

INSTITUT DES PARCS NATIONAUX  
DU CONGO BELGE

INSTITUUT DER NATIONALE PARKEN  
VAN BELGISCH CONGO

# Exploration du Parc National de l'Upemba

MISSION G. F. DE WITTE

en collaboration avec

W. ADAM, A. JANSSENS, L. VAN MEEL et R. VERHEYEN (1946-1949).

FASCICULE 49

# Exploratie van het Nationaal Upemba Park

ZENDING G. F. DE WITTE

met medewerking van

W. ADAM, A. JANSSENS, L. VAN MEEL en R. VERHEYEN (1946-1949).

AFLEVERING 49

1. **DRILIDAE**, par WALTER WITTMER (Zürich).
2. **NOTOXUS, ANTHICUS** and **TOMODERES**,  
by FREDERICK D. BUCK (London).
3. Genus **FORMICOMUS**,  
by Johan C. VAN HILLE (Grahamstown).
4. **PYGOSTENINAE**, by DAVID H. KISTNER (Chicago).
5. **GALERUCINAE**, by GILBERT E. BRYANT (London).
6. Gattung **AULACOCHEILUS** und **AMBLYOPUS**,  
by KURT DELKESKAMP und HANS PHILIPP (Berlin).



BRUXELLES  
1958

BRUSSEL  
1958

**IMPRIMERIE HAYEZ, s.p.r.l.**  
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PARC NATIONAL DE L'UPEMBA  
I. MISSION G. F. DE WITTE  
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Fascicule 49 (1)

NATIONAAL UPEMBA PARK  
I. ZENDING G. F. DE WITTE  
met medewerking van  
W. ADAM, A. JANSSENS, L. VAN MEEL  
en R. VERHEYEN (1946-1949).  
Aflevering 49 (1)

# DRILIDAE (COLEOPTERA MALACODERMATA)

PAR

WALTER WITTMER (Zurich)

Genre **SELASIA** CASTELNAU.

Silb. Rev., IV, 1836, p. 19; LACORDAIRE, Gen. Col., IV, 1857, p. 375.

1. — **Selasia testaceicolor** PIC.

Rev. Zool. Afr., 1914, 3, p. 379.

20 ex. : Kaswabilenga, 700 m, 17.X.1947, n° 845 a; même localité, 3-8.XI.1947, n°s 912 a, 929 a, 960 a; même localité (rive dr. Lufira), 700 m, 22-26.X.1947, n° 856 a; riv. Lupiala, affl. dr. Lufira, 700 m, 6-9.X.1947, n° 807 a; piste de la Lupiala, 900-1.200 m, 23.X.1947, n° 880 a; [riv. Dipidi, 1.700 m, 22.IV.1947, n° 310 a] <sup>(1)</sup>.

2. — **Selasia rhipiceroides** CASTELNAU.

Silb. Rev., IV.1836, p. 19.

1 ex. : Lusinga, 1.760 m, 18.VII.1947, n° 603 a.

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(1) Localité située hors des limites du Parc National de l'Upemba.

3. — **Selasia sicutensis** PIC.

Mél. exot.-ent., 10, 1914, p. 11.

5 ex. : Kanonga, affl. dr. Fungwe, 700 m, 17-22.II.1949, n° 2371 *a*; Kaziba, 1.140 m, 24.II.1948, n° 1329 *a*.

4. — **Selasia** sp.

1 ex. : Mukana, 1.810 m, 22-23.V.1949, n° 2550 *a*.

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Fascicule 49 (2)

NATIONAAL UPEMBA PARK  
I. ZENDING G. F. DE WITTE  
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Aflevering 49 (2)

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# NOTOXUS, ANTHICUS AND TOMODERES (COLEOPTERA, HETEROMERA)

Fam. ANTHICIDAE <sup>(1)</sup>

BY

FREDERICK D. BUCK (London)

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The material collected by M. G. F. DE WITTE and his collaborators in the « Parc National de l'Upemba » comprises 10 species of *Notoxus*, 6 species of *Anthicus* and a single species of *Tomoderes*, of which 9 are new to science. There are also 5 species of *Notoxus* which are not assignable to any species known to the author and which being unique, have been left undescribed for the time being.

The types of the species described herein will be returned to the « Institut des Parcs Nationaux du Congo Belge », some of the paratypes will be incorporated in the collection of the British Museum (Nat. Hist.), London and where possible a paratype will be retained in the collection of the author.

### ***Notoxus guttulatus* n. sp.**

Elongate, shining, black; pronotum, 4 maculae on the elytra and appendages testaceous; pubescent; ventral surface pubescent.

Head testaceous, shining, about as broad as long; widest at eyes which are moderately convex and coarsely faceted; evenly rounded from eyes to

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<sup>(1)</sup> Unless otherwise mentioned, all specimens recorded in this paper were collected by Mission G. F. DE WITTE.

All the localities between [ ] are without the Park's boundaries.

base without trace of basal angles; contracted in an almost straight line to narrow clypeus; vertex depressed, rugose; palpi testaceous; antennae testaceous, elongate, reaching a little beyond base of pronotum, segment 1 stout, 2 and 3 sub-equal about as long as 1, 4-10 obconic, becoming progressively shorter, 10 about as long as wide, 11 pointed, elongate.

Pronotum testaceous, shining, globular, horn stout, slightly shorter than the pronotum, rounded at sides and pointed at apex, side margin coarsely crenulate, apical margin explanate, tuberculate with a crenulate crest; basal margin of pronotum with a transverse furrow; clothed with diffuse pale pubescence, except basal angles where the pubescence is very thick, with long outstanding setae at the sides, puncturation extremely fine and diffuse.

Scutellum testaceous, shining, triangular.

Elytra elongate, more than twice as long as wide at humeri, gently widening in an almost straight line to just behind the middle, where it is equivalent to about half the length, and then evenly rounded to apices, which are individually rounded; black, each elytron with a large testaceous, rounded sub-humeral macula extending from the lateral margin across disc almost to the suture, and another transverse sub-apical macula arising obliquely from the lateral margin and reaching the suture, also testaceous; apex of elytra piceo-testaceous; elytra slightly depressed just inside humeri and across elytra sub-basally so that humeri themselves are prominent and there is a broad obsolete prominence just behind the scutellum; moderately closely and strongly punctate, the punctures becoming evanescent apically; pubescence pale yellow and somewhat close with scattered elongate setae towards the sides.

Ventral surface testaceous, shining and finely pubescent. Legs slender and testaceous.

Holotype : [♀, Mwingwa, N.W. Rhodesia, 27°40' E., 13° S., 17.III.1914 (H. C. DOLLMAN)] (British Museum).

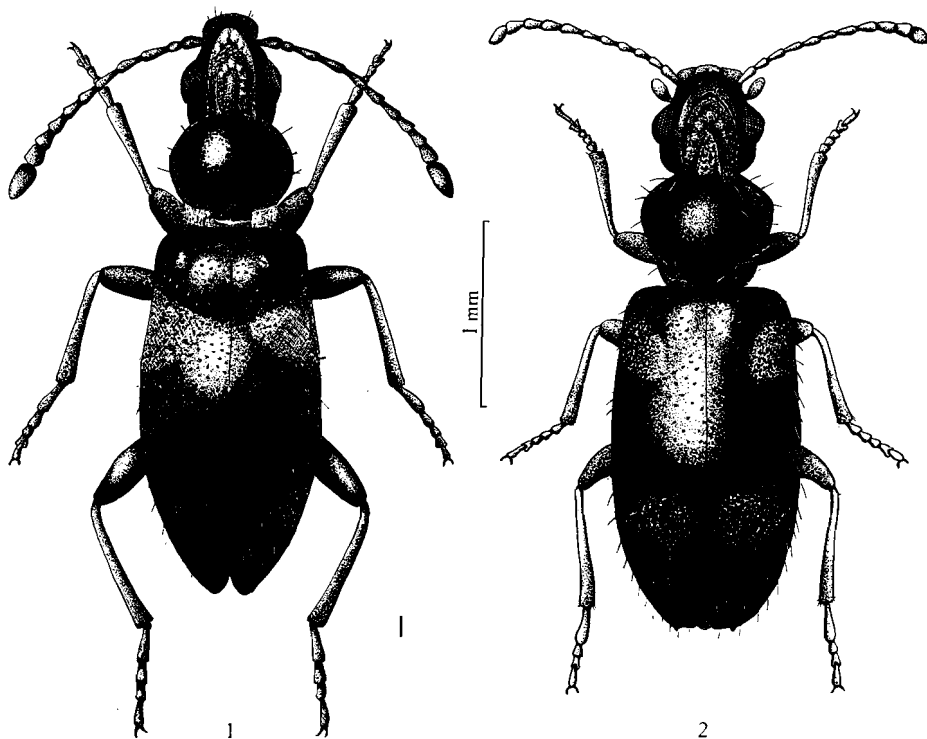
Paratypes : [Ujiji, Tanganyika, 15-17.VIII.1931 (Mrs. OGILVIE)]; [Albertville, Belgian Congo, IX.1931 (Miss A. MACKIE)]; [Elizabethville, Belgian Congo, 1928 (Dr. H. S. EVANS)]; Upemba National Park : Mabwe, lac Upemba, 585 m, 4.IX.1947.

The species resembles *N. cucullatus* LAFERTÉ from which it differs in its weaker puncturation, its testaceous head and pronotum, its shorter pubescence and more rounded apices of the elytra. Also the antennae and legs of *N. guttulatus* are more slender. The type and four paratypes are in the general collection of the British Museum (Nat. Hist.) and with the exception of the type, each carry a label « *Notoxus guttulatus* KRECK., *i.l. det.* R. F. HEBERDEY ». No reference can be found to the species and Dr. JANCZYK of the Vienna Museum says the species is neither in the HEBERDEY nor VON KRECKICH collections. Therefore presumably the description was never published and in consequence the insect is here described as new under the same name.

**Notoxus alternans** n. sp.

(Figs. 1 and 7.)

Elongate, shining, black, pronotum piceus, appendages lighter, each elytron with two testaceous to piceus maculae, puncturation moderately strong and close on elytra, variable and diffuse on pronotum, sparsely clothed with white setae.

FIG. 1. — *Notoxus alternans* n. sp.FIG. 2. — *Notoxus tropicalis* n. sp.

Head black, elongate-ovate, shining, depressed on vertex, depression bordered laterally by a fine irregular carina which is convergent and evanescent apically, strongly contracted in front of eyes to clypeus and evenly, arcuately, rounded to a broad neck behind, hind angles absent; eyes moderately large, moderately prominent and moderately faceted; antennae robust and elongate, extending beyond the base of the pronotum, testaceous, segments 5-10 slightly darker, pubescent, segment 1 elongate and stout, 2 shorter than 1 and 3, 3-5 elongate, slender and sub-equal, 6-10 obconic, becoming progressively shorter and broader, 11 elongate-ovate.

Pronotum globular, piceus, horn lighter at apex, shining, diffusely punctate with punctures of varying size and strength, with long, dark outstanding setae; at base on either side thickly clothed with fine white pubescence, centre of base with fine transverse furrow; thoracic horn elongate, sub-parallel, as long as pronotum, with broad margin, tuberculate, finely and rugosely on raised median area, coarsely and obsolete in the margin.

Scutellum minute.

Elytra elongate, twice as long as broad; black with two triangular sub-humeral maculae and two ante-apical maculae, testaceous or piceus; humeri prominent, sides slightly widened to middle and thence gently rounded to apices which are individually rounded, transversely depressed in an arc behind the humeri, strongly and moderately closely punctate, with sparse, long, white outstanding setae.

Ventral surface piceus to testaceous, finely and diffusely punctured, shining. Legs slender, femora piceus, tibiae testaceous, darker at the apices, tarsi testaceous. Aedeagus characteristic (fig. 7).

Length : 3,25 mm.

Holotype ♂ : Kabwe s/Muye, affl. dr. Lufira, 1.320 m, 6-12.V.1948.

Paratypes : 21 sp. : Kabwe s/Muye, affl. dr. Lufira, 1.320 m, 6-12.V.1948; 4 sp. : Buye-Bala, affl. g. Muye, affl. dr. Lufira, 1.750 m, 8-16.IV.1948; [3 sp. : Kenia, affl. dr. Lusinga, 1.585 m, 19.XII.1947]; 6 sp. : Buye-Bala, 1.750 m, 1-7.IV.1948; 10 sp. : Kalumengongo, tête source, affl. dr. Lualaba, 1.780 m, 21.I.1948; 1 sp. : rég. confl. Mubale-Munte, 1.480 m, 13-18.V.1947; 4 sp. : riv. Lufwa, affl. dr. Lufira, 1.700 m, 16.III.1948; 1 sp. : Lubanga, affl. dr. Senze, affl. dr. Lufira, 1.750 m, 5.IV.1948; [1 sp. : Grande Kafwe, affl. dr. Lufwa, 1.780 m, affl. dr. Lufira, 5.III.1948]; 2 sp. : Mukana Lusinga, 1.810 m, 18.III.1948.

In general shape this species approaches *N. griseofasciatus* PIC, but its coloration, markings and pubescence are very different.

### **Notoxus abnormis** n. sp.

(Figs. 3 and 11.)

Elongate, parallel, piceo-flavous, head piceus and pronotum piceo-testaceous, somewhat shining, strongly and closely punctured, clothed with short, fine, flavous pubescence, appendages flavous.

Head piceus, a little longer than broad, flattened on vertex with a small well marked carina starting from just behind the eyes, extending across the base of the eyes and meeting just before the clypeus, strongly and arcuately contracted from the eyes to the clypeus; eyes rather large, moderately faceted; temples parallel, two-thirds of the length of the eye,



basal angles strongly rounded; mandibles and palpi testaceous; antennae testaceous, segment 1 stout, elongate, 2 shorter than 1 or 3, 3-5 elongate, sub-equal, 6-10 obconic, progressively becoming a little shorter, 11 longer and pointed at the apex.

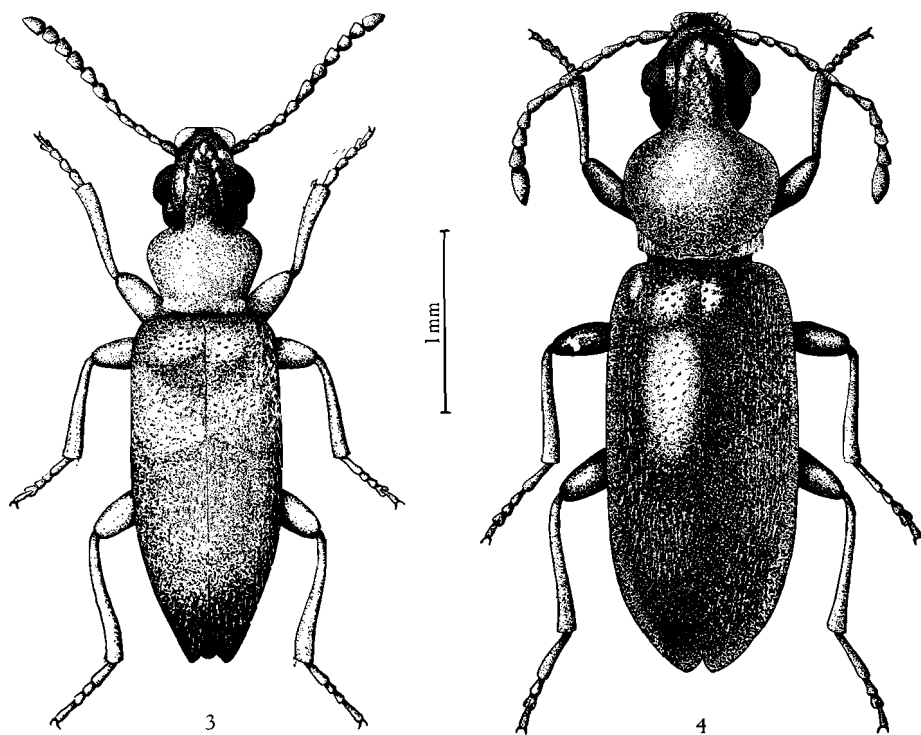


FIG. 3. — *Notoxus abnormis* n. sp.

FIG. 4. — *Notoxus gutenbergi* n. sp.

Pronotum transverse, piceo-testaceous, shining, finely and diffusely punctured, pubescence fine and very short, broadest well in front of middle from whence it is contracted to base in an almost straight line, thickly clothed at base on either side of middle with fine white pubescence, at the centre close to basal margin a deep narrow sulcus, thoracic horn elongate, shining between the tubercles, as long as pronotum, margin coarsely crenulate, raised central part distinctly and finely tuberculate, the explanate margin with very obsolete tubercles, each occupying the entire width of the margin.

Scutellum minute.

Elytra piceo-flavous; with an indistinct sub-humeral band contracted at the suture and broadened at the sides, somewhat lighter; elongate, a little more than twice as long as wide; humeri prominent and rounded; parallel sided for basal two-thirds and thence contracted to an acuminate apex, where the apex of each individual elytron is rounded, shining, less so than pronotum, coarsely and closely punctured, clothed with short, fine, flavous pubescence.

Ventral surface testaceous, shining, last visible segment of abdomen in both sexes strongly excised in the middle, where there is a brush of long castaneous hairs (fig. 11 a), each side of this segment is clothed with long, sparse, flavous pubescence. Legs slender pale testaceous to flavous, femora darker. Aedeagus characteristic (fig. 11 b).

Holotype ♂ : Lusinga, 1.760 m, 7.IV.1947.

Paratypes : 1 sp. : Lusinga, 1.760 m, 12-18.III.1947; 1 sp. : Kalumengongo (tête source), afl. dr. Lualaba, 1.780 m, 21.I.1948.

This species in general facies is perhaps closest to *N. sectator* QUEDENFELDT but differs not only in coloration but in puncturation, pubescence, etc. It is quite possible, owing to the unusual formation of the apical abdominal segment in both sexes, that this species may prove to constitute a new genus, but there is not sufficient material to come to any definite conclusion on this point.

### ***Notoxus tropicalis* n. sp.**

(Figs. 2 and 9.)

Somewhat elongate, shining, black, elytra with four testaceous maculae, finely and somewhat diffusely punctured, sparsely pubescent and setose.

Head black, quadrate, shining, very finely and very diffusely punctured, eyes moderately large, somewhat prominent and moderately coarsely faceted, evenly rounded in front of eyes to clypeus, temples short a little over half the length of the eyes, hind angles strongly rounded, with long pale setae at the base, vertex flattened, bordered at sides with a fine carina which is convergent anteriorly, almost meeting behind the clypeus, palpi testaceous, antennae piceus, somewhat short, scarcely reaching the base of the pronotum, segment 1 only slightly thickened, 2 a little shorter than 1 and 3, 3-10 becoming progressively stouter, 11 somewhat elongate.

Pronotum black, shining, as wide as broad, broadest in front of middle whence it is evenly rounded to anterior margin, anterior angles absent, contracted to base in an almost straight line, very finely and extremely diffusely punctate, with sparse long setae, at the base at each side of the middle with close fine, pale pubescence; thoracic horn somewhat short, broad, a little shorter than pronotum, side margin not crenulate, raised median area tuberculate, margin simple.

Scutellum minute.

Elytra shining, short and broad, less than twice as long as wide, humeri prominent, rounded, almost parallel sided to just beyond the middle thence evenly rounded to the apex where each elytron has a small tooth, puncturation stronger and closer than on pronotum, very slightly depressed just behind the humeri; a testaceous, sub-humeral macula on each elytron and another sub-median; clothed with very diffuse, pale pubescence and setae.

Ventral surface piceus, obsoletely rugose. Legs slender, femora piceus, tibiae and tarsi lighter. Aedeagus characteristic (fig. 9).

Length : 3 mm.

Holotype : Kalumengongo (tête source), affl. dr. Lualaba, 1.780 m, 21.I.1948.

Paratypes : 1 sp. : Mukana-Lusinga, 1.810 m, 15-19.I.1948; [1 sp. : Kenia, 1.700 m, 28.III.1947]; [1 sp. : Kenia, affl. dr. Lusinga, 1.585 m, 19.XII.1947].

This species approaches *N. parallelus* KRECKICH but has a shorter thoracic horn and four maculae, from *N. pilosus* LAFERTÉ it differs in its more parallel sided elytra, broader and less elongate antennae, while *N. cucullatus* LAFERTÉ has a less shining pronotum and elytra.

#### ***Notoxus wittei* n. sp.**

(Figs. 5 and 6.)

Black, shining, elongate, moderately strongly and diffusely punctate, pronotum piceus, elytra with two distinct sub-humeral testaceous maculae and two obscure sub-apical maculae, appendages lighter.

Head black, rugose, slightly elongate, slightly depressed on vertex, bordering carina very fine; eyes moderately large, moderately prominent, and somewhat coarsely faceted; contracted from eyes to clypeus in a gentle arc; and evenly, arcuately rounded to neck; hind angles not traceable; mandibles and palpi testaceous; antennae testaceous, slightly infusate apically, segment 1 elongate and broad, 2 narrower, shorter than both 1 and 3, 3-8 sub-equal, progressively slightly broader at the apex, 9-10 shorter, 11 longer, acuminate.

Pronotum testaceous, shining, finely and very diffusely punctate with sparse, long, white setae; slightly transverse, broadest a little in front of middle and rounded to apex without traceable apical angles; contracted to base in an almost straight line; at base each side of middle with a tuft of whitish pubescence, sulcate across base close to basal margin; thoracic horn elongate, as long as pronotum, lighter towards the apex, slightly widening to the base, sides simple, tuberculate on raised median area, becoming evanescent apically, margin smooth and shining at apex.

Scutellum small and dull.

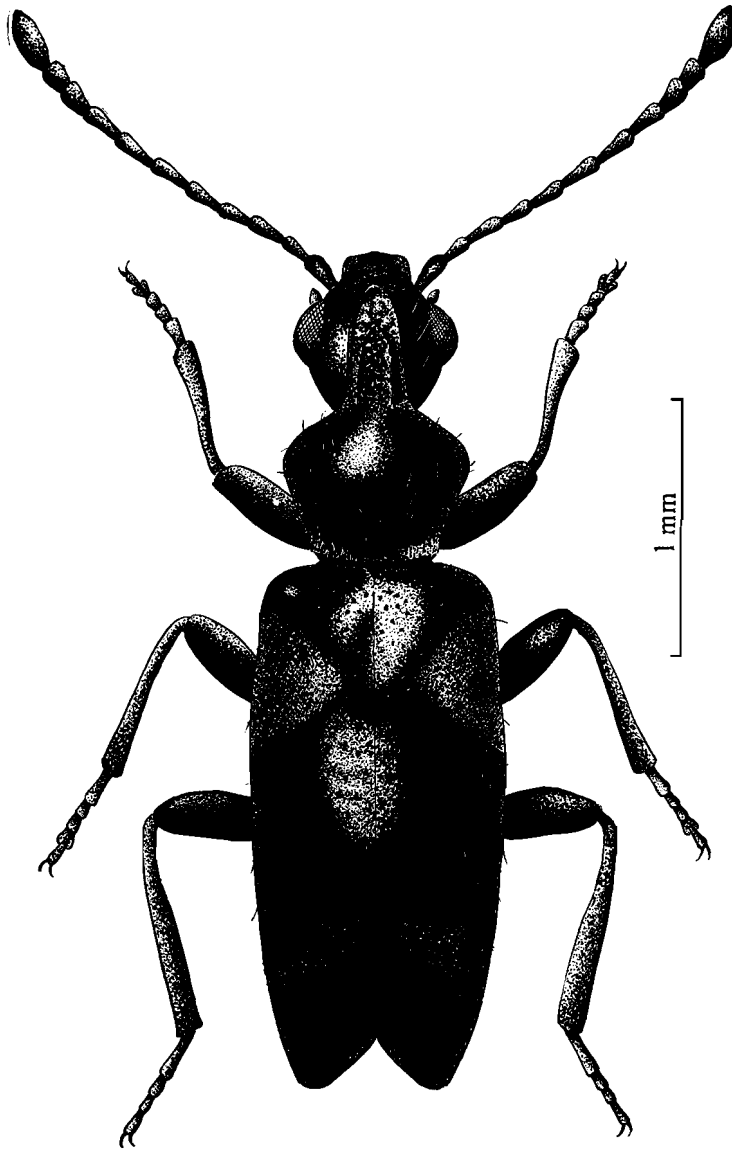
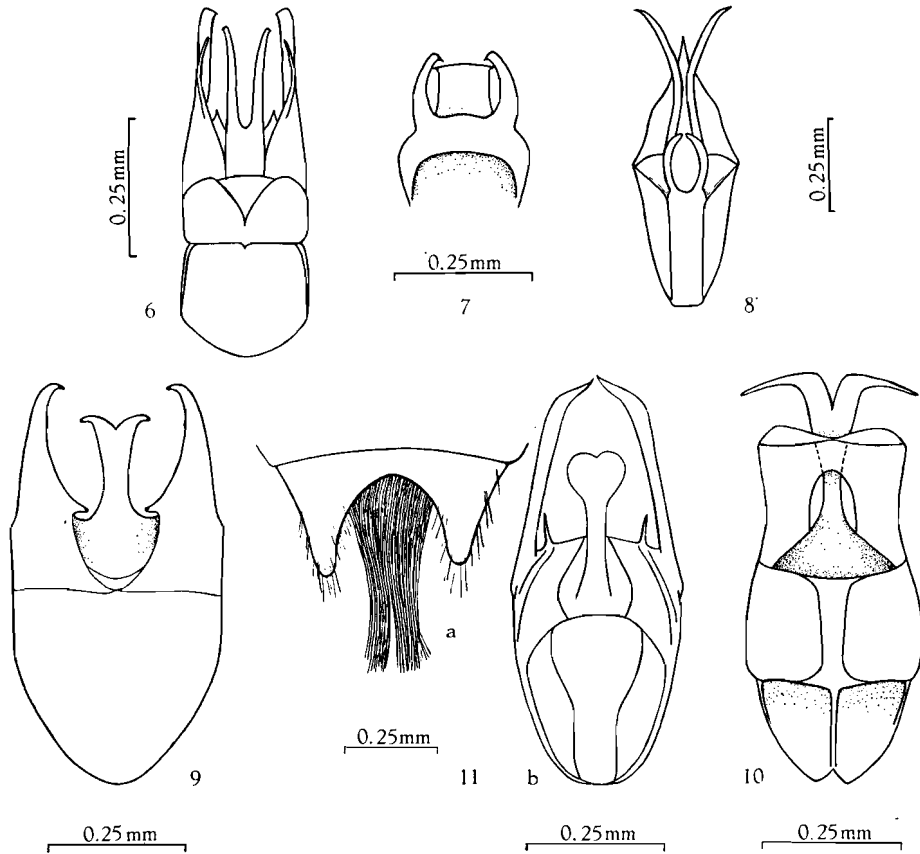


FIG. 5. — *Notoxus wittei* n. sp.

Elytra black to piceus, shining, with two sub-humeral triangular maculae and two obscure sub-apical maculae; twice as long as broad, almost parallel sided, humeri prominent, only slightly contracted to apex where each elytron is individually rounded; the tip of each elytron extended well beyond

the suture; at the base near the suture two raised areas and a broad depression behind; finely and diffusely punctate, with sparse, long, white setae.

Ventral surface testaceous, shining, very finely punctate. Legs slender, femora piceus, tibiae and tarsi flavous. Aedeagus characteristic (fig. 6).



Aedeagus of :

FIG. 6 : *Notoxus wittei* n. sp. — FIG. 7 : *Notoxus alternans* n. sp. — FIG. 8 : *Notoxus niger* n. sp. — FIG. 9 : *Notoxus tropicalis* n. sp. — FIG. 10 : *Notoxus gutenbergi* n. sp.  
FIG. 11 : *Notoxus abnormis* n. sp : a, last visible ventral segment; b, aedeagus.

Holotype : Mukana, Lusinga, 1.810 m, 18.III.1948.

Paratypes : 6 sp. : Kalumengongo (tête source), affl. dr. Lualaba, 1.780 m, 21.I.1948; 2 sp. : Kalumengongo, 1.780 m, 16.III.1948; 3 sp. : riv. Lufwa, affl. dr. Lufira, 1.700 m, 16.III.1948; 1 sp. : Lufwa, affl. dr. Lufira, 1.700 m, 16.I.1948; 3 sp. : Mukana, 1.810 m, 18.III.1948; 12 sp. : Mukana-

Lusinga, 1.810 m, 15-19.I.1948; 4 sp. : Lusinga, 1.760 m, 9-17.XII.1947; [2 sp. : Kenia, affl. dr. Lusinga, 1.585 m, 19.XII.1947]; 2 sp. : Buye-Bala, affl. g. Muye, affl. dr. Lufira, 1.750 m, 6-8.IV.1948; 1 sp. : Buye-Bala, 1.750 m, 1-7.IV.1948; [1 sp. : riv. Dipidi (tête source), affl. dr. Lufwa, rég. Lusinga, 1.700 m, 10.I.1948].

This species is very distinct by the divergent apices of the elytra, but perhaps approaches most closely to *N. jeuneli* PIC, differing in the following respects : the more parallel sided elytra, the raised basal areas of the elytra, and the apices.

***Notoxus gutenbergi* n. sp.**

(Figs. 4 and 10.)

Elongate, sub-parallel; piceus, appendages and pronotum lighter; moderately strongly and moderately closely punctured; with fine, rather close, yellowish pubescence.

Head as broad as long, piceus; eyes moderately large and slightly prominent, not coarsely faceted, head in front of eyes sharply contracted to clypeus in an almost straight line, behind evenly rounded to neck without traceable basal angles; vertex concave, shining, with a few coarse, scattered punctures; bordered by a fine carina commencing by ocular margin, and running up to and across base of clypeus; with scattered setae anteriorly; mandibles and palpi lighter; antennae testaceous, reaching base of pronotum, slightly fuscous towards the apex, finely pubescent, segment 1 elongate and broader than next, 2 shorter than 1 and 3, 3-5 sub-equal, 6 onwards becoming shorter and wider apically until 10 is as wide as long, 11 elongate, acuminate.

Pronotum testaceous, globular, shining, a little narrower than elytra, finely and diffusely punctured, with sparse fine yellowish pubescence, at the base either side of the middle clothed with close, fine pale pubescence, close to base a distinct transverse furrow; thoracic horn elongate, crenulate at sides only, raised median portion strongly tuberculate, widely explanate margin obsoletely tuberculate.

Scutellum small.

Elytra elongate, twice as long as broad, subparallel; piceus, sometimes with one and sometimes with two obscure maculae on each elytron; shining, moderately strongly and moderately closely punctured; with close, fine, recumbent, yellowish pubescence; humeri prominent, evenly rounded from basal third to apices which are individually rounded, just behind base and close to suture two raised areas.

Ventral surface, testaceous, smooth, shining. Legs slender, testaceous; femora darker, tibiae lighter at apices, tarsi flavous. Aedeagus characteristic (fig. 10).

Holotype : Kalule Nord, rive g. face Mujinga-Kalenge, 1.050 m, 28.II-3.III.1949.

Paratypes : 5 sp. : Kalule Nord, rive g. face Mujinga-Kalenge, 1.050 m, 28.II-3.III.1949; 4 sp. : riv. Bowa, affl. dr. Kalule Nord, près Kiamalwa, 1-3.III.1949; 4 sp. : Kaziba, affl. g. Senze, sous-affl. dr. Lufira, 1.140 m, 10-14.II.1948; 1 sp. : Mukana-Lusinga, 1.810 m, 15-19.I.1948; 1 sp. : Lufwa, affl. dr. Lufira, 1.750 m, 16.I.1948.

This species differs from *N. litigiosus* LAFERTÉ in its generally narrower shape and different coloration, also by having a more pronounced post-humeral depression. *N. gutenbergi* has been named in honour of GUTENBERG the German 15th century printer whose invention of moveable type made the dissemination of knowledge by the printed word a commercial proposition.

***Notoxus niger* n. sp.**

(Figs. 8 and 12.)

Black, elongate, parallel, shining, strongly punctured, appendages lighter, with short, fine whitish pubescence.

Head black, shining, with scattered very fine white pubescence; as long as broad, vertex very slightly convex; with a fine carina running from just inside the eyes to the base of the clypeus; eyes moderately large, somewhat prominent, finely faceted; arcuately contracted from eyes to clypeus, temples parallel, a little shorter than eyes, basal angles widely rounded to a broad neck; palpi testaceous, mandibles darker; antennae with basal four segments testaceous rest becoming darker towards black apex, very finely pubescent, segment 1 elongate, stout, 2-6 sub-equal, obconic, 7-10 becoming wider, 11 elongate, acuminate.

Pronotum black, globular, posterior angles hardly traceable; slightly broader than long with scattered, fine, white pubescence, very finely and diffusely punctured, at the base on each side thickly clothed with whitish pubescence, sulcate across base close to basal margin; thoracic horn elongate, a little shorter than pronotum, parallel sided and rounded at apex, sides not noticeably crenulate unless viewed obliquely, explanate margin obsoletely tuberculate; raised median area tuberculate, triangular and bordered with a fine carina, rest of horn rugosely tuberculate.

Scutellum small.

Elytra black, shining, strongly and moderately closely punctured; about twice as long as broad, parallel-sided for basal two-thirds, thence contracted to a somewhat acuminate apex, where each elytron is individually rounded, humeri prominent, clothed with sparse long, whitish pubescence.

Ventral surface piceus, shining. Legs slender, femora piceus, tibiae and tarsi flavous. Aedeagus characteristic (fig. 8).

Holotype : Mukana-Lusinga, 1.810 m, 15-19.I.1948.

Paratypes : 4 sp. : Lufwa, affl. dr. Lufira, 1.700 m, 16.I.1948; 6 sp. : Mukana-Lusinga, 1.810 m, 15-19.I.1948; 1 sp. : same data, 6.III.1948; 1 sp. : Lusinga, 1.760 m, 8.XI.1949; 3 sp. : riv. Lufwa, 1.700 m, 16.I.1948.

*N. niger* differs from *N. ater* PIC by its narrower more elongate thoracic horn, the shorter antennae and the pronotum being narrower in proportion to the elytra, causing the humeri to be more prominent.

***Notoxus jeanelli* PIC.**

PIC, 1914, Voy. ALLUAUD et JEANNEL, IV, p. 169.

23 sp. : Kabwe s/Muye, affl. dr. Lufira, 1.320 m, 6-12.V.1948; 7 sp. : Buye-Bala, 1.750 m, 8-16.IV.1948; 11 sp. : Buye-Bala, affl. g. Muye, affl. dr. Lufira, 1.750 m, 8-16.IV.1948; 1 sp. : riv. Lufwa, affl. dr. Lufira, 1.700 m, 16.III.1948; [3 sp. : riv. Dipidi, 1.700 m, 22.IV.1947]; 3 sp. : Lusinga, 1.760 m, 20.IV.1947; [1 sp. : Kenia, affl. dr. Lusinga, 1.585 m, 19.XII.1947]; 5 sp. : Mukana-Lusinga, 1.810 m, 15-19.I.1948; 8 sp. : Mukana, 1.810 m, 18.III.1948; 3 sp. : riv. Kampadika, affl. Grande Kafwe, 1.700 m, 22.I.1948; 2 sp. : Lufwa, 1.700 m, 16.III.1948; 6 sp. : Kalumengongo (tête source), affl. dr. Lualaba, 1.780 m, 21.I.1948; 1 sp. : Kabwekanono, 1.815 m, 6.III.1948; 1 sp. : Katongo, affl. g. Mubale, sous-affl. g. Munte, 1.750 m, 1.IV.1948.

***Notoxus antinorii* PIC.**

PIC, 1901, Le Natural., XXIII, p. 228.

1 sp. : Ganza, 860 m, 30.V-10.VI.1949.

***Notoxus neavei* KREKICH.**

KREKICH, 1922, Rev. Zool. Bot. Afr., 10, p. 210.

1 sp. : Lufwa, affl. dr. Lufira, 1.700 m, 16.I.1948.  
Determined from description.

***Notoxus guttula* KREKICH.**

1 sp. : Mabwe, lac Upemba, 585 m, 14.IX.1947.

Also amongst this material were five undescribed species of *Notoxus* represented by unique examples.

***Anthicus ashbyi* n. sp.**

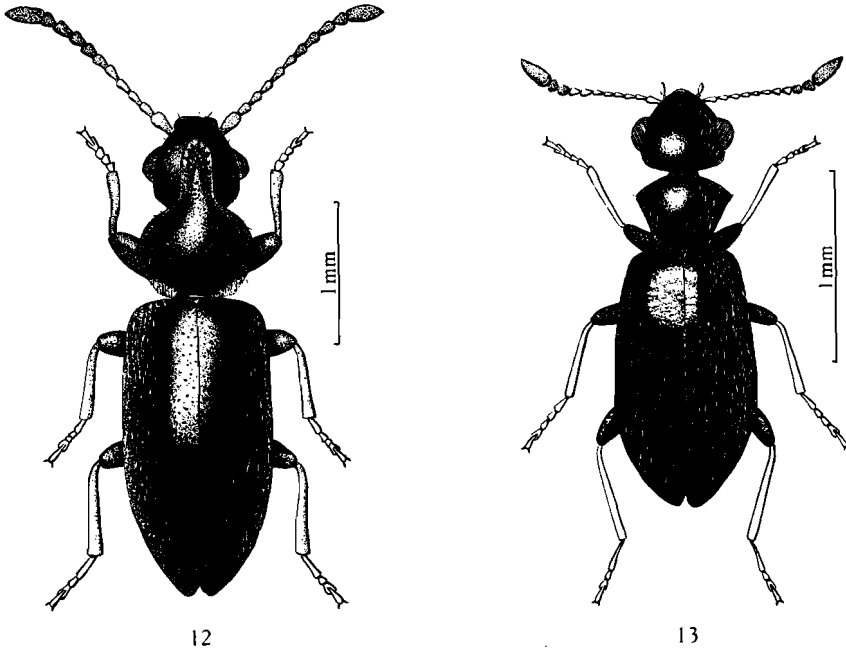
(Fig. 13.)

Black, appendages lighter; shining, finely and somewhat closely punctured, pubescence white.

Head black, shining, finely and closely punctured; convex, a little broader than long, widest at base (exclusive of eyes); eyes large and



finely faceted; moderately strongly contracted from eyes to clypeus which is narrow and transverse, hind angles broadly rounded to arcuate base; very finely and diffusely clothed with white pubescence; clypeus, mandibles, palpi and base of antennae testaceous, apical segments of antennae piceus; segment 1 elongate and broad, 2-5 narrower, elongate, obconic, 6-8 about



12

FIG. 12. — *Notoxus niger* n. sp.

13

FIG. 13. — *Anthicus ashbyi* n. sp.

as broad as long, widest apically, 9 broader and longer than 8, 10 transverse, broader than 9, 11 broader and much more elongate than any preceding, acuminate.

Pronotum black, shining, as finely and closely punctured as head; convex, distinctly broader than long, approximately as broad as head with eyes; anterior angles acute, anterior margin strongly arcuate, contracted behind to narrow base in an almost straight line; with large obsolete fovea in the centre at the base; clothed with short, fine, white pubescence.

Scutellum minute.

Elytra black, shining; a little more coarsely and rugosely punctured than the head and pronotum; elongate-ovate, about  $1\frac{3}{4}$  times as long as broad, at humeri much wider than pronotum, humeri prominent and rounded; widened to a little beyond the middle and thence evenly, arcuately rounded to apex; with an almost imperceptible depression on suture sub basally; pubescence moderately close, white.

Ventral surface black and shining. Legs slender, with femora piceus to black, tibiae and tarsi testaceous, intermediate and hind tarsi almost as long as tibiae, anterior shorter.

Length 2 mm.

Holotype : Mukana-Lusinga, 1.810 m, 6.III.1948.

Paratypes : 2 sp. : Kabwekanono, 1.815 m, 6.III.1948; 3 sp. : Mukana-Lusinga, 1.810 m, 6.III.1948; 2 sp. : gorges de la Pelenge, 1.150 m, 31.V.1947; 1 sp. : Lusinga, 1.760 m, 19.III.1947; [1 sp. : Grande Kafwe, affl. dr. Lufwa, 1.780 m, affl. dr. Lufira, 5.III.1948]; [1 sp. : riv. Dipidi, 1.700 m, 9.I.1948].

This species is very near *A. trapezithorax* PIC but differs in having the basal margin of the head more arcuate and consequently the basal angles less prominent, is more shining particularly on the head and pronotum, the elytra are more rounded at the sides, is less strongly and more rugosely punctured, overall it is a little smaller. Both this species and the following are named in honour of the two coleopterists, Mr. S. R. ASHBY and Mr. F. J. COULSON, who encouraged me and maintained my interest in those very early days when the difficulties which beset one seem almost insuperable.

***Anthicus coulsoni* n. sp.**

(Fig. 14.)

Small, piceo-testaceous, appendages lighter, distinctly punctured and with short pale, inconspicuous pubescence.

Head piceus, shining, finely and diffusely punctured; convex, as wide as long (exclusive of eyes) almost globular; eyes large, prominent, finely faceted; rounded from eyes to narrow, transverse, fuscous clypeus, temples short, hind angles broadly rounded, scarcely traceable; mandibles, palpi and antennae flavous, antennal segment 1 elongate, 2-5 shorter, filiform, sub-equal, 6-8 very slightly elongate, 9-10 quadrate, wider, 11 longer and wider than any preceding, acuminate.

Pronotum testaceous, shining, finely punctured about as strongly as head but much closer; convex, about as wide as long, distinctly narrower than the head with eyes; broadest at anterior angles which are acute; anterior margin strongly arcuate, contracted to a narrow base in an almost straight line, with an almost imperceptible depression at base.

Scutellum minute.

Elytra piceo-testaceous, shining; more strongly punctured than head or pronotum, punctures with a tendency to run into rows; convex, ovate, about  $1\frac{1}{2}$ - $1\frac{3}{4}$  times as long as broad, much broader than pronotum at humeri which are broadly rounded, widest at middle and evenly rounded to apex; pubescence fine, pale, short, only noticeable at sides, with an occasional more elongate seta.

Ventral surface darker; legs moderately short, flavous, tarsi shorter than tibiae.

Length : 1,75 mm.

Holotype : Lusinga, 1.760 m, 9-17.XII.1947.

Paratypes : 1 sp. : Lusinga, 1.760 m, 1-8.XII.1947; 1 sp. : Lusinga, 1.760 m, 3.III.1947.

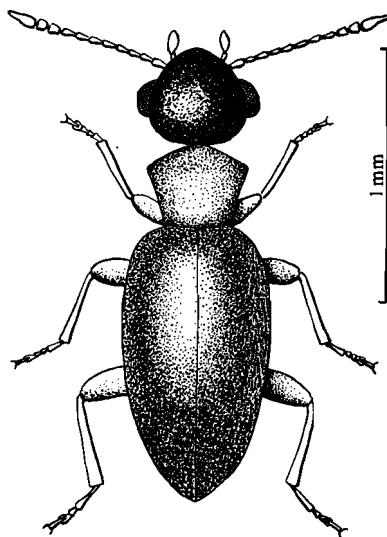


FIG. 14. — *Anthicus coulsoni* n. sp.

A very distinct species, in size and general facies closest to *A. scydmaenoides* WOLLASTON from the Canaries; quite apart from its different coloration the head of *A. coulsoni* is more transverse than that of *A. scydmaenoides*, the elytra is less distinctly punctured and the antennae have the apical segments less elongate.

#### ***Anthicus trapezithorax* PIC.**

PIC, 1899, Bull. Mus. Paris, V, p. 31.

In spite of the fact that this insect is a Madagascan species, the author cannot see any significant differences between those specimens in the general collection of the British Museum (Nat. Hist.) and the specimen collected by the expedition to Upemba National Park.

1 sp. : Lusinga, 1.760 m, 9-17.XII.1947.

**Anthicus bottegoi** PIC.

PIC, 1895, Ann. Mus. Genova, (2), XV, p. 231.

1 sp. : Kaswabilenga, 700 m, 3-4.XI.1947; 5 sp. : riv. Lukawe, affl. dr. Lufira, 700 m, 22.X.1947; 2 sp. : Mabwe, rive Est lac Upemba, 585 m, 1-15.VIII.1947.

**Anthicus gestroi** PIC.

PIC, 1895, Ann. Mus. Genova, (2), XV, p. 231.

1 sp. : Kabwe s/Muye, affl. dr. Lufira, 1.320 m, 6-12.V.1948.

**Anthicus usambarensis** PIC.

PIC, 1908, Échange, XXIV, p. 27.

1 sp. : Lusinga, 1.760 m, 22.III.1947; 1 sp. : riv. Mboto, affl. Lusinga, 9.VII.1945.

**Tomoderes tschoffeni** PIC.

PIC, 1900, Ann. Soc. Ent. Belge, XLIV, p. 428.

2 sp. : Buye-Bala, 1.750 m, 25-31.III.1948; 1 sp. : Lusinga, 1.750 m, 1-8.XII.1947.

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ARRANGED ALPHABETICALLY.

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PARC NATIONAL DE L'UPEMBA  
I. MISSION G. F. DE WITTE  
en collaboration avec  
W. ADAM, A. JANSSENS, L. VAN MEEL  
et R. VERHEYEN (1946-1949).  
Fascicule 49 (3)

NATIONAAL UPEMBA PARK  
I. ZENDING G. F. DE WITTE  
met medewerking van  
W. ADAM, A. JANSSENS, L. VAN MEEL  
en R. VERHEYEN (1946-1949).  
Aflevering 49 (3)

GENUS FORMICOMUS  
(COLEOPTERA POLYPHAGA)  
(Fam. ANTHICIDAE)

BY

JOHAN C. VAN HILLE (Grahamstown, S. Africa)

In this collection the genus *Formicomus* is represented by 215 specimens, distributed over the following ten species :

<i>F. wittei</i> n. sp. ... ..	111 specimens.
<i>F. jordani</i> n. sp. ... ..	26 specimens.
<i>F. upembensis</i> n. sp. ... ..	45 specimens.
<i>F. dollmani</i> VAN HILLE ... ..	10 specimens.
<i>F. spatulatus</i> VAN HILLE ... ..	2 specimens.
<i>F. rubricollis</i> LAFERTÉ ... ..	4 specimens.
<i>F. tuberculifer</i> PIC ... ..	9 specimens.
<i>F. subinflatus</i> PIC ... ..	5 specimens.
<i>F. tropicalis</i> KREKICH ... ..	2 specimens.
<i>F. lacustris</i> KREKICH ... ..	1 specimen.

The three species described as new form 85 % of the collection. They belong to the group of black species with dark, metallic-blue elytra which especially in tropical Africa is represented by a large number of very similar species of limited geographical distribution. All these species are very alike in form and colour, while in several species progressive and regressive colourations occur. In the author's opinion only the secondary sex characteristics provide reliable data for identifications. Of the three

species described below the males can be distinguished externally by the shape of the femoral spine on the front legs. The females which do not have external sex characteristics are very difficult to separate. Identification was carried out on the external features summarized in the following key.

- 1a. Elytra with posthumeral band of white hairs ..... 2  
 b. Elytra without posthumeral band of hairs ..... 3
- 2a. Prothorax dorsally somewhat shagreened but not flattened and with two dorsal pits in front of the posterior margin; the distance between these pits exceeds the diameter of each pit; ♂ with short triangular femoral spine on front leg ..... *F. jordani* n. sp.  
 b. Prothorax dorsally smooth and glossy with very insignificant pits in front of the posterior margin, not much larger than the punctures; ♂ with large downward pointing femoral spine on front leg .....  
*F. wittei* n. sp.
3. Prothorax dorsally somewhat flattened and shagreened; the dorsal pits on the prothorax not always visible; when visible the distance between them does not exceed the diameter of each pit; ♂ with slender femoral spine on front leg ..... *F. upembensis* n. sp.

The band of white hairs on the elytra is easily rubbed off, but even then the places where the hairs were implanted are clearly visible. The shagreen appearance on the thorax is not a constant characteristic in *F. jordani* and the author is not sure to what extent this feature is caused or emphasised by the drying out of the specimens.

The geographical distribution of these three species is nearly identical. They were all collected in an area of which the diameter does not exceed 60 km and at altitudes between 1.070-1.820 m, apart from two specimens of *F. jordani* collected at Mabwe, 585 m, on the east coast of Lake Upemba (not Kabwe on the river Muye, 1.320 m).

1. — **Formicomus wittei** n. sp. <sup>(1)</sup>.

(Fig. 1.)

Head, thorax and abdomen black; elytra with metallic blue or greenish-blue reflection; appendages black.

Head finely punctured, with scattered, dark, procumbent hairs anteriorly.

Prothorax glossy; punctures finer than on head; with fine recumbent hairs which are black in middle area, but grey anteriorly, posteriorly and laterally.

(1) The localities between [ ] are outside the Park's boundaries.

Elytra with posthumeral constriction carrying a band of stiff white hairs, which does not reach the median suture; surface highly glossy, with very few punctures in front of the band, slightly more densely punctured behind the band, but less densely than on head; hairs on central area of elytra black; greyish-white posteriorly and laterally.

Sexual characteristics :

♂ : Front legs with large, downward pointing femoral spine and a tubercle on distal third of tibia (fig. 1 A). Last exposed abdominal sternite having a semicircular incision on the posterior margin (fig. 1 B). Sternite of retractile abdominal segment with narrow median sclerite; side-lobes with narrow ventral prong and broad, pointed, dorsal prong; very hairy (fig. 1 C). Tergite of retractile abdominal segment as figured (fig. 1 D). Tegmen of aedeagus with three terminal subequal lobes (fig. 1 E).

♀ : Retractable segment weakly sclerotized; sternite with irregular, blunt, median point and well developed side-lobes (fig. 1 F).

(The last exposed sternite of ♂ is very similar to that of *F. pagnioni* Pic but in all other details the parts are different.)

Length : 3,5-4,2 mm, average 4,0 mm.

Width (over widest part of elytra) : 1,2-1,3 mm, average 1,25 mm.

Holotype : ♂, Grande Kafwe, affl. dr. Lufwa, affl. dr. Lufira, 1.780 m, 5.III.1948.

Allotype : ♀, Mukana, Lusinga, 1.810 m, 1.IV.1947.

Geographical distribution : Mukana, Lusinga, 1.810 m, 17 ♂♂, 20 ♀♀; Mukana, 1.810 m, 8 ♂♂, 12 ♀♀; Lusinga, 1.760 m, 3 ♂♂, 3 ♀♀; riv. Lufwa, affl. dr. Lufira, 1.700 m, 17 ♂♂, 8 ♀♀; [Grande Kafwe, affl. dr. Lufira, 1.780 m, 10 ♂♂, 2 ♀♀]; région confl. Mubale-Munte, 1.480 m, 7 ♂♂, 2 ♀♀; [Kiamakoto-Kiwakishi, 1.070 m, 1 ♂]; Kankunda, 1.300 m, 1 ♀.

## 2. — *Formicomus jordani* n. sp.

(Fig. 2.)

Head, thorax and abdomen black; elytra with metallic blue reflection; appendages black.

Head finely punctured; with scattered dark hairs, procumbent in front and laterally, recumbent dorsally.

Prothorax in many specimens shagreened over posterior, dorsal third, in other specimens smooth and glossy; more densely punctured and more hairy than head; hairs black, but greyish white over posterior fifth; near posterior margin two pits, further apart than the diameter of each pit.

Elytra with a slight posthumeral constriction, carrying a band of stiff, white, recumbent hairs, not extending to the median suture; surface highly glossy with few punctures; hairs black, but greyish white laterally and over posterior third.



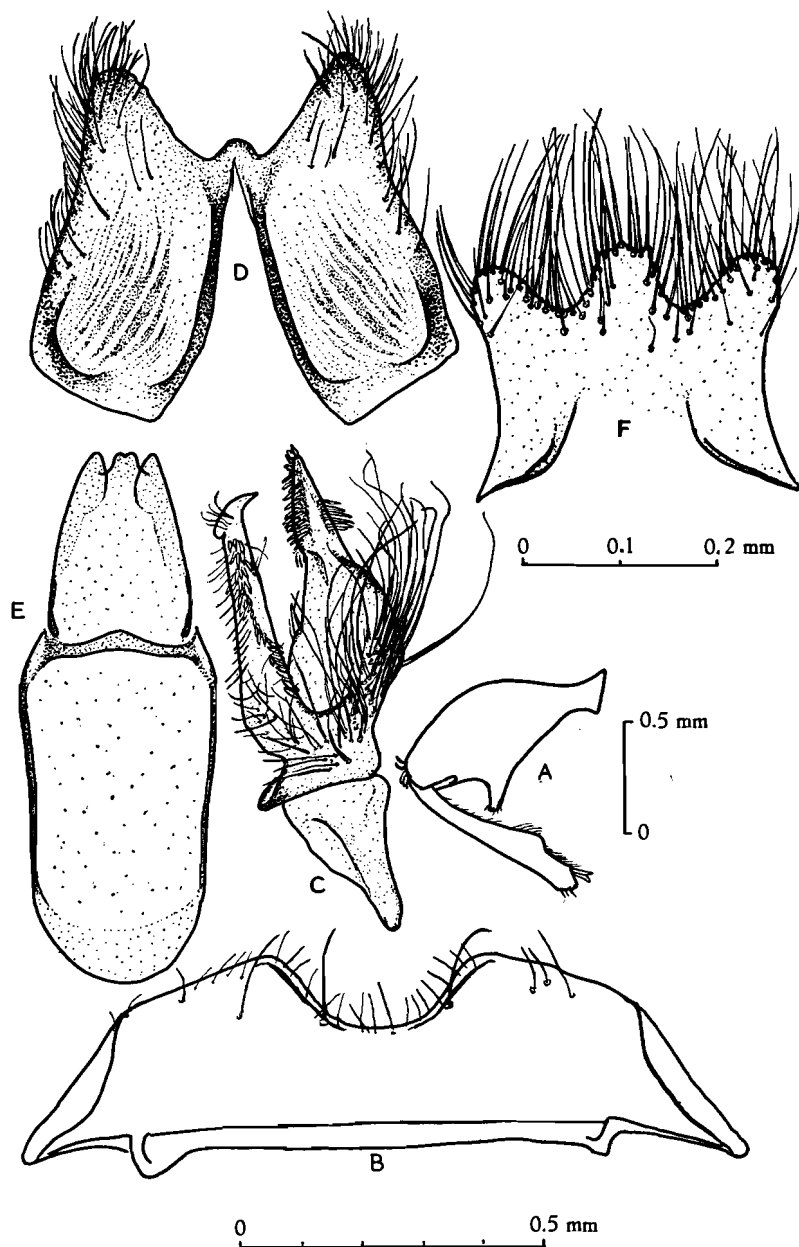


FIG. 1. — *Formicomus wittei* n. sp.

A : Femur and tibia of front leg of ♂. — B : Last exposed abdominal sternite of ♂. — C : Ventral view of right sidelobe of sternite of retractile segment of ♂. — D : Tergite of retractile segment of ♂. — E : Tegmen of aedeagus. — F : Sternite of retractile segment of ♀.

(B, C, D and E at same scale; A and F as indicated.)

## Sexual characteristics :

♂ : Front legs with short triangular femoral spine and small tubercle on distal third of tibia (fig. 2A). Last exposed abdominal sternite with slightly sinuous posterior margin (fig. 2B). Sternite of retractile abdominal segment with narrow median sclerite and broad, simple side-lobes with lateral hair tufts (fig. 2C). Tergite of retractile abdominal segment as figured (fig. 2D). Tegmen of aedeagus with three terminal lobes of which the middle one is slightly shorter than the lateral ones (fig. 2D).

♀ : Retractable segment weakly sclerotized; sternite with well developed median point and side-lobes (fig. 2F).

Length : 2,9-4 mm, average 3,7 mm.

Width (over widest part of elytra) : 1-1,3 mm, average 1,16 mm.

Holotype ♂ : Lufwa, affl. dr. Lufira, 1.700 m, 16.I.1948.

Allotype ♀ : [Grande Kafwe, affl. dr. Lufwa, affl. dr. Lufira, 1.780 m, 5.III.1948].

Geographical distribution : Lusinga, 1.760 m, 1 ♂, 5 ♀ ♀; Mukana, Lusinga, 1.810 m, 1 ♂, 4 ♀ ♀; Mukana, 1.810 m, 1 ♂, 1 ♀; [riv. Lufwa, affl. dr. Lufira, 1.700 m, 1 ♂, 3 ♀ ♀]; [Grande Kafwe, affl. dr. Lufwa, 1.700 m, 2 ♀ ♀]; riv. Kampadika, affl. Kafwe, 1.700 m, 1 ♀; Mabwe (rive Est lac Upemba), 585 m, 1 ♂, 1 ♀; Kalumengongo (tête source), affl. dr. Lualaba, 1.750 m, 1 ♂; [riv. Kenia, affl. dr. Lusinga, sous-affl. dr. Lufira (nid rat-taupe), 1.585 m, 1 ♀]; rég. confl. Mubale-Munte, 1.480 m, 1 ♀; Kabwe s/Muye, affl. dr. Lufira, 1.320 m, 1 ♂.

This species also occurs in Angola where Prof. K. JORDAN collected 1 ♂ and 4 ♀ ♀ in Quirimbo, 1934; these specimens belong to the British Museum.

3. — **Formicomus upembensis** n. sp.

(Fig. 3.)

Head, thorax and abdomen black; elytra with very faint blue reflection, often appearing black; appendages dark testaceous (especially the antennae and tarsi) to black.

Head finely punctured, with scattered black and grey hairs.

Prothorax with few black and grey hairs; the posterior half to third of the middorsal area is finely shagreened and flattened; in some specimens pits are visible near the posterior margin; these are about as far apart as the diameter of each pit.

Elytra slightly indented behind the humerus; without transverse band of white hairs; hairs fine and scattered, grey or greyish white.

## Sexual characteristics :

♂ : Front legs with slender femoral spine and small tubercle on distal fourth of tibia (fig. 3A). Last exposed abdominal sternite with posterior

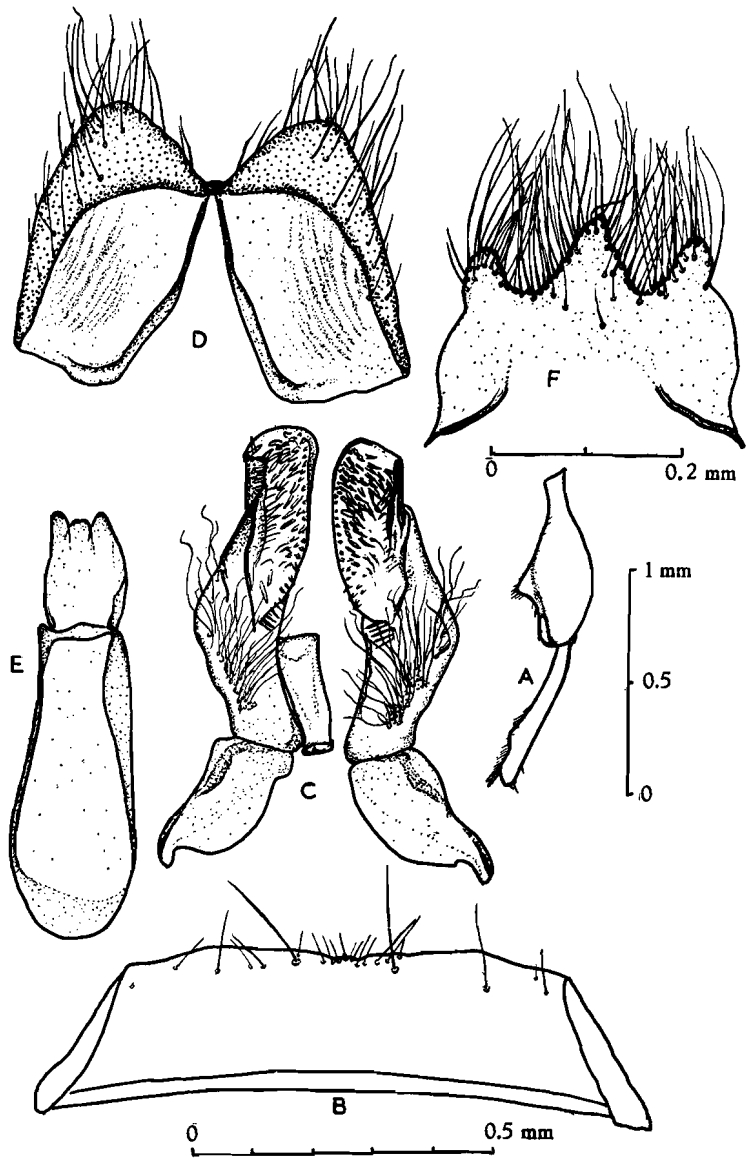


FIG. 2. — *Formicomus jordani* n. sp.

A : Femur and tibia of front leg of ♂. — B : Last exposed abdominal sternite of ♂. — C : Sternite of retractile segment of ♂. — D : Tergite of retractile segment of ♂. — E : Tegmen of aedeagus. — F : Sternite of retractile segment of ♀.

(B, C, D and E at same scale; A and F as indicated.)

margin somewhat cut in and with a small, median protuberance (fig. 3 B). Sternite of retractile abdominal segment with rhomboid median sclerite and simple elongated side-lobes (fig. 3 C). Tergite of retractile abdominal segment as figured (fig. 3 D). Tegmen of aedeagus very slightly incised at the tip (fig. 3 E).

♀ : Retractable segment weakly sclerotized; the sternite without median point or tubercle (fig. 3 F).

Length : 3,5-4,2 mm, average 3,8 mm.

Width (over widest part of elytra) : 1,1-1,3 mm, average 1,2 mm.

Holotype ♂ : Buye-Bala, 1.750 m, 25-31.III.1948.

Allotype ♀ : Buye-Bala, 1.750 m, 25-31.III.1948.

Geographical distribution : Buye-Bala, 1.750 m, 2 ♂♂, 27 ♀♀; [riv. Lufwa, affl. dr. Lufira, 1.700 m, 1 ♂, 2 ♀♀]; région confl. Mubale-Munte, 1.480 m, 1 ♀; Lubanga, affl. dr. Senze (affl. dr. Lufira), 1.750 m, 2 ♀♀; Mukana, 1.810 m, 3 ♀♀; Kabwe s/Muye, affl. dr. Lufira, 1.320 m, 1 ♀; riv. Kampadika, affl. Kafwe, 1.700 m, 1 ♂, 4 ♀♀; Katongo, affl. g. Mubale, sous-affl. g. Munte, 1.750 m, 1 ♀.

#### 4. — **Formicomus dollmani** VAN HILLE.

Proc. Roy. ent. Soc. Lond., (B), 22, 1953, p. 151.

Distribution. — [Riv. Lufwa, affl. dr. Lufira, 1.700 m, 6 ♂♂; Mukana, 1.810 m, 3 ♂♂, 1 ♀.

Described from Namwala and Chinenga, w. half of N. Rhodesia.

#### 5. — **Formicomus spatulatus** VAN HILLE.

J. ent. Soc. S. Afr., 13, 1950, p. 68-72.

Distribution. — Kanonga, 675 m, 1 ♂; Mabwe (rive Est lac Upemba), 585 m, 1 ♀.

Described from Nairobi (Kenya) and recorded from Mwendwa (N. Rhodesia), Kanna (Urundi) and Bugarama (Ruanda).

#### 6. — **Formicomus rubricollis** LA FERTÉ.

Monographie des *Anthicus*, Paris, 1848, p. 75.

Distribution. — Ganza, 860 m, 1 ♂, 2 ♀♀; Kaswabilenga, 700 m, 1 ♀.

Described from S. Africa and occurring over the whole eastern half of Africa from Lake Victoria to the Cape Province.

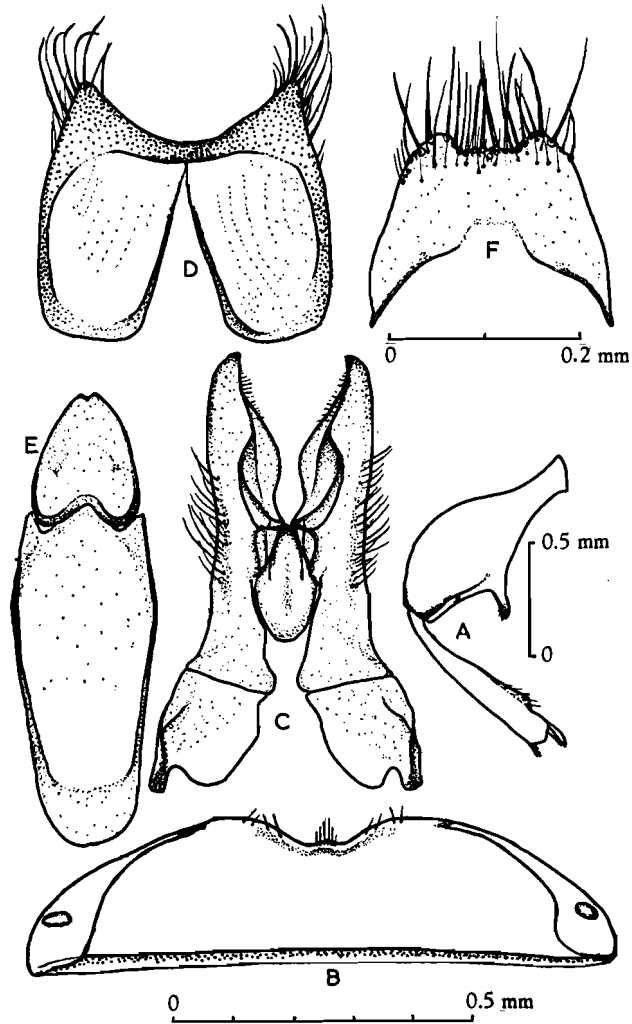


FIG. 3. — *Formicomus upembensis* n. sp.

A : Femur and tibia of front leg of ♂. — B : Last exposed abdominal sternite of ♂. — C : Sternite of retractile segment of ♂. — D : Tergite of retractile segment of ♂. — E : Tegmen of aedeagus. — F : Sternite of retractile segment of ♀.

(B, C, D and E at same scale; A and F as indicated.)

7. — **Formicomus tuberculifer** PIC.

Naturaliste, 19, 1897, p. 340.

Distribution. — Mabwe, rive Est lac Upemba, 4 ♂♂, 1 ♀; Kaziba, affl. g. Senze, sous-affl. dr. Lufira, 1.140 m, 2 ♀♀; Mukana-Lusinga, 1.810 m, 1 ♀; Kiamakoto (entre Masombwe et Mukana) rive dr. Lukima, affl. dr. Grande Kafwe, 1.070 m, 1 ♀.

Described from S. Africa and recorded from Kenya, Uganda, Belgian Congo, N. and S. Rhodesia, Nyasaland, Angola and S. Africa.

8. — **Formicomus subinflatus** PIC.

Rev. Ent. Caen, 20, 1901, p. 97.

Distribution. — Kaswabilenga, 1.700 m, 1 ♂; riv. Kande (affl. g. Lupiala), sous-affl. dr. Lufira, 700 m, 1 ♂; riv. Lupiala, affl. dr. Lufira, 700 m, 1 ♀; Kanonga, affl. dr. Fungwe, 700 m, 2 ♀♀.

Described from S. Rhodesia and recorded from N. and S. Rhodesia and Nyasaland.

9. — **Formicomus tropicalis** KREKICH-STRASSOLDO.

Ann. Mus. Stor. nat. Genova, 52, 1928, pp. 1-4.

Distribution. — Mabwe, rive Est lac Upemba, 585 m, 1 ♂, 1 ♀.

Described from S. Rhodesia and recorded from N. and S. Rhodesia, Nyasaland, S. Angola, S. W. Africa and S. Africa.

10. — **Formicomus lacustris** KREKICH-STRASSOLDO.

Ann. Mus. Stor. nat. Genova, 52, 1928, pp. 1-4.

Distribution. — Mabwe, rive Est lac Upemba, 585 m, 1 ♀.

Described from Lake Rudolf (British Somaliland) and recorded from S. Ethiopia, Gold Coast, Lake Victoria, N. and S. Rhodesia, Portuguese East Africa and Zululand (South Africa).