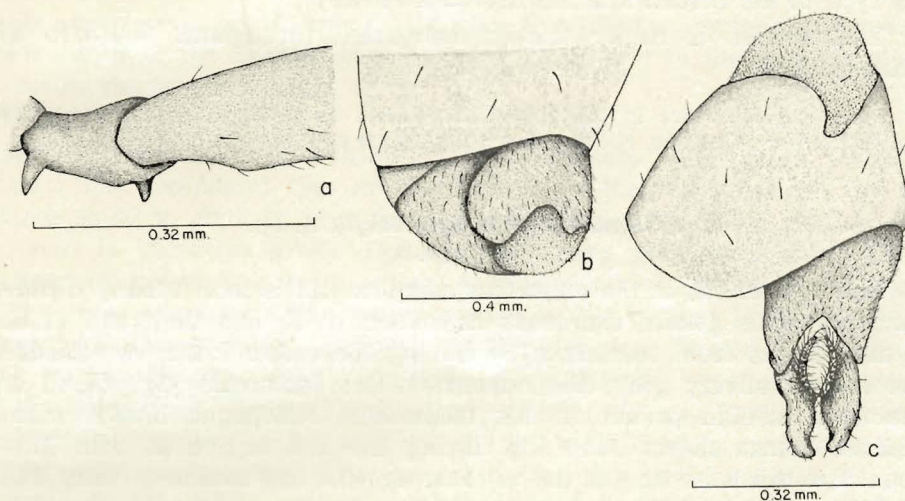
- Hypopygium with a large membranous area extending over the apex. Process on hind trochanter more extended, not so triangular in shape 8
- 8 (7) Hind trochanter with a small basal bump bearing two or three small, closely-placed bristles (fig. 24, b). Male hypopygium with a longitudinal seam down the mid-line (fig. 24, c) *setositora* n.sp.
- Not as above 9
- 9 (8) Claspers rather short, beak-like on inner apices (fig. 18, e)
brachyscolops n.sp.
- Claspers long and slender, as in figure 21, b ... *mbuyensis* HARDY.
- 10 (4) Hind femur of male with a well-developed ventral process near base. Thorax and abdomen highly polished black ... *tridens* HARDY.
- Hind femur without such a process. Thorax and abdomen gray-brown pollinose *africana* HARDY.
- 11 (3) Thorax and abdomen polished black 12
- Thorax and abdomen subshining black, dusted with brown pollen 15
- 12 (11) Abdomen elongate, 1,22 times longer than the head and thorax combined. Hind tarsi very flat and broad (fig. 20, a). Eyes of male joined on the front *latitarsis* HARDY.
- Abdomen normal in shape, scarcely as long as the combined thorax and abdomen. Tarsi not flat. Eyes of male at least narrowly separated on the front 13
- 13 (12) Male claspers slender, straight-sided, slightly enlarged at tips (fig. 22, d) *mesostena* n. sp.
- Male claspers irregular in shape as in figures 18, b and 19, c ... 14.
- 14 (13) Male claspers as in figure 19, c. Posterior surfaces of femora lightly pollinose *incondita* n. sp.
- Male claspers as in figure 18, b. Posterior surfaces of femora densely silvery gray pollinose *ancylostyla* n. sp.
- 15 (11) Male claspers simple, evenly tapered, lacking ventral processes (fig. 19, a). Female ovipositor with a conspicuous basal protuberance (fig. 19, b) *congoana* HARDY.
- Each clasper with a small preapical tooth on the ventral surface (fig. 23, b). Female ovipositor lacking a basal protuberance, strongly curved, almost S-shaped *parvicuspis* n. sp.

Tomosvaryella africana HARDY.

(Fig. 17, a-c.)

Tomosvaryella africana HARDY, 1949, Mem. Inst. royal Sc. Nat. Belg., 2nd Series, Fasc. 36 : 65.

This species fits near *T. tridens* HARDY because of the development of two ventral processes on each hind trochanter. It is differentiated, however, by the lack of a ventral process on the hind femur; by the predominantly brown pollinose body; by the differences in development of the ventral processes on the trochanters; as well as by genital characters.

FIG. 17. — *Tomosvaryella africana* HARDY.

a : hind trochanter of male; b : apex of male abdomen, dorsal;
c : male genitalia, ventral.

A predominantly opaque brown species, shining black in ground color. The junction of the compound eyes in the male is about two-thirds as long as the lower portion of the front. The lower front is densely gray pubescent. The upper occiput is subshining black, rather densely brown pollinose. The third antennal segment is brown, tinged with yellow in the ground color; densely gray pubescent, and moderately acuminate below. The dorsum of the thorax and the abdomen are subshining black, rather densely brownish gray pollinose. The latter is sparsely covered with short, inconspicuous hairs. The pleura and metanotum are gray pollinose. The wing venation and leg coloration details are the same as is typical of most African *Tomosvaryella*. The hind trochanter of the male is developed

as in figure 17, a. The male hypopygium has a large membranous area covering the entire apex and also has a longitudinal groove extending over the median portion (fig. 17, b). From a ventral view, the membranous area covers the entire apex of the eighth segment. The ninth segment is approximately as wide as long and the cleft of the hind margin extends about one-half the length of the segment. The claspers are simple, shaped as in figure 17, c. The base of the female ovipositor is oval in shape, with a gibbose area beneath. The piercer is straight, slender, and but slightly longer than its base.

Length : Body and wings, 2,6-2,9 mm.

Type locality, Okahandja, Southwest Africa.

Type in the British Museum (Natural History).

This species is rather widely distributed throughout Southern and Eastern Africa.

Four specimens are in the collection labelled as follows : II/fd/14, 10.XII.1951, No. 2281; I/b/3", 1.III.1950, No. 261; and I/b/3, 28 XII.1949, No. 75.

Tomosvaryella ancylostyla n. sp.

(Fig. 18, a-b.)

This species fits in the *mesostena* complex and is most readily differentiated by male genital characters as shown in figures 18, b and 22, d. It also differs from *mesostena* by having the entire lower two-thirds of the occiput silvery gray, the antennae short acuminate (fig. 18, a), and the front median portion of the mesonotum subopaque brown with a distinct bronze sheen. Also, by having the last section of vein *M*3+4 about two-thirds as long as the *m* crossvein, the last section of vein *M*1+2 slightly curved, and the posterior surfaces of the femora are densely silvery gray pollinose; in *mesostena* the posterior surfaces of the femora are lightly gray pollinose.

The mesopleura and the upper portion of the pteropleura are gray pollinose. The compound eyes are narrowly separated on the front by a shining black line equal in width to about one-half an eye facet. Each tibia has a silvery gray, densely pubescent area on the posterior surface at the apical one-third to one-half of the segment, this is especially conspicuous on the hind tibia. The basitarsus and the apical tarsal segment are brown to black and the other tarsal segments are brown, tinged with yellow. From a dorsal view, the membranous area covers the entire apex of the eighth segment, from a ventral view the membranous area deeply dissects the segment. The outer clasper is rather short and thick, blunt at apex. The inner is moderately slender and strongly curved outward on the outer half (fig. 18, b).

Length : Body, 2,25 mm; wings, 3,5 mm.

Female unknown.

Holotype male labelled PpK/52/g, 16.X.1951, No. 2614. Two male paratypes labelled as follows : Napokomweli, 18.X.1950, No. 895 (G. DEMOULIN); and II/gd/4, 27.XII.1951, No. 2944.

Type and one paratype returned to the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ». One paratype in the University of Hawaii collection.

Tomosvaryella brachyscolops n. sp.

(Fig. 18, c-e.)

This species superficially resembles *T. vicina* (BECKER) because of the shape of the process on the hind trochanter. It is differentiated by having a large apical membranous area on the male hypopygium, by the differences in the shapes of the claspers (fig. 18, e and 27, b), and in the shape of the process on the trochanter (fig. 18, d).

Male. Predominantly subshining black, dusted with brown pollen. Head : The compound eyes are very close together on the front for a distance equal to eight or nine rows of eye facets. The lower portion of the front is brownish gray. The face is silvery gray pubescent. The antennae are brown, the third segment is moderately acuminate and rather thickly gray pubescent. The upper portion of the occiput is subshining, dusted with brown pollen, the lower portion is gray. Thorax : Shining black in ground color, brown pollinose on the dorsum, gray on the sides and the metanotum. Humeri and halteres yellow. Legs : Coxae, trochanters, and femora dark brown to black, the latter are densely gray pollinose on the posterior surfaces. The process on the hind trochanter is as in figure 18, d. The tibiae are yellow at their bases and apices, black in the median portion. The front femur has no sub-basal ventral setae. Wings : Similar to those of most African *Tomosvaryella* except that vein *Cul+1st A* is very short, scarcely longer than the *r-m* crossvein and evanesces before reaching the wing margin. The *r-m* crossvein is situated at or slightly beyond the middle of cell 1st *M2*. Abdomen : Shining black in ground color, dusted with gray on the first tergum and rather thickly dusted with brown over the remainder of the dorsum. The dorsal surface is also rather sparsely covered with short, suberect setae. The male hypopygium is scarcely one-half as long as the fifth abdominal segment and has a large apical membranous area (fig. 18, e). From a ventral view, the membranous area covers the apex of the eighth segment completely and almost bisects the segment. The ninth segment is about as wide as long and is deeply cleft on the hind margin. The claspers are rather simple, slightly pointed on their inner apices (fig. 18, e). Each clasper has a rather dense clump of pile on the dorsomedian surface.

Length : Body, 3 mm; wings, 3,4 mm.

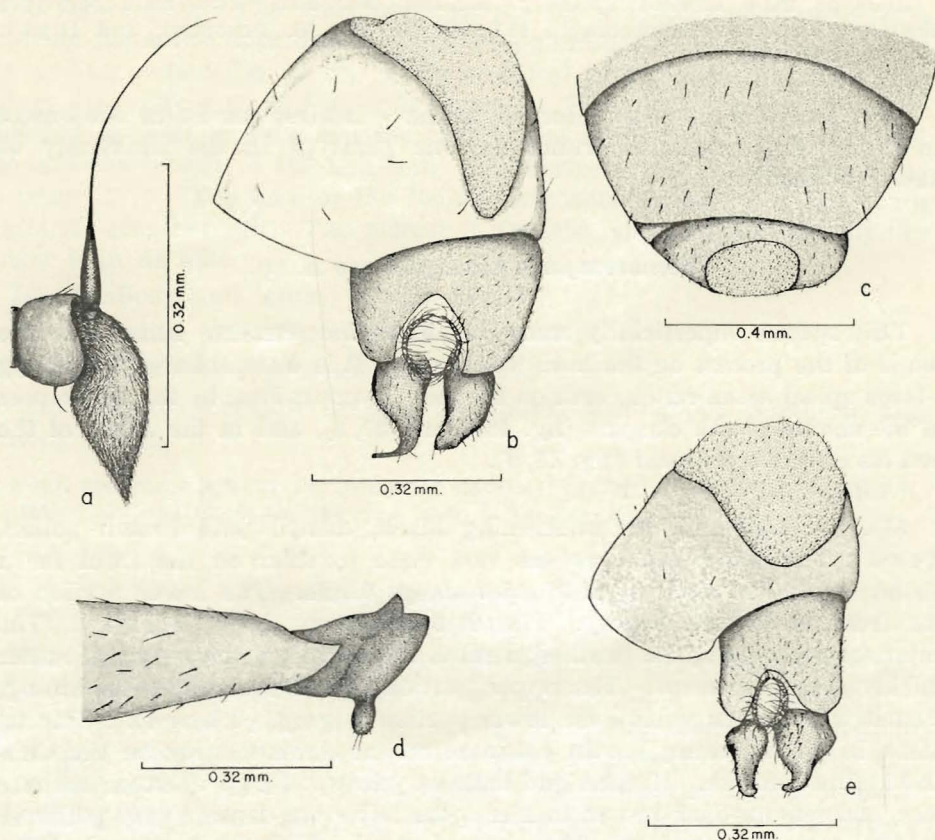


FIG. 18. — a, b : *Tomosvaryella ancylostyla* n. sp.;
 c, d, e : *Tomosvaryella brachyscolops* n. sp.
 a : antenna; b : male genitalia, ventral.
 c : apex of male abdomen, dorsal; d : hind trochanter
 of male; e : male genitalia, ventral.

The female sex has not been associated with the males at hand.

Holotype male labelled II/fd/15, 22.IX.1951, No. 2464. Three male paratypes labelled as follows : II/fd/7", 5.V.1952, No. 3424; PpK/55/d/8, 19.XI.1951, No. 2768; and II/fd/6, 13.VII.1951, No. 2072.

Type and two paratypes returned to the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ». One paratype retained in the University of Hawaii collection.

Tomosvaryella congoana HARDY.

(Fig. 19, a-b.)

Tomosvaryella congoana HARDY, 1950, Inst. des Parcs Nat. du Congo et du Ruanda-Urundi, Fasc. 62 : 45, figs 24, a-c.

A complex of species occur in the Congo region which agree in appearance by having the thorax and abdomen dusted with gray pollen, the hind trochanters of the male without ventral projections, and the male hypopygium with an apical membranous area. I find no definite ways to differentiate these species except by male genital characters. *T. congoana* is recognized by the simple, evenly tapered male claspers (fig. 19, a). It is also slightly larger than most species of this complex but this cannot be depended upon. In general details this fits the description of other members of this complex. The hind trochanters are smooth ventrally and are covered with fine, gray pubescence. The membranous area covers the entire apex of the eighth abdominal segment. The ninth segment is slightly wider than long, the cleft on the posterior margin extends half the length of the segment. The claspers are shaped as in figure 19, a.

Length: Body, 3,6-4 mm; wings, 4-4,4 mm.

Female specimens are on hand which apparently belong with the males. They fit the description of the male in most respects. The ovipositor, however, is distinctive; the basal portion has a large protruberance developed ventrally; the piercer is straight and extends approximately to the apex of the third abdominal segment (fig. 19, b).

Type locality, Katanda, Albert National Park, Congo.

Type in the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ».

Eight specimens are in the collection containing the following labels : II/gc/6, 21.VIII.1952, No. 3963; II/hd/4, 6.XII.1951, No. 2861; II/gd/4, 27.XII.1951, No. 2944; PpK/9/g/9, 10.XI.1952, No. 4044; I/o/2, 3.X.1950, No. 866 (G. DEMOULIN); I/o/3 (aval), 29.IX.1950, No. 853 (G. DEMOULIN); II/gd/4, 22.VIII.1952, No. 3964; and Iso/III, 26.IX.1952, No. 4100.

Tomosvaryella incondita n. sp.

(Fig. 19, c.)

This species fits in the *mesostena* complex and appears to be identical with that species except for genital characters. The male claspers are very differently shaped than are those of *mesostena*; the two claspers are asymmetrical, irregularly formed, and each has a dorsal keel (fig. 19, c). Also, the membranous area is confined to the apex of the eighth segment as seen from both dorsal and ventral views. In other details, fitting the description of *mesostena*.

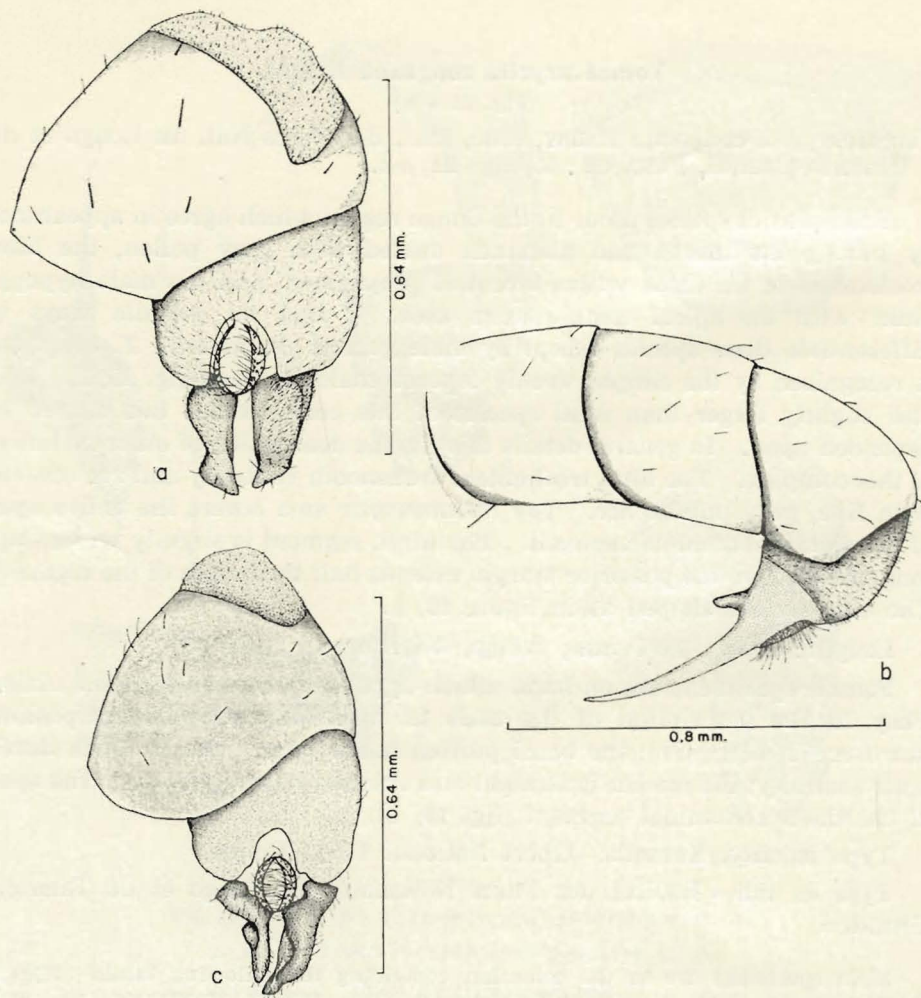


FIG. 19. — a, b : *Tomosvaryella congoana* HARDY;
 c : *Tomosvaryella incondita* n. sp.
 a : male genitalia, ventral; b : female ovipositor,
 lateral.
 c : male genitalia, ventral.

Length : Body, 2,7 mm; wings, 3 mm.
 Female unknown.

Holotype male, Pidigala, 23.IV.1952, No. 3328.

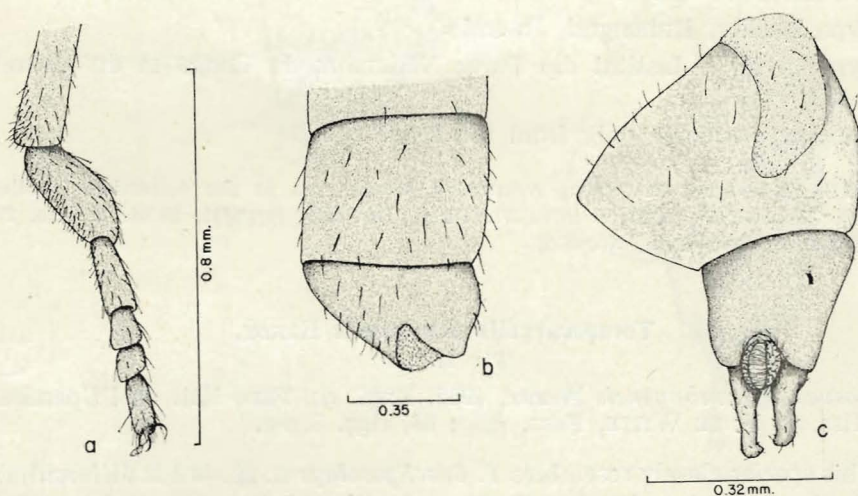
Type in the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ».

Tomosvaryella latitarsis HARDY.

(Fig. 20, a-c.)

Tomosvaryella latitarsis HARDY, 1950, Inst. des Parcs Nat. du Congo et du Ruanda-Urundi, Fasc. 62 : 46, figs. 25, a-c.

This species is readily differentiated from other known *Tomosvaryella* by the long slender body and strongly flattened hind basitarsi (fig. 20, a), as well as by the male genital characters.

FIG. 20. — *Tomosvaryella latitarsis* HARDY.

a : hind tarsus of male; b : apex of male abdomen, dorsal;
c : male genitalia, ventral.

Predominantly polished black species. The abdomen is 1,35 times longer than the combined head and thorax. The upper half of the occiput, the anterior half of each pleuron, and the femora are polished black. The humeri and halteres are yellow. The antennae are brown, the third segment is acuminate below. The femora are almost entirely black, the tibiae are yellow with dark brown to black discolorations beyond the basal two-fifths of the segment. The hind basitarsus is flat and broad as in figure 20, a. The wings are distinctly tinged with brown. The *r-m* crossvein is situated at the middle of cell 1st *M2* and the last section of vein *M1+2* is scarcely longer than the penultimate section. From a dorsal view, the hypopygium is almost as long as the fifth abdominal segment and has a moderately large apical membranous area. The seventh tergum is scarcely, if at all, visible

from a dorsal view (fig. 20, b). The claspers are moderately long and straight-sided, blunt at their apices (fig. 20, c).

Length of the specimens at hand : Body, 4 mm; wings, 3,75 mm.

Female unknown. One specimen at hand may possibly belong here. It fits the description of the male in most details; however, the abdomen is not conspicuously elongate and the hind tarsi are not flattened. The upper half of the front is shining black, the lower half is silvery gray. The front femora lack sub-basal hairs. The ovipositor is straight, the tip extends to about the middle of the third abdominal segment. The ovipositor looks much like that of *subvirescens* except that it is more slender.

Type locality, Ruhengeri, Ruanda.

Type in the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ».

Known previously only from the type.

Three males and the above mentioned female are in the collection labelled : II/ic/10, 7.IX.1951, No. 2391; II/id/10, 11.IX.1951, No. 2419; II/gd/11, 13.XI.1951, No. 2757; and II/hd/11, 18.VIII.1952, No. 3953.

Tomosvaryella mbuyensis HARDY.

(Fig 21, a-b.)

Tomosvaryella mbuyensis HARDY, 1952, Expl. du Parc Nat. de l'Upemba I, Miss. G. F. DE WITTE, Fasc. 8(5) : 68, figs. 8, a-e.

This species closely resembles *T. brachyscolops* n. sp. but is differentiated by the long slender claspers of the male (fig. 21, b). The male genitalia resemble those of *mesostena* n. sp. but differ as shown in figures 21, b and 22, d.

Male. The eyes are joined on the front for a distance equal to about six rows of eye facets, or approximately half the length of the lower portion of the front. The lower portion of the front is pale brown pubescent, the face is silvery gray. The first two antennal segments are black, the third segment is brown, tinged faintly with yellow in the ground color and gray pubescent; the third segment is short acuminate. The upper portion of the occiput is polished black, very faintly dusted with brown, the lower portion is gray. The thorax is shining black in ground color, rather densely dusted with brown on the mesonotum, gray over the metanotum and over the posterior two-thirds of each pleuron; the anterior portion of the pleuron is polished black. Humeri and halteres yellow. Legs colored as in other species of this complex. A distinct keel is developed on the ventral portion of the hind trochanter; in some specimens a slight projection is present as in figure 21, a. The wings are as in other species of this complex. The abdomen is polished black in ground color, lightly brown

pollinose and sparsely covered with short, erect setae. A large membranous area covers the entire apex of the eighth segment of the male. As seen from a ventral view, the membranous area covers all of the apex and most of the right side of the eighth segment. The ninth segment is about as wide as long, the cleft on the hind margin extends approximately half the length of the segment. The claspers are long and slender as in figure 21, b.

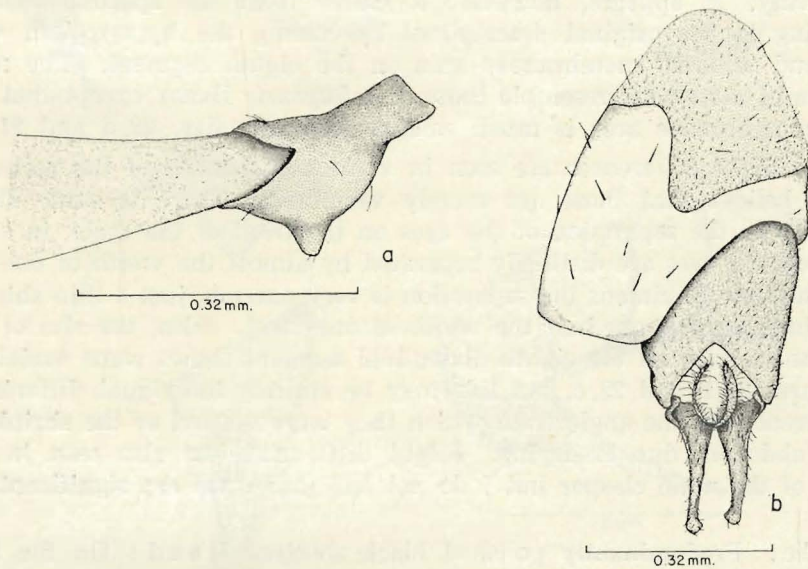


FIG. 21. — *Tomosvaryella mbuyensis* HARDY.
a : hind trochanter of male; b : male genitalia, ventral.

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

Type locality, Buye-Bala, affl. g. Muye, Upemba National Park, Congo.

Specimens are in the collection labelled II/gd/4, 23 XI.1951, No. 2780; II/fd/18, 21.XII.1951, No. 2939; I/o/1, 19.VIII.1950, No. 763 (G. DEMOULIN); and II/gd/4, 25.II.1952, No. 3150.

The type is in the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ».

***Tomosvaryella mesostena* n. sp.**

(Fig. 22, a-e.)

In my key to the African species of *Tomosvaryella* (HARDY, 1949a : 64) this runs to *Tomosvaryella frontata* (BECKER). *T. frontata* was described from Sinaja, Transsylvanin Alps, and was recorded by BECKER from Alexandria, Egypt and Tunis; I have not seen this species and am not sure of its identity. It appears, however, to differ from the species at hand (according to the original description) by having the hypopygium very small and with no membranous area on the eighth segment. The male genitalia of *mesostena* resemble those of *mbuyensis* HARDY except that the apical membranous area is much smaller (compare figs. 22, d and 21, b).

Some slight differences are seen in various specimens of the series at hand I believe that these are merely variations. There is some slight difference in the separation of the eyes on the front of the male; in some specimens the eyes are distinctly separated by almost the width of one eye facet; in other specimens the separation is very narrow, just a thin shining black line, scarcely one-half the width of one facet. Also, the size of the membranous area on the eighth abdominal segment shows some variation, see figures 22, b and 22, c, but this may be entirely individual differences or differences in the angle from which they were viewed or the shrinkage of the abdomen due to drying. Slight differences are also seen in the shapes of the male clasper but I do not feel that these are significant.

Male. Predominantly polished black species. **Head:** On the type the eyes are separated on the front by almost the width of one eye facet. The lower portion of the front is silvery gray pubescent, as is the upper half on the face. The lower half of the face is polished black. The face is approximately equal in width to the widest portion of the front. The first two antennal segments are dark brown to black, the third segment is brown, tinged with yellow in ground color, densely gray-white pubescent; the third segment is long acuminate (fig. 22, a), the tip portion is white. The occiput is polished black on the upper half and on the lower portion, silvery gray on each side. **Thorax:** Entirely polished black, except for the yellow humeri, for a spot of gray on each side of the metanotum, and for the gray-brown pollinose hypopleura. The halteres are yellow. The mesonotum is bare except for few hairs extending down the dorso-central areas and except for a few setae around the sides. **Legs:** Predominantly polished black, the bases and apices of the femora and tibiae are narrowly yellow. The posterior surfaces of the femora are lightly gray pollinose. The trochanters and tarsi are brownish yellow. The hind tarsi are not flattened. The hind trochanters are smooth ventrally. **Wings:** Similar to those of most other species of African *Tomosvaryella*. The third costal section is about half as long as the fourth, the two combined are

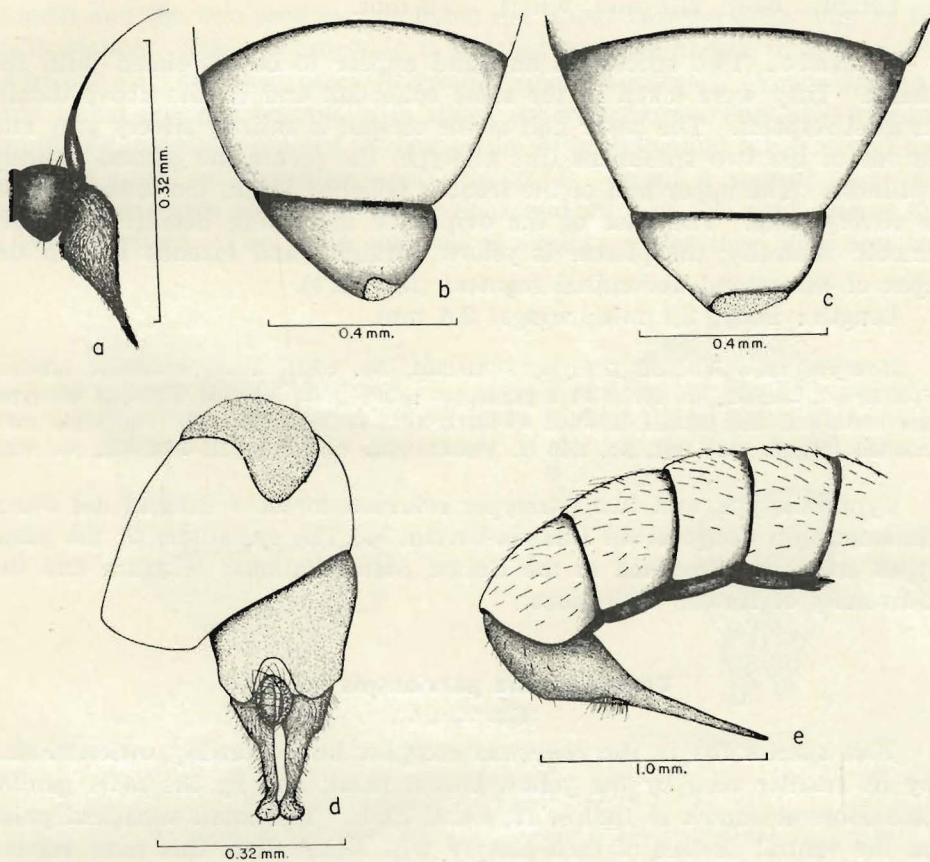


FIG. 22. — *Tomosvaryella mesostena* n. sp.

a : antenna; b : apex of male abdomen, dorsal, specimen A;
 c : apex of male abdomen, dorsal, specimen B; d : male genitalia,
 ventral; e : female abdomen, lateral.

about two-thirds as long as the fifth costal section. The *r-m* crossvein is situated near the basal two-fifths of cell 1st *M2* and the last section of vein *M1+2* is straight. The last section of vein *M3+4* is slightly longer than the *m* crossvein and is 2,5 times longer than vein *Cul + 1st A*.
 A b d o m e n : Entirely polished black, rather thickly covered with suberect, short, brown setae. The hypopygium is about two-thirds as long as the fifth abdominal segment and has a moderately large apical membranous area; as mentioned above, slight variations have been seen in this characteristic (figs. 22, b and 22, c). From a ventral view, the genitalia are as in figure 22 d.

Length : Body, 2,75 mm; wings, 2,8-3 mm.

Female. Two specimens on hand appear to be associated with the males. They were taken in the same collection and fit the above details in most respects. The lower half of the occiput is entirely silvery gray and in one of the two specimens (the allotype) the pleura are almost entirely pollinose. The upper half of the front is polished black, the lower portion is silvery gray. The base of the ovipositor is shining black, completely smooth ventrally; the piercer is yellow, straight, and extends beyond the apex of the second abdominal segment (fig. 22, e).

Length : Body, 3,1 mm; wings, 3,6 mm.

Holotype male labelled II/fd/10, 20.XII.1951, No. 2935. Allotype female labelled PpK/12/d/9, 2.I.1952, No. 2972. Five paratypes : One male labelled same as allotype; one male and one female labelled PFNK/12/9, 24.VII.1952, No. 3820; one male each labelled II/hc/8, 23.IV.1951, No. 1590 (J. VERSCHUREN); and II/gd/11, 4.IX.1952, No. 4036.

Type, allotype, and two paratypes returned to the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ». The remainder of the paratypes are being deposited in the United States National Museum and the University of Hawaii collections.

Tomosvaryella parvicuspis n. sp.

(Fig. 23, a-b.)

This species fits in the *congoana* complex but is readily differentiated by its smaller size; by the yellow-brown front; and by the male genital characters as shown in figures 19, a and 23, b. The small subapical point on the ventral surface of each clasper will differentiate this from related species.

Male. **Head :** The junction of the compound eyes is about one-half as long as the lower portion of the front. The lower front is distinctly yellow-brown, the face is silvery gray. The antennae are brown, the third segment is short acuminate. The upper half of the occiput is subshining black, lightly dusted with brown, the lower portion is silvery gray pollinose. **Thorax :** Polished black in ground color, lightly dusted with brown on the dorsum, gray on the pleura and on the metanotum. The humeri are yellow, tinged faintly with brown; the halteres are yellow. **Legs :** Principally brown, the first four tarsal segments, the apices of the tibiae and femora and the broad bases of the tibiae are yellow. The femora are dusted with gray pollen, the hind femora are polished black on the ventral and posteroventral surfaces. The hind trochanters lack ventral processes but are densely gray pubescent. The hind tarsi are slender, not at all flattened. **Wings :** Hyaline. The venation is typical of members of this complex. The third costal section is approximately one-half as long as the

fourth and the two sections combined are about two-thirds as long as the fifth section. The *r-m* crossvein is situated near the middle of cell 1st *M*₂. Abdomen : Polished black in ground color, moderately brown pollinose and rather sparsely covered with short, suberect hairs. The male hypopygium is about three-fourths as long as the fifth abdominal segment and has a large apical membranous area (fig. 22, a). From a ventral view the membranous area covers the entire apex and most of the right side of the eighth segment. The ninth segment is slightly wider than long and the

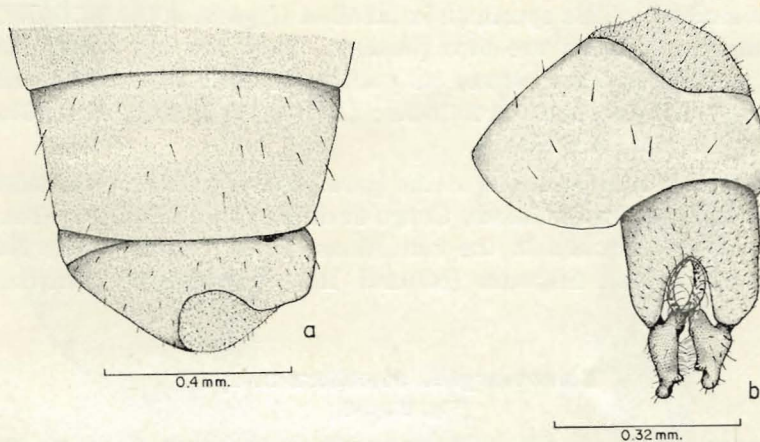


FIG. 23. — *Tomosvaryella parvicuspis* n. sp.

a : apex of abdomen, dorsal; b : male genitalia, ventral.

cleft on the posterior margin extends about one-half the length of the segment. Each clasper has a distinct subapical tooth on the ventral surface (fig. 22, b) and a rather dense clump of hairs near the median portion on the dorsal surface. Some variation has been seen in the shape of the outer clasper; this, however, depends largely upon the angle from which it is viewed.

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

The female has not been associated, three specimens on hand may possibly be this species. They differ from other females of this complex by having the ovipositor rather strongly curved.

Length : Body, 3-3,2 mm; wings, 3,5-3,8 mm.

Holotype male labelled II/gd/11, 4.IX.1952, No. 4036. Thirty-two male paratypes contain the following data : II/gd/17, 14.VIII.1952, No. 3940; PpK/55/d/8, 19.XI.1951, No. 2768; II/gd/4, 23.XI.1951, No. 2780; Pidigala, 23.IV.1952, No. 3328; II/gd/6, 2.IX.1952, No. 4023; II/fd/7", 5.V.1952, No. 3424; II/gc/17, 16.IX.1952, No. 4057; II/gd/4, 2.V.1952,

No. 3410; Makpe/8, 5.XI.1951, No. 2718; PpK/73/d/9, 8.IV.1952, No. 3311; II/gd/4, 8.VIII.1952, No. 3923; II/hd/11, 18.VIII.1952, No. 3951; II/fc/6, 10.X.1951, No. 2567; II/gd/4, 27.XII.1951, No. 2944; II/gd/10, 8.VIII.1952, No. 3909; mont Moyo, 29.VII.1952, No. 3844; II/fd/6, 15.I.1952, No. 3011 (J. VERSCHUREN); II/PpK/55/d/9, 28.X.1951, No. 2679; II/gd/8, 9.V.1951, No. 1700; II/fd/18, 8.X.1951, No. 2556; II/fd/12, 5.VIII.1952, No. 3884; Ndelele/K/115, 3.XII.1951, No. 2842; II/e, 3.I.1951, No. 1033 (J. VERSCHUREN); II/gc/6, 21.VIII.1952, No. 3963; I/a/3, 7.II.1950, No. 199; II/fd/17, 25.IX.1952, No. 4083; II/gd/4, 31.VII.1951, No. 2181 (J. VERSCHUREN); II/gc/10, 11.XII.1951, No. 2882; and II/fc/17, 29.I.1951, No. 1168.

One aberrant male specimen is not being designated as a paratype, it has the tips of the claspers more attenuated than do the other specimens which have been studied. This specimen is labelled II/gd/7, 20.XI.1951, No. 2448. Three female specimens are also present. They are not being included in the type series since I cannot be positive of their association with the males. They are labelled as follows: II/fd/6, 11.X.1951, No. 2576; and II/gd/4, 27.XII.1951, No. 2944.

The type and a large share of the paratypes are being returned to the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ». The paratypes are being deposited in the collections of the United States National Museum, the British Museum (Natural History), and the University of Hawaii.

Tomosvaryella setositora n. sp.

(Fig. 24, a-d.)

This species fits in the complex with *T. brachyscolops* n. sp. and *mbuyensis* HARDY, and is differentiated by having a longitudinal seam down the middle of the male hypopygium and by having two to three small bristles on the projection of the hind trochanter (fig. 24, b).

Male. Head: The compound eyes are joined for a distance equal to about half the length of the lower portion of the front. The lower front is gray, faintly tinged with brown. The face is silvery gray pubescent. The antennae are brown, the third segment is acute to short acuminate (fig. 24, a). The upper portion of the occiput is subshining black, rather thickly brown pollinose; the remainder of the occiput is gray. Thorax: Shining black in ground color, brown pollinose on the dorsum, gray on the sides and on the metanotum. The humeri and halteres are yellow. A row of fine hairs extends down each dorsocentral line. Legs: The coloration is as in other members of this complex. The femora are predominantly gray pollinose. The ventral portion of the hind femur is polished black. Each hind trochanter bears a small basal bump which has two or three short bristles at the apex (fig. 24, b). The hind tarsi are flattened dorsoventrally, the basitarsus is slightly broader than the tibia. The front femur has no sub-basal ventral setae. Wings: Similar to those of other members of this complex. The third costal section is scarcely over one-third as long as

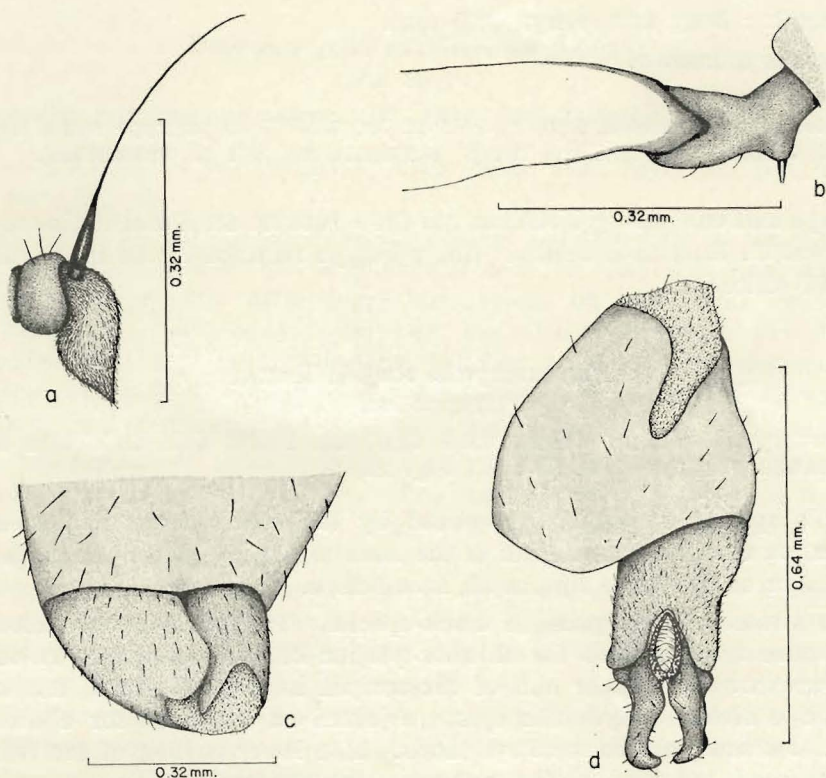


FIG. 24. — *Tomosvaryella setositora* n. sp.

a : antenna; b : hind trochanter of male; c : apex of male abdomen, dorsal;
d : male genitalia, ventral.

the fourth and the two sections combined are about two-thirds as long as the fifth costal section. The *r-m* crossvein is situated at the middle of cell 1st *M2* and the last section of vein *M1+2* is slightly curved. The last section of vein *M3+4* is about four-fifths as long as the *m* crossvein and vein *Cul + 1st A* is about one-half as long as the last section of *M3 + 4*. **Abdomen** : Shining black in ground color, rather densely brown pollinose on the dorsum and sparsely covered with short sub-erect setae. The male hypopygium is about four-fifths as long as the fifth abdominal segment and has an apical membranous area and a longitudinal seam extending through the median portion (fig. 24, c). As seen from a ventral view, the membranous area covers the apical portion of the eighth abdominal segment. The ninth segment is about as wide as long. The claspers are rather simple, somewhat expanded on the outer edges and curved inward slightly at their inner apices (fig. 24, d).

Length : Body and wings, 2,75 mm.

Female unknown.

Holotype male labelled II/fd/7", 5.V.1952, No. 3424. Two paratype males labelled II/gd/4, 6.III.1951, No. 1334; and II/fc/6, 26.XII.1951, No. 2941 (J. VERSCHUREN).

Type and one paratype returned to the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ». One paratype retained in the University of Hawaii collection.

Tomosvaryella singula HARDY.

(Fig. 25, a-c.)

Tomosvaryella singula HARDY, 1950, Inst. des Parcs Nat. du Congo et du Ruanda-Urundi. Fasc. 62 : 47, Fig. 26, a-b.

This species is readily recognized by the rather long, straight-sided process on each hind trochanter of the male (fig. 25, a), and by male genital characters as shown in figures 25, b and 25, c.

An almost entirely polished black species. The posterior two-thirds of the pleura are gray and the anterior portion of the mesonotum is dusted with brown. The upper half of the occiput is polished black, the lower portion is silvery gray. The eyes are joined on the front for a distance equal to about eight rows of eye facets. The lower portion of the front is silvery gray pubescent. The antennae are moderately long acuminate. The humeri and halteres are yellow. The femora are predominantly black, the tibiae are marked with brown to black through the median portions. The process on the hind trochanter is as in figure 25, a. The wing venation is the same as that of most African *Tomosvaryella*. The abdomen is polished black, conspicuously covered with short, erect setae. The male hypopygium is densely gray pubescent. The eighth segment has a longitudinal suture extending through the median portion and a small apical membranous area (fig. 25, b). From a ventral view, the membranous area is much more extensive and almost completely bisects the eighth segment. The ninth segment is short and broad. The claspers are rather irregular, the outer has a moderately strong prominence on the outer edge (fig. 25, c).

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

Female unknown.

Type locality, Kivu, Rutshuru, Albert National Park, Congo.

Type in the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ».

Previously recorded only from the type locality. One specimen is in the collection labelled PFSK/20/11, 14.VI.1952, No. 3629 (J. VERSCHUREN).

Tomosvaryella subvirescens (LOEW).

(Fig. 25, d-e.)

Pipunculus subvirescens LOEW, 1872, Berl. Ent. Zeitschr. 16 : 87.

For synonymy, refer to HARDY, 1949, Mem. Inst. royal Sc. Nat. Belg., 2nd Ser., 36 : 75.

The males of this species are very readily differentiated by the symmetrical hypopygium with the membranous area on the right side, and by the trapezoid, densely white pubescent process on each hind trochanter (fig. 25, d). As seen from a dorsal view, the male hypopygium very closely resembles that of *T. vicina* (BECKER) but that species is differentiated by the triangular-shaped process on the hind trochanter and by the differences in the shapes of the claspers (figs. 25, e and 27, b).

A predominantly shining black species with an abundance of short, suberect hairs over the abdomen. The third antennal segment is brown, rather densely gray pubescent. The eyes are joined on the front for a distance equal to the length of six or seven rows of eye facets, the lower portion of the front is densely silvery gray pubescent. The wings are similar to those of most species of African *Tomosvaryella*, I see nothing distinctive about them. The hypopygium is about two-thirds to three-fourths as long as the fifth abdominal segment and is gently rounded apically, with a moderately large membranous area confined to the right side. As seen from a ventral view, the right side of the eighth segment is largely membranous. The ninth segment is rather deeply cleft on the posterior margin, this V-shaped cleft extends almost half the length of the segment. The claspers are rather irregular in shape as in figure 25, e. Some slight variation in the shapes of the claspers has been seen but for the most part the differences observed depend entirely upon the angle from which they are being viewed. I doubt that the female specimens can be differentiated with certainty, they probably closely resemble two or more related species. They can probably be separated fairly closely by the shining black, rather densely short-haired abdomen, by the presence of two short bristles at the base of each front femur, and by the straight, moderately short ovipositor; the later extends just beyond the apex of the third abdominal segment.

Type locality, Belgrave, Texas.

Type in the Museum of Comparative Zoology, Cambridge, Massachusetts.

This is perhaps the most widely distributed species of the entire family *Dorilaidae*. It has been recorded throughout much of the world : Palearctic, Nearctic, Neotropical, Ethiopian, Oriental and Pacific regions. It is widespread throughout Africa.

Fifteen males in the collection contain the following data : II/gd/10, 24.I.1952, No. 3033 (J. VERSCHUREN); II/e, 21.XII.1950, No. 999 (J. VERSCHUREN); I/b/3, 21.XII.1949, No. 63; II/hd/4, 6.XII.1951, No. 2861; II/fc/6, 26.XII.1951, No. 2941 (J. VERSCHUREN);

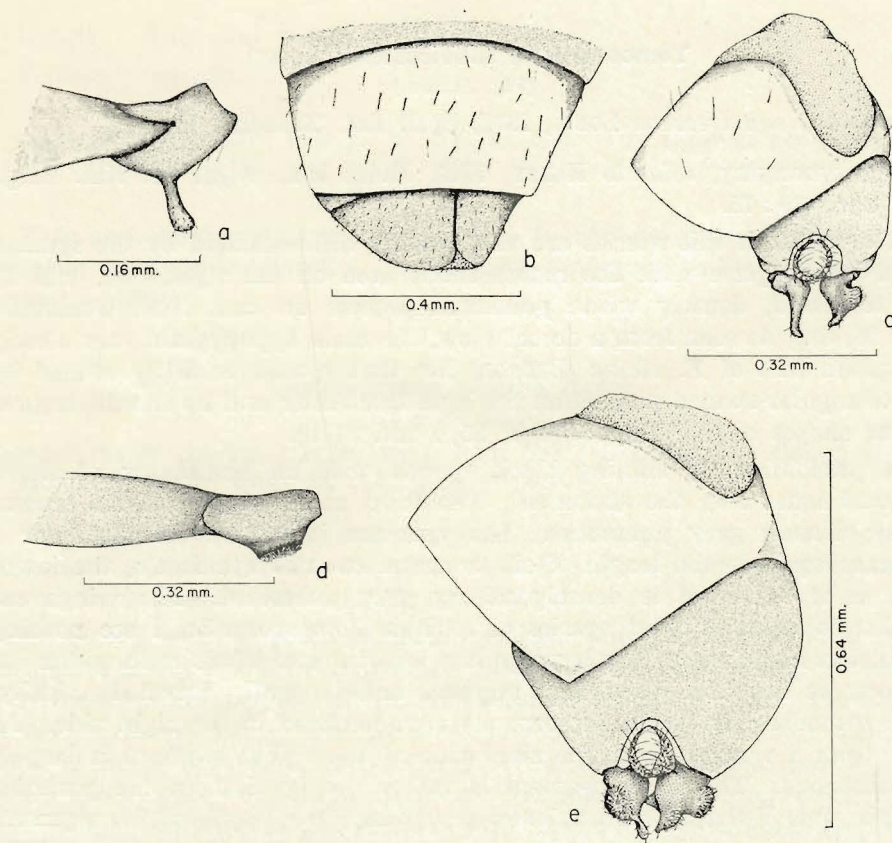


FIG. 25. — a, b, c: *Tomosvaryella singula* HARDY;

d, e: *Tomosvaryella subvirescens* (LOEW).

a: hind trochanter of male; b: apex of male abdomen, dorsal;

c: male genitalia, ventral.

d: hind trochanter of male; e: male genitalia, ventral.

II/gd/4, 23.XI.1951, No. 2780; II/gd/6, 2.IX.1952, No. 4023; II/fb/4, 18.IV.1951, No. 1576; II/e, 8.I.1951, No. 1066 (J. VERSCHUREN); II/e, 6.I.1951, No. 1055 (J. VERSCHUREN); II/gc/6, 29.VI.1951, No. 2015 (J. VERSCHUREN); II/fc/Garamba, 26.I.1951, No. 1165 (J. VERSCHUREN); and II/gd/4, 26.VI.1952, No. 3706.

Twenty-one females are present which apparently fit this species; there is a possibility, however, of this series being mixed.

The specimens contain the following collection data: II/gd/4, 23.XI.1951, No. 2780; Makpe/8, 5.XI.1951, No. 2718; II/fc/6, 26.XII.1951, No. 2941; II/fd/10, 20.XII.1951, No. 2935; II/fd/18, 21.XII.1951, No. 2939; Kassi-Garamba, 20.I.1951, No. 1127 (J. VERSCHUREN);

Utukuru/4, 22.XII.1952, No. 3811; II/fc/gar, 26.I.1951, No. 1165 (J. VERSCHUREN); II/e, 21.XII.1950, No. 999 (J. VERSCHUREN); Akam, 19.V.1950, No. 528; II/gc/6, 4.VI.1951, No. 1867; II/d/4, 24.I.1951, No. 1137 (J. VERSCHUREN); II/fd/7", 17.II.1951, No. 1271; Ndelele/K/115, 3.XII.1951, No. 2842; II/gd/4, 22.XII.1951, No. 2940; II/fd/12, 10.III.1952, No. 3178; II/fd/17, 7.V.1952, No. 3431; II/fc/4, 30.VIII.1952, No. 3997; and PpK/51/6/9, 2.IV.1952, No. 3277.

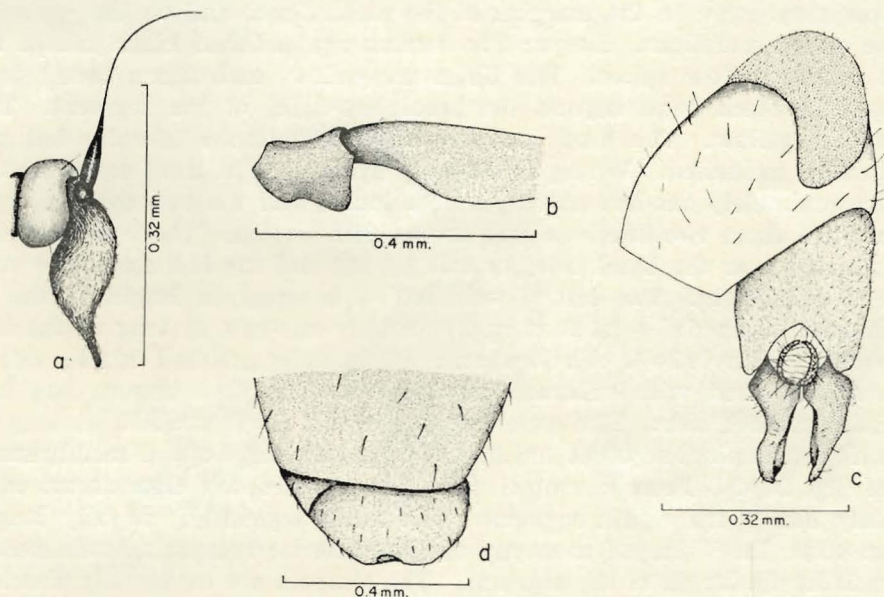


FIG. 26. — *Tomosvaryella torosa* n. sp.

a : antenna; b : hind trochanter of male; c : male genitalia, ventral;
d : apex of male abdomen, dorsal.

***Tomosvaryella torosa* n. sp.**

(Fig. 26, a-d.)

This species fits near *T. singula* HARDY but the hind trochanter has a triangular-shaped process and the male hypopygium has a conspicuous membranous area at the apex and no dorsal suture (fig. 26, d). Because of the predominantly polished body it closely resembles the *mesostena* complex but the eyes are joined on the front and each hind trochanter has a distinct ventral process (fig. 26, b).

Male. The eyes are joined on the front for a distance about equal in length to the lower portion of the front. The lower portion of the front and the face are silvery gray pubescent. The upper half of the occiput is polished black, the lower half is densely gray pollinose. The first two

antennal segments are dark brown, the third segment is yellow, tinged with brown and is long acuminate ventrally (fig. 26, a). **Thorax**: Entirely polished black except for the faintly gray pollinose pleura, and except for the yellow humeri. The extreme anterior margin of the mesonotum is faintly brownish pollinose. The halteres are yellow. The thorax is almost devoid of hairs except for a few inconspicuous hairs down each dorsocentral row, on the margins of the mesonotum, and on the posterior edge of the scutellum. **Legs**: The femora are polished black except for the narrow yellow apices. The tibiae are yellow, each has a broad dark brown to black band beyond the basal two-fifths of the segment. The tarsi are yellow. The hind tarsi are slightly flattened laterally but not noticeably expanded. **Wings**: Entirely hyaline. The third costal section is approximately one-half as long as the fourth and the two sections combined are about two-thirds as long as the fifth section. The *r-m* crossvein is situated near the basal third of cell 1st *M2* and the last section of vein *M1+2* is straight. The last of vein *M3+4* is equal in length to the *m* crossvein. Vein *Cul + 1st A* is approximately one-half as long as the last section of vein *M3+4*. **Abdomen**: Completely polished black, rather sparsely covered with suberect, short hairs. The first tergum has two bristles on each side. The male hypopygium is about one-half as long as the fifth abdominal segment and has a moderately large apical membranous area (fig. 26, d). From a ventral view, the membranous area almost completely bisects the eighth segment. The ninth segment is slightly longer than wide, the V-shaped concavity on the posterior margin extends nearly two-fifths the length of the segment. The claspers are moderately slender, pointed at apices, and slightly concave on inner surfaces (fig. 26, c).

Length : Body, 3 mm; wings, 3,25 mm.

Female unknown.

Holotype male and one male paratype labelled PFNK/12/9, 24.VII.1952, No. 3820.

Type returned to the « Institut des Parcs Nationaux du Congo et du Ruanda-Urundi ». Paratype retained in the University of Hawaii collection.

***Tomosvaryella vicina* (BECKER).**

(Fig. 27, a-c.)

Pipunculus vicinus BECKER, 1900, Berl. Ento. Zeitschr. 45 : 238.

I have not previously identified this species and to my knowledge it has not been recognized since the original description. From the original, it appears to be similar in appearance to *T. subvirescens* (LOEW). BECKER indicated that the hypopygium is small, with a distinct longitudinal division but no membranous area, and that each hind trochanter has a triangular projection ventrally. The specimens on hand from the Garamba fit

BECKER's original description of *vicina* more nearly than any species which I have previously studied and these probably are the same; I have not had an opportunity to study BECKER's type, however, and there is a possibility that two species are involved.

The mesonotum, scutellum, and abdomen are submetallic black, faintly brownish pollinose, with a slight bronze sheen as seen in some lights. The pleura and metanotum are rather densely gray pollinose. The eyes

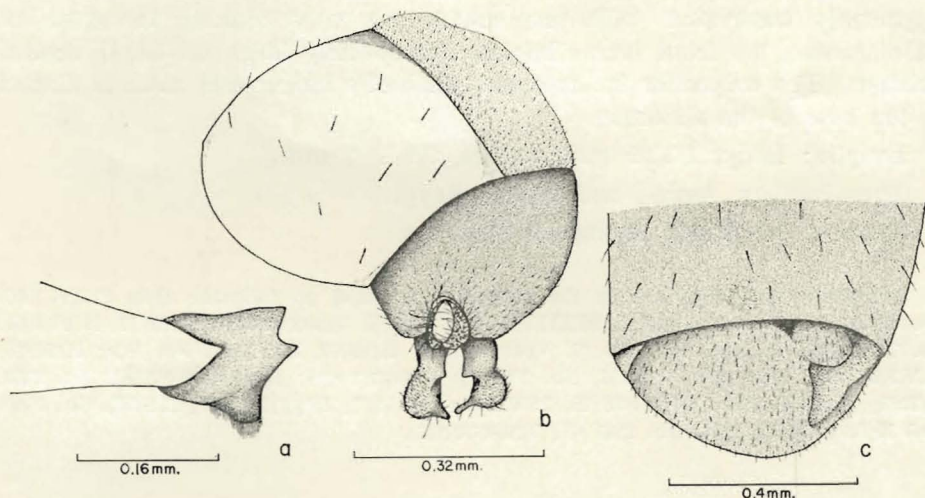


FIG. 27. — *Tomosvaryella vicina* (BECKER).

a : hind trochanter of male; b : male genitalia, ventral;
c : apex of male abdomen, dorsal.

are joined on the front for a distance about equal to eight or nine rows of eye facets. The lower portion of the front is yellowish gray pubescent. The face is silvery gray. The third antennal segment is brown, long acuminate, and densely gray pubescent. The wings are similar to those of most other species of African *Tomosvaryella*, the *r-m* crossvein is situated at the middle of cell 1st *M*₂. The femora are predominantly black covered with gray pollen, the hind femur is polished black on the ventral surface. Each front femur has two short, black, ventral bristles near the base. The tibiae are yellow with broad brown to black rings beyond the basal two-fifths. The tarsi are yellow except for the brown apical segments. The hind trochanter has a triangular-shaped ventral projection as in figure 27, a. The male hypopygium is semi-circular, evenly rounded as

seen from above. The large membranous area is confined to the right side of the segment. BECKER indicated that no membranous area was present but that a longitudinal division extended over the hypopygium. In situ, the membranous area may sometimes be difficult to discern and often it does give the impression of a longitudinal suture being present (fig. 27, c). From a ventral view, the membranous area covers the entire right side of the hypopygium. The ninth segment is rather short and broad. The claspers are irregular, each is expanded on the ventral margin and terminates in a short beak-like apex (fig. 27, b). The females on hand which were apparently associated with the males are very similar to those of *subvirescens*, the front femur has two moderately large sub-basal ventral bristles. The ovipositor is, however, distinctly longer and extends almost to the base of the abdomen.

Length : Body, 3-3,25 mm; wings, 3,5-3,75 mm.

Type locality, Assiut, and Luxor, Egypt.

Type in the Berlin Zoological Museum.

Seventeen specimens are in the collection labelled as follows : II/e, 21.XII.1950, No. 999 (J. VERSCHUREN); II/fc/6, 26.XII.1951, No. 2941 (J. VERSCHUREN); II/fd/17, 11.VI.1951, No. 1890; II/e, 6.I.1951, No. 1055 (J. VERSCHUREN); II/fd/17, 28.V.1951, No. 1824; II/fd/15, 24.V.1951, No. 1798; II/e, 8.I.1951, No. 1066 (J. VERSCHUREN); II/gd/4, 9.X.1951, No. 2560; II/fc/5, 31.I.1951, No. 1167; II/fd/15, 24.V.1951, No. 1798; II/gc/17, 14.VIII.1952, No. 3940; and II/fc/6, 26.XII.1951, No. 2941 (J. VERSCHUREN).

Tomosvaryella sp. ? male in poor condition.

One male specimen cannot be identified. It appears to be near *latitarsis* but the hind tarsi are not strongly flattened and the male genitalia differ.

The specimen is labelled II/fd/6, 15.I.1952, No. 3011 (J. VERSCHUREN).

Tomosvaryella spp. ? females unidentifiable.

Forty-seven female specimens are in the collection which have not been associated with the males and cannot be correctly placed.

The specimens contain the following collection records : II/fd/4, 24.X.1951, No. 2668; II/hc/4, 26.VII.1951, No. 2161 (J. VERSCHUREN); II/fc/6, 25.VII.1951, No. 2157; Napokomweli, 18.X.1950, No. 895 (G. DEMOULIN); II/gd/4, 12.IX.1952, No. 4054; II/gd/4, 27.XII.1951, No. 2944; II/e, 18.XII.1950, No. 995; II/fe/7", 23.VIII.1951, No. 2291; II/fd/18, 6.V.1952, No. 3429; II/fd/17, 27.VIII.1952, No. 3983; II/fd/6, 11.X.1951, No. 2576; II/gd/6, 2.IX.1952, No. 4023; II/hd/11, 18.VIII.1952, No. 3953; II/fd/10, 20.XII.1951, No. 2935; II/fe/6, 16.I.1952, No. 3013; II/gc/15, 17.XII.1951, No. 2917; II/fd/17, 11.VI.1951, No. 1890; II/gc/7, 14.VIII.1952,

No. 3940; II/e, 30.XII.1950, No. 1021; II/f/gar, 26.I.1951, No. 1165 (J. VERSCHUREN); II/hd/9, 21.VIII.1951, No. 2297; II/e, 3.I.1951, No. 1033 (J. VERSCHUREN); II/fd/5, 23.XII.1951, No. 2128; II/hc/4, 20.IV.1951, No. 1588 (J. VERSCHUREN); II/e, 4.I.1951, No. 1040 (J. VERSCHUREN); II/gc/6, 21.VIII.1952, No. 3963; II/e, 4.I.1951, No. 1041 (J. VERSCHUREN); Ndelele/K/115, 5.XII.1951, No. 2842; mont Moyo, 29.VII.1952, No. 3844; II/fe/6, 16.I.1952, No. 3012 (J. VERSCHUREN); II/gc/11, 5.X.1951, No. 2521; Utukuru/4, 22.VII.1952, No. 3811; II/ee/14, 26.IV.1951, No. 1617 (J. VERSCHUREN); II/gc/8, 9.IX.1952, No. 4042; II/gd/4, 23.XI.1951, No. 2780; and II/fd/15, 22.IX.1951, No. 2464.

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LITERATURE DEALING WITH *DORILAIIDAE*
OF THE CONGO

- HARDY, D. E., 1949a, The African *Dorilaidae* (*Mem. Inst. royal des Sc. Nat. de Belg.*, 2nd Ser., Fasc. 36 : 3-80, 6 pls., 129 figs.)
- 1949b, New *Dorilaidae* from the Belgian Congo. [*Bull. Inst. royal des Sc. Nat. de Belg.*, 25 (39) : 1-10, 15 figs.]
- 1950, Exploration du Parc National Albert, Miss. G. F. DE WITTE (1933-1935). [*Fasc. 62, Dorilaidae (Pipunculidae)*, 53 pp., 71 figs.]
- 1952a, Contribution à l'Étude des Diptères de l'Urundi. III : *Bibionidae* et *Dorilaidae*. [*Bull. Inst. royal des Sc. Nat. de Belg.*, 28 (55) : 1-20, 21 figs.]
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