# Exploration du Parc National Albert

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

FASCICULE 63

# Exploratie van het Nationaal Albert Park

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

AFLEVERING 63

## PALPICORNIA

J. BALFOUR-BROWNE, M. A. (London)



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# PARC NATIONAL ALBERT I. MISSION G. F. DE WITTE 1933-1935 Fascicule 63

# NATIONAAL ALBERT PARK I. ZENDING G. F. DE WITTE 1933-1935 Aflevering 63

## PALPICORNIA

BY

J. BALFOUR-BROWNE M. A. (London).

The Palpicornia of the Albert National Park collected by the Mission G. F. DE WITTE had been, in part, determined by the late M. A. D'ORCHYMONT before his regretted death early in 1946. Shortly thereafter Dr. Van Straelen asked me to undertake the completion of the determination of the DE WITTE collections and also those of the Mission H. Damas, and to prepare a report thereon. I wish here to express my sincere thanks to Dr. Van Straelen for the opportunity to study these very rich collections, both numerically and scientifically, representing a total of over 103 species, which furnish the richest single material I have yet seen from Africa. In those cases where D'ORCHYMONT had assigned, in collection, a name to new species recognised by him in his preliminary study I have retained the name proposed by him.

Of the total of 103 named species dealt with hereinafter 22 species are described as new to science, four belonging to the Hydrænidæ, one to the Hydrochinæ, fifteen to the Sphæridinæ and two to the Hydrophilinæ. The high proportion of new species occuring in the Hydrænidæ emphasises that this family is still but very imperfectly known from Africa, the emphasis being the greater for the fact that only 20 specimens belonging to this group were obtained out of the very large total of the whole collection. Again, the fifteen new species of Sphæridinæ, out of a total of 44 species taken, compared with only two new species of Hydrophilinæ, out of 48 species taken, suggests that the terrestrial forms of the Hydrophilidæ are still relatively unknown whilst the truly aquatic forms from « normal » habitats are relatively well known; this, perhaps, is but a measure of the fact that previous collections have tended to ignore the smaller forms of the Sphæridiinæ from non-aquatic habitats.

Analysis of the vertical and horizontal distributions as detailed in the accompanying Tables, indicates that for the Palpicornia as a whole (Table 1) the numerical preponderance of species occurs at the low intermediate zone (1.001 to 2.000 m), the next preferred zone being the lowest (O to 1.000 m); contrarily only two species attain to the highest zone (3.001 to 4.000 m). This altitudinal preference holds true (Table 2), but without significant value, for the *Hydrænidæ* and for the subfamilies *Hydrochinæ* and *Hydrophilinæ*. The *Spercheidæ* shew a decided preference for the lowest zone, no specimens occurring above 1.000 m. On the other hand the *Sphæridiinæ*, whilst shewing the same maximum preference for the low intermediate zone at 1.000 to 2.000 m, have their next highest preference for the high intermediate zone (2.001 to 3.000 m) and are the only group to attain to the highest zone over 3.001 m. This difference in preference must undoubtedly be significant, having regard to the numerically rich material on which the opinion is based.

Horizontally, as is to be expected, a greater number of species are seen to be common to the East African Highlands and to the Albert National Park than are common to the Park and to the relatively low-lying area of the Congo basin with altitudes rarely exceeding 600 m.

TABLE 1.

SPECIES	0-1.000 m.	1.001-2.000 m.	2.001-3.000 m.	3.001-4.000 m.	Belgian Congo.	East Africa,	West Africa.
Hydrænidæ.				Commission of the Commission o			
Ochthebius regimbarti KNISCH  — andreinii? s. sp. Régimbart  Hydræna (s. str.) perlonga nov. sp  — alberti nov. sp  Limnebius damasi sp. nov  — wittei sp. nov  — sp	× - × × -		   X   _   _			+++	- - - - - -
Spercheidæ.							
Spercheus cerisyi Guérin	× × ×			_	++-	++++	+
Hydrophilidæ.							
Hydrochus albicans Régimbart	× × × ×	$\frac{\times}{\times}$	<u>×</u> ×		+++++	+ + + + +	++

SPECIES	0-1.000 m.	1.001-2.000 m.	2.001-3.000 m.	3.001-4.000 m.	Belgian Congo.	East Africa,	West Africa.
Cælostoma wittei sp. nov		××			1   1++	+   + + + +   + +   +   +	+
— strictus d'Orchymont	×	×			+	+	

y					T		
SPECIES	0-1.000 m.	1.001-2.000 m.	2.001-3.000 m.	3.001-4.000 m.	Belgian Congo.	East Africa.	West Africa.
Helochares mersus d'Orchymont  stenius d'Orchymont  livianus d'Orchymont  minax d'Orchymont  minax d'Orchymont  mentinotus Kuwert  sp.  (C.) africanus d'Orchymont  sp.  (C.) africanus d'Orchymont  sp.  (S. str.) longipalpis Murray  (S. str.) dilutus Erichson  (S. str.) pallens Mac Leay  Marold  menticus Régimbart  Pellochares conspicuus Régimbart  Pellochares conspicuus Régimbart  menchrus (M.) natalensis Gemminger & Harold  meticus Régimbart  meticus Solieri Castelnau  magolensis Erichson  Hydrophilus senegalensis Percheron  meticus Solier  Hydrochara elliptica Fabricius  Neohydrophilus straeleni sp. nov  meticus Hope  methickei d'Orchymont  meticus Hope  methickei d'Orchymont  meticus Borchymont  meticus Borchymont  meticus Borchymont  meticus Berichson  Allocotocerus seriatus Régimbart  meticus Berichson  meticus Borchymont  meticus Berichson  meticus Borchymont  meticus Berichson  meticus Borchymont  meticus Berichson  semirotundus d'Orchymont  meticus Berichson  meticus Borchymont  meticus Borchymo	×	×××××     ××       ××       ××××   ××   ××	XXX		++ ++++     +++++++++++++++++++++++++++	+ + +++  ++ ++ +++ ++++ ++++ ++++ ++++++	
TOTALS.	50	74	34	2	56	71	33

TABLE 2.

SPECIES	0-1.000 m.	1.001-2.000 m.	2.001-3.000 m.	3.001-4.000 m.	Belgian Congo.	East Africa.	West Africa.
Hydrænidæ	3	5	1	0	0	3	0
Hydrophilidæ Sphæridiinæ	3 10	32	22	2	2	3 24	1 14
Hydrophilidæ: $Hydrophilinx + Hydrophilinx \dots \dots$	34	37	11	0	38	41	18

The Holotype specimen of all new species will be deposited in the « Institut Royal des Sciences Naturelles de Belgique » (Brussels), paratypes in the same institution and in the British Museum.

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

#### HYDRÆNIDÆ

#### Subfam. HYDRÆNINÆ.

#### Ochthebius (Homalochthebius) regimbarti Knisch.

Ochthebius (Homalochthebius) regimbarti Knisch 1924, Coleopt. Cat. Junk, 79, 18.

Ochthebius rugulosus Régimbart 1906, Ann. Soc. ent. France, 75, 276 (nec Wollaston 1857; nec J. Sahlberg 1900).

I am indebted to M. Legros of Paris Museum for the opportunity to examine one of the two « type » specimens of this species from Régimbart's collection. This specimen is a male  $(1,652 \times 0,664 \text{ mm})$  labelled in Régimbart's handwriting (i) Kibwezi. Wa-Kamba. (ii) Afr. or. angl. Ch. Alluaud. (iii) rugulosus Rég. I hereby designate this specimen as the holotype.

Owing to the inadequate original description I have prepared a full re-description based on the ex-typis seen and a short series from the Mission H. DAMAS.

Testaceous, the head black, cupreo-micant; male with the anterior edge of the labrum produced and distinctly upturned in the middle, female with a median rounded emargination, quite shallow but distinct; pronotum with a shallow median longitudinal sulcus and with shallow transverse sulci anteriorly and posteriorly on the disc, the anterior lateral sulcus obsolete; transparent membrane distinct; elytra ten-striate, the striæ distinctly and strongly catenate-punctate; interstriæ in the male obsoletely, in the female distinctly reticulate-rugose.

Head black, coppery metallic, the fronto-clypeal suture strong and deep; labrum microreticulate, in the male strongly produced and upturned in the middle, in the female shallowly but distinctly emarginate in the middle; clypeus shining on the disc, sparingly finely punctulate, the sides and posterior edge microreticulate; frons microreticulate, posteriorly bifoveolate with an ocellus on each side immediately behind each foveole. Pronotum transverse, evidently narrower at the base than at the apex, with a distinct anterior and lateral transparent fringing chitin; with a shallow longitudinal median sulcus and with more or less obsolescent anterior and posterior transverse sulci on the disc; the antero-lateral sulcus obsolete, very shallow; the disc shining, except in the depressions of the sulci which are microreticulate; antero-lateral lobes (« oreillettes ») deeply microreticulate, finely granular; irregularly and quite shallowly moderately coarsely punctate; fusco-testaceous, somewhat greenish-micant. Elytra

oval, the sides rounded, testaceous, with ten striæ, the external ones somewhat obsolete, the striæ distinctly and strongly catenate-punctate, brownish; interstriæ barely as wide as the striæ, weakly convex, in the male obsoletely, in the female distinctly reticulate-rugose. *Venter* piceous, apical ventrites testaceous. *Legs* testaceous.

MISSION H. DAMAS: Kamande, S.-W. shores of Lake Edward (Kianga), 925 m, 19.XI.1935, 1  $\sigma$ , 3  $\varphi$ .

This little species resembles O. (H.) and reinii Régimbart but it is a distinctly smaller insect with the pronotal punctation much less impressed and finer and the «oreillettes» distinctly rugose-reticulate, not shining



FIG. 1.

Ochthebius (Homalochthebius) regimbarti Knisch.
Holotype: Ædeagus, lateral aspect. ×50.

and punctate as in the compared species. It is readily distinguished in the male by the pronounced process of the labrum and in the female by the shallow but distinct emargination of the anterior edge of the labrum.

#### Ochthebius (Homalochthebius) andreinii Régimbart.

Ochthebius andreinii Régimbart 1905, Boll. Soc. ent. Ital., **36** (1904), 222. Ochthebius andreinii Régimbart 1906, Ann. Soc. ent. France, **75**, 275. Ochthebius andreinii Régimbart 1922, in Voy. Maur. de Rothschild, Ethiopie, pl. 49, fig. 4. Ochthebius (Homalochthebius) andreinii d'Orchymont 1948, Proc. Zool. Soc.

Lond., 117 (IV), 719.

Two females which, in the absence of males taken at the same time, it is impossible to ascribe to any of the three subspecies which d'Orchymont has distinguished (Mém. Mus. Hist. Nat. Paris [N. S.], **27**, fasc. 2, 49) on differences in the form of the mobile terminal piece of the ædeagus.

Mission G. F. DE WITTE: Kitondo, N. of Gandjo, 2.000 m, 7-23.I.1935.

#### Hydræna (s. str.) perlonga sp. nov.

Elongate, sub-parallel, transversely convex, the disc flattened and the lateral declivity of the elytra steep; sixth ventrite in the male asymmetrical, with a distinct tuft of long hairs on the right side; posterior tibiæ with the inner face in the posterior two-thirds bearing a linear series of long hairs forming a strong brush.

Head brownish-testaceous, the frons coarsely and rather deeply, the clypeus very much more finely and less densely punctate, the punctural interstices shining; labrum finely and quite strongly microreticulate, the anterior edge sharply and deeply angularly emarginate; apical segment of the maxillary palpi feebly infuscate. Pronotum brownish-testaceous, the sides quite widely pale testaceous, wider than long, the sides weakly rounded, not subangulate in the middle, distinctly but finely serrulate or denticulate; surface closely and coarsely, almost rugulose-punctate, the punctures a little larger than those of the frons, the interstices much less than the diameter of the punctures, shining; with a sublateral longitudinal

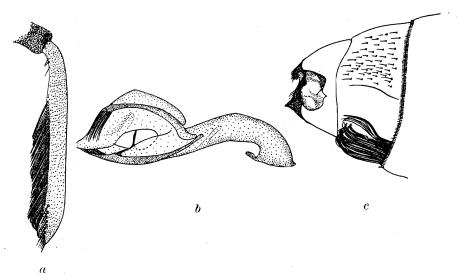


FIG. 2. — Hydræna (s. str.) perlonga sp. nov. Holotype! a. Right posterior tibia of male, dorsal aspect.  $\times 100$ .

- b. Ædeagus, lateral aspect.  $\times 100$ .
- c. Apical ventrites of male.  $\times 50$ .

shallow but wide impression which is frankly rugose-punctate. *Elytra* elongate, sub-parallel, the apices taken together simply rounded; with about sixteen linear series of coarse close-set punctures, about the same size as those on the disc of the pronotum, the internal series very regular except near the apex, those of the external declivity more irregular; the sides moderately explanate, the edge of the epipleurs very feebly serrate. *Venter* fuscotestaceous, metasternum with a longitudinal glabrous plate on each side in front of the trochanters, the remainder of the surface finely pubescent; sixth ventrite asymmetrical, with a strong tuft of long golden hairs on the right side, delimited internally by a sinuate carina, with a similar but much weaker carina on the left side of the middle line, (see fig. 2b). *Legs* testaceous, the hind tibiæ internally in the distal two-thirds with a linear series of long hairs.

Holotype of Belgian Congo: Albert National Park.

Mission G. F. de Witte : Nyarusambo (Kikere), 2.226 m, 28-29.VI.1934:  $2{,}000~\times~0{,}847~\text{mm}.$ 

Paratype: 1 of, same particulars as holotype, 2,102 x 0,864 mm.

Readily distinguishable amongst the described African species of the genus by the large size and the particularly elongate form this species also presents two characteristics in the male sex which separate it very sharply from all previously known forms from the Ethiopian area: the brush of long hairs on the right side of the sixth ventrite and the long hairs on the inner side of the hind tibiæ in the distal two-thirds of their length.

#### Hydræna (s. str.) alberti sp. nov.

Oblong-oval, not the least parallel-sided; testaceous, the head entirely fuscous; pronotum with a square discal macula in the middle black.

The present species is undoubtedly very closely related to H. (s. str.) erythræa Régimbart as that species is interpreted by d'Orchymont (1948,







a. Hydræna (s. str.) erythræa Régimbart.
Ædeagus, lateral aspect. ×150.
b. Hydræna (s. str.) alberti sp. nov. Holotype!
Ædeagus, lateral aspect. ×150.

Proc. Zool. Soc. Lond., 117 (iv), 719) in his paper on the Palpicornia of Material of that series is before me for comparison. present species is normally of a clear flavo-testaceous colour, the head being fuscous and the disc of the pronotum bearing a large square black In the sculpture of the head the two species seem to be identical but the pronotum of alberti is distinctly less closely punctate, the interstices on the disc being at least twice as wide as in erythraa, the punctation is finer, the discal foveoles are quite obsolete and the antero-lateral fovea is longer and more distinct though not, apparently, deeper than in the compared species. The ædeagus is only slightly different, as may be seen by comparing the accompanying figures. The erythrae-phylum seems to comprise a small group of species from the north-eastern parts of Africa and is of exceptional difficulty in identification owing to the small size of the ædeagus which only attains about 0,15 mm in length. At least two very closely related species of this complex are known to me from Uganda.

Holotype of. Belgian Congo: Albert National Park.

Mission H. Damas: Vitshumbi, 925 m, 13.I.1936; 1,305 x 0,526 mm.

Paratypes:  $1 \, \sigma$ ,  $3 \, \circ \circ$ , same particulars as holotype;  $1 \, \circ$ , Ondo, 1.200 m, 30.VII.1935; [1  $\sigma$ , Kisenyi (Lake Edward), 925 m, 17.VI.1935].

#### Subfam. LIMNEBIINÆ.

#### Limnebius (Bilimneus) damasi sp. nov.

This little species must be very closely related to L. (B.) cupulifer d'Orchymont (1941, Bull. Mus. Roy. Hist. nat. Belg., 17, n° 14, fig. 2a) but the specimens before me are broader in proportion to the length, less elongate than L. (B.) evanescens Kiesenwetter, with which species d'Orchymont compares cupulifer, very finely and indistinctly punctulate, sparsely but distinctly pubescent, the head and pronotum quite shining and without visible reticulation, elytra very finely and rather indistinctly transversely reticulate; head dark fuscous, with a rufo-testaceous band on each side from the vertex to the edge of the clypeus following the curve

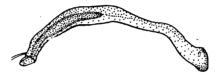


FIG. 4.

Limnebius (Bilimneus) damasi sp. nov. Holotype! Ædeagus, lateral aspect. ×150.

of the inner edge of the eye, but nowhere touching it; pronotum rufotestaceous, the anterior half widely fuscous in the middle with a narrow lateral extension on each side which does not quite attain the anterior or side margins; elytra fusco- or rufo-testaceous, paler apically, examined under a high magnification and in intense illumination very finely and rather indistinctly transversely microreticulate or striolate; the sutural margin of the elytra not visibly elevated, even behind, the apex truncate, the sutural angle very slightly obtuse, almost rectangular, the external angle distinctly more widely rounded in the male than in the female; sixth ventrite not visibly sexually dimorphic; seventh ventrite in the male a little more shining, more coarsely and more sparingly punctulate than in the female.

Holotype &. Belgian Congo: Albert National Park.

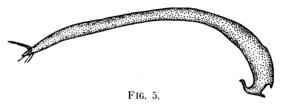
Mission H. Damas: Vitshumbi, 925 m, 13.I.1936; 0,800 x 0,465 mm.

Paratypes: 1  $\,$  Q, same particulars as holotype, 0,926  $\,$   $\,$  0,505 mm. 1  $\,$  Q, Ondo, 1.200 m, 30.VII.1935; 0,842  $\,$  0,526 mm. Coll. G. L. R. Hancock. Uganda: Kampala, Namanve Swamp, 25-30.III.1933, 18 specimens (in the British Museum).

This minute species must be very closely related to L. (B.) cupulifer d'Orchymont by the form of the ædeagus; as I have indicated above it seems less superficially similar to L. (B.) evanescens Kiesenwetter, than does cupulifer, being broader in proportion to the length and it is evidently yet smaller than the compared species, the females of damasi not attaining the size of the males of cupulifer. The description given by d'Orchymont makes no reference to the colour of cupulifer but the colour pattern of damasi is very distinctive and should distinguish the species with ease. The two species also appear to differ in that d'Orchymont describes the externo-apical angle of the elytra of the female of cupulifer as being a little more obliquely truncate than in the male, a description which can in no way be applied to damasi.

#### Limnebius (Bilimneus) wittei sp. nov.

Dark fuscous, paler laterally, the head and pronotum shining, quite unreticulate, very finely and sparsely punctulate; elytra distinctly but very finely reticulate, dull, very finely and sparsely pubescent; suture without



Limnebius (Bilimneus) wittei sp. nov. Holotype! Ædeagus, lateral aspect. ×150.

trace of raised margin, even posteriorly; apices of the elytra with the external angle widely rounded.

Resembling damasi in the shining, unreticulate head and pronotum and with the elytra reticulate this little species does not present the colour contrast so characteristic of that species, being of uniform dark fuscous, the sides of the pronotum and elytra vaguely paler; wittei may also be recognised, when compared with the same sex of damasi, by the much more widely rounded external apical angles of the elytra which gives an impression that this species is more elongate. The ædeagus is perfectly distinct from that of damasi.

Holotype & Belgian Congo : Albert National Park. Mission G. F. de Witte : Kanyabayongo (Kabasha), 1.760 m, 7.XII.1934; 1,021  $\times$  0,537 mm. Unique.

#### Limnebius sp.

A single female which it is impossible to identify in the absence of males taken at the same place.

Mission G. F. DE WITTE : Kitondo (près Gandjo), 2.000 m, 7-23.I.1935;  $1{,}158 \times 0{,}589$  mm.

#### SPERCHEIDÆ

#### Spercheus cerisyi (Guérin).

Sperchæus cerisyi Guérin-Ménéville 1842, Icon. Règne Anim., 7, Ins., (1834), 71.

Spercheus crenaticollis Régimbart 1906, Ann. Soc. ent. France, 75, 271. Spercheus cerisyi d'Orchymont 1929, Bull. Ann. Soc. ent. Belg., 69, 45, 46, 47, fig. 2.

Mission G. F. de Witte : Camp de la Rwindi,  $1.000~\mathrm{m},~20\text{-}28.\mathrm{XI}.1934,~2~\mathrm{specimens}.$ 

Mission H. Damas : Kamande (Kianga), 925 m, 19.XI.1935, 2 specimens; Vitshumbi, 925 m, 13-14.I.1936, 118 specimens [Kisenyi (Lake Edward), 925 m, 17.VI.1935, 4 specimens].

#### Spercheus senegalensis Castelnau.

Spercheus senegalensis Castelnau 1832, Ann. Soc. ent. France, 1, 398. Sperchæus sulcatus Gory in Guérin-Ménéville 1842, Icon. Règne Anim., 7, Ins. (1834), 71, pl. 20, fig. 11.

Spercheus algoensis Péringuey 1892, Trans. S. Afr. Phil. Soc., **6**, 108. Spercheus distinguendus Fairmaire 1893, Ann. Soc. ent. Belg., **37**, 147. Spercheus senegalensis d'Orchymont 1929, Bull. Ann. Soc. ent. Belg., **69**, 49, fig. 3.

Four specimens, only, of this widespread species are before me. It would be interesting to know if the apparent rarity of the species in the Albert National Park is really due to its virtual absence or if the collecting methods adopted have failed to obtain it in numbers proportionate to its real occurence in the area. Since the methods of collecting which were adopted obtained over one hundred specimens of the preceding, smaller, species it would appear that *senegalensis* is here a genuinely rare species. Further research is clearly necessary, however, before a definite answer can be provided to this problem. It will be noticed that both species occurred only at the lower elevations and this suggests that they may here be, the former at near its optimum and the latter at well above its optimum altitudinal occurrence.

Mission G. F. DE WITTE: Camp Rwindi, 1.000 m, 20-28.XI.1934, 1 specimen.

Mission H. Damas : Lake Edward, W., Bugazia, 13-16.V.1935, 2 specimen; Hangi, 925 m, 27.V.1935, 1 specimen.

#### Spercheus humeralis Régimbart.

Spercheus humeralis Régimbart 1906, Ann. Soc. ent. France, 75, 272. Spercheus humeralis d'Orchymont 1929, Bull. Ann. Soc. ent. Belg., 69, 46, fig. 1.

This species, from the Kavirondo Gulf, Victoria Nyanza, is apparently of great rarity. D'ORCHYMONT stated that it had not been taken since the original capture of an unstated number of specimens. Since that was written I have only seen a single female (mesocerci seen) from Uganda: Lake Kachira, 1931 (Coll. E. B. WORTHINGTON) in the British Museum. Whilst undoubtedly of this species that specimen has the post-humeral emargination of the epipleurs very shallow, approaching in this character, and also in the virtual absence of the four longitudinal costæ of the elytra, much more closely to the male sex as re-described by D'ORCHYMONT. Mission H. Damas has produced a further specimen, again a female, agreeing much more closely with the re-description of D'ORCHYMONT. appears that this species is one of great rarity or else that it is restricted to a very narrowly limited habitat. Unfortunately no information is at hand as to the particular conditions under which any of the known specimens have been taken.

Mission H. Damas: Kamande, 925 m, 18.XI.1935, 1 ♀.

#### HYDROPHILIDÆ

Subfam. HYDROCHINÆ.

#### Hydrochus albicans Régimbart.

Hydrochus albicans Régimbart 1906, Ann. Soc. ent. France, 75, 273.
 Hydrochus albicans d'Orchymont 1936, Mem. Est. Mus. Zool. Coimbra (i), n° 96, 2.

A short series of specimens which answer closely to the description of this species. The species is very distinct owing to the entirely dull, very finely microreticulate and quite unmetallic head and pronotum, the upturned sides of the clypeus, the rather sharp and narrow longitudinal carina of the pronotum dividing the two foveæ of each side, the regular series of punctures of the elytra, each puncture being filled with a white secretion or membrane, the narrow interseries of which the 4th, 6th and 8th are raised into sharp longitudinal costæ from the base to almost three-quarters of their length, the costa of the 4th interseries terminating in a small tubercle, those of the 6th and 8th interseries rapidly declivous; in the apical quarter the 2nd interseries forms a low carina and marks a distinct angulation between the (longitudinal) area from the suture to

the second interseries and the area external to the carina; the apex of the elytra is sharply transversely truncate and finely crenulate, both the sutural and external apical angles being sharply rectangular or almost so; the surface of the elytra is entirely dull, finelly microreticulate, non-metallic. Palpi and legs are flavo-testaceous, the distal segment of the former and the fifth segment of the tarsi vaguely infuscate.

This species appears to be completely isolated from all the described species by the extremely isolated form of the ædeagus which is very small, the basal piece about equal to the parameres in length, the parameres symmetrical and apically rounded, the median lobe slightly asymmetric, broad at the base and acute at the apex, continuing distally into a very long, tapering flagellum which is many times the length of the basal piece and parameres taken together; distally the flagellum tapers to a thread

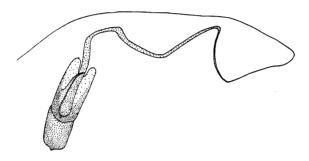


Fig. 6. — Hydrochus albicans Régimbart. Ædeagus, ventral aspect. ×100.

so tenuous as to be difficult to perceive even at a magnification of  $250 \times$ . Owing to the small number of specimens available it has not been possible to determine if the flagellum is retractile or how it is carried in the organ.

Mission H. Damas: Vitshumbi, 925 m, 13.I.1936, 1 ♂; 493, 1 ♂, 6 ♀♀. [Kisenyi (Lake Edward), 925 m, 17.VI.1935, 1 ♂].

#### Hydrochus albertianus sp. nov.

Elongate, head and pronotum greasy metallic green, elytra cuprescent; pronotal impressions entirely obsolete; elytral series regular, interseries not at all costate, flat or feebly convex, about equal in width to the serial punctures.

Head with distinct double punctation, the larger punctures on the frons forming three or four irregular series on each side with the very fine smaller punctures scattered throughout, though not at all densely; the fronto-clypeal suture deep but fine; clypeus somewhat convex, rather closely, particularly anteriorly, doubly punctate, the larger punctures slightly smaller than the large punctures of the frons, the very fine small

punctures similar to the smaller ones of the frons. Pronotum elongate pentagonal, widest anteriorly, the anterior angles rounded, the posterior angles sharply rectangular, the sides weakly sinuate, very finely crenulate; nearly evenly transversely convex, the dorsal foveæ entirely obsolete, irregularly, fairly copiously but not at all densely doubly punctate as on the head, the larger punctures of variable size, smaller anteriorly and laterally but always many times larger than the very fine small punctures; with a median longitudinal impunctate band on the disc. minute, strongly metallic nitid. Elytra about twice as long as their greatest width which is at two-thirds of their length from the base, at the base not wider than the base of the pronotum, the shoulders moderately prominent; serial rows of punctures very regular, the punctures smaller near the base and apex; interseries about as wide as the serial punctures at any given level, flat or very feebly convex, not at all costate, the third and fourth interseries with a slightly higher convexity at the beginning of

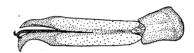


FIG. 7.

Hydrochus albertianus sp. nov. Holotype!

Ædeagus, ventral aspect. ×40.

the posterior declivity; apex with a few marginal punctures of larger size and almost perforate, the cavity of the puncture with thin transparent membrane. Legs testaceous, the apex of the femora blackish as also the fifth tarsal segment. Edeagus elongate, the basal piece about one-third the length of the elongate lateral lobes; lateral lobes apically strongly asymmetric, twisted to the right, the lobe of the right side enlarged and flattened, falcate, the left lobe terminally acute, not at all flattened; median lobe also twisted to the right but the extreme apex partly reflexed and finely hooked.

Holotype  ${\it o}$ . Belgian Congo : Albert National Park. Mission G. F. de Witte : Ruhengeri, 1,800 m, rivière Mukungwa, 30-31.VIII.1934; 3,871  $\times$  1,226 mm.

This new species is by far the largest yet described from Africa. In facies it is very similar to the South American species *H. drakei* Knisch and it resembles the Neotropical species more closely than any from the Old World. The sub-perforate punctures at the apex of the elytra are somewhat similar to the structure seen in *H. perforatus* Régimbar but that is a very much smaller insect and the form of the ædeagus suggests that the new species is more closely related to *H. angustatus* Germar than to *H. perforatus* or other described African species.

#### Subfam. SPHÆRIDIINÆ.

#### Cœlostoma (s. str.) phalacroides rubrocinctum Régimbart.

Cælostoma phalacroides Régimbart 1903, Ann. Soc. ent. France, 72, 44. Cyclonotum rubrocinctum Régimbart 1906, Ann. Soc. ent. France, 75, 269. Cælostoma phalacroides d'Orchymont 1929, Bull. Ann. Soc. ent. Belg., 69, 91.

Cælostoma phalacroides rubrocinctum D'ORCHYMONT 1936, Mém. Mus. Roy. Hist. nat. Belg. (ii), fasc. 7, 21, fig. 22.

Mission G. F. de Witte: L. Mugunga (Nzulu), Sake, 1.500 m, 25.I.1934, 1 specimen; Bulengo, 1.560 m (lac Mugunga), 29.I.1934, 6 specimens; lac Magera, 26.II-6.III.1934, 1 specimen; Nyarusambo, 28.VI-2.VII.1934, 3 specimens; Nyarusambo (Kikeri), 2.226 m, 28.VI-2.VII.1934, 1 specimen; forêt Mayumbu, Nyamuragira, 2.100 m, 14-26.VI.1935, 3 specimens; E. Nyamuragira, Muhumangabo, 2.075 m, 14-26.VI.1935, 5 specimens.

Mission H. Damas : Rivière Ndua Hangi, 912 m, 28.V.1935, 1 specimen; Ondo, 1.200 m, 29.VII.1935, 1 specimen; lac Ndalaga, 1.725 m, 12.VIII.1935, 1 specimen; lac Lukulu, 1.700 m, 15.VIII.1935, 5 specimens; Niange, 19.X.1935, 1 specimen. [Uganda: Katwe, 925 m, 10.VI.1935, 1 specimen; Kisenyi (Lake Edward), 925 m, 17.VI.1935, 2 specimens.]

#### Cœlostoma (s. str.) mocquerysi D'ORCHYMONT.

Cælostoma (s. str.) mocquerysi d'Orchymont 1936, Mém. Mus. Roy. Hist. nat. Belg. (ii), fasc. 7, 34, fig. 23.

A single specimen identified as this species by D'ORCHYMONT to which a label in his handwriting is affixed: «?mocquerysi m. un of du Cameroun s'en rapproche. Trop immature surtt. de l'édéage pour une dét. ferme ». This species was described from Gaboon and the western Congo. It has not previously been recognised from east of 14° E. longitude.

Mission G. F. DE WITTE: Vitshumbi, 925 m, 9-12.X.1933, 1 of.

#### Cœlostoma (s. str.) rufitarse (BOHEMAN).

Cyclonotum rufitarse Boheman 1851, Inst. Caffr., 1, 60, ex p. Cælostoma punctulatum р'Овснумовт 1924, Ann. Mus. Civ. stor. Nat. Genova, 51, 257 ex p. (nec Klug).

Сælostoma (s. str.) rufitarse р'Овснумовт 1936, Mém. Mus. Roy. Hist. nat. Belg. (ii), fasc. 7, 15, fig. 5.

Mission G. F. de Witte: Vitshumbi, 925 m, 11.X.1933, 1 specimen; Nyarusambo, 26.VI-2.VII.1934, 1 specimen. [Uele: Monga, 18.IV-8.V.1935, 1 specimen; Uele: Buta, 11-13.V.1935, 1 specimen.]

Mission H. Damas : Kamande, 925 m, 18.XI.1935, 1 specimen; Rwindi, 1.000 m, 15.I.1936, 1 specimen.

#### Cœlostoma (s. str.) wittei (D'ORCHYMONT i. litt.) sp. nov.

This new species is exceptionally closely related to *C. neavei* m. (*in litt.*) from Northern Rhodesia in both sculpture and in the form of the ædeagus. Like *neavei* the pronotal punctation becomes slightly finer but distinctly more widely spaced towards the sides as compared to the disc. The ædeagus is of the same type in the two species but in *wittei* the median lobe is shorter, but since it is as wide as in *neavei* it appears to be stumpier, the lateral lobes are similarly constricted shortly before the pronouncedly rounded-rectangular external apical angles. This species is

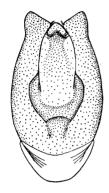


FIG. 8.

Cælostoma (s. str.) wittei sp. nov. Holotype! Ædeagus, dorsal aspect. ×40.



FIG. 9.

Outline of median lobe of the ædeagus of a. *Cælostoma* (s. str.) *æthiopicum* p'Orchymont; b. *Cælostoma* (s. str.) *neavei* J. Balfour-Browne.

also evidently very closely related to *C. æthiopicum æthiops* d'Orchymont, a name (in litt.?, in coll.?) given to the form of *æthiopicum* from Kisantu described by d'Orchymont (1936, loc. cit. p. 26) but not named, in which the parameres are truncate at the apex, the internal apical angle not projecting and the external edge somewhat constricted before the external apical angle. The five species *subsphæroides* (Régimbart), *æthiopicum* d'Orchymont, *rubiginosum* m. (*in litt.*), *neavei* m. (*in litt.*) and *wittei* m. form a close group of species characterised by the more widely spaced lateral punctures of the pronotum and the structure of the ædeagus.

Holotype &. Belgian Congo: Albert National Park.

Mission G. F. de Witte : Ruhengeri (s. Kirii), 3.X.1934; 4,258  $\times$  2,839 mm (head retracted).

Paratype : 1 of, N'Zulu, lac Kivu, 1.500 m, 8.XI.1934; 5,290  $\times$  2,902 mm (head extended).

#### Cœlostoma (s. str.) subsphaeroides (Régimbart).

Cyclonotum subsphæroides Régimbart 1907, Ann. Mus. Civ. Stor. nat. Genova (iii), **3** (43), 51.

Cælostoma (s. str.) subsphæroides D'ORCHYMONT 1936, Mém. Mus. Roy. Hist. nat. Belg. (ii), fasc. 7, 24, fig. 14.

Mission G. F. DE WITTE: Kivu: Rutshuru, 15-25.IX.1933, 1 of.

#### Cœlostoma (s. str.) deplexum sp. nov.

Very similar to *C. picturatum* D'ORCHYMONT from Uganda in the elongate form and high transverse convexity and also in the sculpture which is, however, a little stronger in *deplexum*; the close relationship of the two

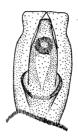


FIG. 10.

 $C\alpha lostoma$  (s. str.) deplexum sp. nov. Holotype! Ædeagus, dorsal aspect.  $\times 40$ .

species is also apparent in the form of the ædeagus in which the median lobe is gradually widened from apex to base, the apex truncately rounded, the ventral orifice some distance from the apex and the lateral lobes having the external apical angle rounded, the internal apical angle somewhat produced and acute; the external edge of the lateral lobe shows a distinct subterminal constriction. It should be noted that, as stated by D'ORCHYMONT, there is no basal aliform expansion at either side of the median lobe (c. f. wittei m.) but in both picturatum and deplexum there is a foretaste of this structure as may be seen in the figure.

Holotype of. Belgian Congo: Albert National Park.

Mission H. Damas : lac Kibuga, 26.VII.1935; 4,581 × 2,322 mm.

Paratypes : 1 Q , same particulars as holotype, 4,709  $\times$  2,387 mm. 1 Q , lac Edouard, W., Bugazia, 13-16.V.1935; 4,838  $\times$  2,583 mm.

#### Cœlostoma (s. str.) spp.

In addition to the preceding named species there are certain females whose identification, in the absence of males taken at the same time, is impossible. These are as follow:

Mission H. Damas : rivière Ndua, Hangi, 925 m, 28.V.1935, 1  $\circ$  .

Mission G. F. De Witte : [Uele : Monga, 18.1V-8.V.1935, 2  $\,$   $\,$  ; Uele : Buta, 11-13.V.1935, 1  $\,$   $\,$  ] .

#### Cœlostoma (Lachnocœlostoma) edwardsi J. Balfour-Browne.

Cælostoma edwardsi J. Balfour-Browne, 1940, Ruwenzori Expedition 1934-1935, London, British Museum (Nat. Hist.), 3, n° 9, 145, fig. 1.

A pair of this recently described species, the ædeagus of the male agreeing perfectly with that of the holotype from Mbarara, Ankole District, Uganda.

Coll. HACKARS: Mutsora, 1.200 m, 1939, 1 ♂, 1 ♀.

#### Dactylosternum antennale D'ORCHYMONT.

Dactylosternum antennale d'Orchymont 1924, Ann. Mus. Civ. Stor. nat. Genova, 51, 259.

Dactylosternum antennale J. Balfour-Browne 1940, Ruwenzori Expedition 1934-1935, London, British Museum (Nat. Hist.), 3, n° 9, 146.

Mission G. F. DE WITTE: Bulengo (Mugunga), 1.500 m, 31.I.1934, 2 specimens; Kivu: Rutshuru, 22.V-18.VI.1934, 44 specimens; Ruanda: Ninda, 2.150 m, 25-26.IX.1934, 2 specimens.

#### Dactylosternum rarum KNISCH.

Dactylosternum convexum Régimbart 1907, Ann. Mus. Civ. Stor. nat. Genova, 43, 53 (nec Castelnau 1840).

Dactylosternum rarum Knisch 1924, Coleopt. Cat., Junk, 79, 118.

Mission G. F. DE WITTE: Kivu: Rutshuru, 22.V-20.VI.1934, 2 specimens.

#### Dactylosternum abdominale (FABRICIUS).

Sphæridium abdominale Fabricius 1792, Ent. Syst., 1, 79.

?Sphæridium depressum Klug 1833, Ins. Madag., 160.

Cœlostoma insulare Castelnau 1840, Hist. Nat. Ins., 2, 59.

Cyclonotum abdominale Mulsant 1844, Ann. Soc. Agr. Lyon, 7, 179.

Cyclonotum nitidum Boheman 1851, Ins. Caffr., 1, 602 (nec Castelnau 1840).

Dactylosternum rousseti Wollaston 1854, Ins. Mader., 100, pl. 3, fig. 1.

Cyclonotum mulsanti Murray 1859, Ann. Mag. Nat. Hist., (iii), 4, 352.

Dactylosternum natalense Gemminger & Harold 1868, Cat. Col., 1, 495.

Hydrobius semistriatus Schaufuss 1887, Horæ Soc. ent. Ross., 21, 108. Dactylosternum foveonitidum Kuwert 1890, Verh. Nat. Ver. Brünn, 28 (1889), 179.

Dactylosternum abdominale Horn 1890, Trans. Amer. Ent. Soc., 17, 283.

Mission G. F. DE WITTE: Rutshuru, 22.V-24.VI.1934, 196 spécimens.

#### Sphæridium bottegoi MARCUZZI.

Sphæridium bottegoi Marcuzzi 1943, Ann. Mus. Civ. Stor. nat. Genova, 61, 106, pl. 3, fig. 5.

Sphæridium bottegoi d'Orchymont 1943, Bull. Mus. Roy. Hist. nat. Belg., 19, n° 39, 13, 20, fig. 6.

Determined by D'ORCHYMONT.

Mission G. F. DE WITTE: Burunga (Mokoto), 2.190 m, 9-20.III.1934, 2 ♂♂, 9 ♀♀; riv. Bishakishaki, Kamatembe (plaine lave), 2.100 m, 7-23.I.1935, 1♀; Rutshuru, riv. Fuku, 1.250 m, 5.VII.1935, 1♀.

#### Sphæridium caffrum Castelnau.

Sphæridium caffrum Castelnau 1840, Hist. Nat. Ins., 2, 60.

Sphæridium apicale Boheman 1851, Ins. Caffr., 1, 606.

Sphæridium senegalense Murray 1859, Ann. Mag. Nat. Hist., (iii), 4, 352 (nec Castelnau 1840).

Sphæridium apicale Régimbart 1906, Ann. Soc. ent. France, 75, 271.

Sphæridium caffrum D'ORCHYMONT 1919, Ann. Soc. ent. France, 88, 114.

Sphæridium caffrum d'Orchymont 1943, Bull. Mus. Roy. Hist. Nat. Belg., 19, n° 39, 2, 20, fig. 2.

Mission G. F. de Witte: Nyarusambo (Kikeri), 2.226 m, 28.VI-2.VII.1934, 5  $\circlearrowleft$  , 3  $\circlearrowleft$   $\circlearrowleft$ ; Vitshumbi (lac Edouard), 925 m, 17-22.X.1933, 1  $\circlearrowleft$ , 1  $\circlearrowleft$ ; Rutshuru, 1.285 m, 20-21.XII.1936, 1  $\circlearrowleft$ ; Ruanda: Ninda, 2.150 m, 18-26.IX.1934, 6  $\circlearrowleft$  , 10  $\circlearrowleft$  , Kibati, 1.900 m, 1-14.V.1935, 1  $\circlearrowleft$ ; 1389. Kibga (S. Visoke), 2.400 m, 10-15.II.1935, 1  $\circlearrowleft$ .

Mission H. Damas: Lac Kivu: Ngoma, 19-23.IX.1935, 1 ♀, 2-11.II.1936, 1 ♂, 1 ♀; Kivu: Kisenyi, 13.III.1936, 1 ♀; Bugazia, 920 m, 21.V.1935, 1 ♂.

#### Sphæridium simplicipes MARCUZZI.

Sphæridium simplicipes MARCUZZI 1943, Ann. Mus. Civ. Stor. nat. Genova, 61, 110, 112, fig. C, pl. 4, fig. 9.

Sphæridium simplicipes d'Orchymont 1943, Bull. Mus. Roy. Hist. nat. Belg., 19, n° 39, 14, 20.

This series was determined by D'ORCHYMONT.

Mission G. F. DE WITTE: Burunga (Mokoto), 2.190 m, 9-10.III.1934, 3 of of, 13  $\circ$   $\circ$ .

#### Sphæridium bisinuatum sp. nov.

Black, the sides of the pronotum narrowly, the apex of the elytra broadly and the sides narrowly in the posterior two-thirds, flavous; elytra with ten series of widely spaced larger punctures; punctural interstices of the elytra microreticulate, dull; marginal bead of the elytra continued round the apex to join the sutural stria at the apex; posterior tibiæ bearing a single median ventral seta.

*Head* black, finely closely punctulate, the interstices slightly greater than the diameter of the punctures, entirely shining. *Pronotum* black, the sides very narrowly flavous, scarcely wider than the margin except anteriorly;

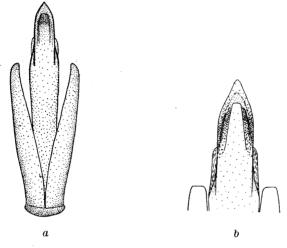


Fig. 11. — Sphæridium bisinuatum sp. nov. Paratype!

- a. Ædeagus, ventral aspect.  $\times 40$ .
- b. Apex of median lobe, ventral aspect.  $\times 75$

sides distinctly rounded, the lateral margin strong and continuing round the anterior angles along the anterior edge more finely, barely extending round the bluntly rectangular posterior angles; punctured as on the head, the interstices on the disc shining, towards the sides finely and obsoletely microreticulate. *Scutellum* black, closely finely punctulate, the interstices shining. *Elytra* black, the apical quarter flavous and with a narrow lateral anterior extension along the margin into the basal third; with a large, more or less distinct rounded post-humeral spot reddish-testaceous; punctation as on the pronotum and with about ten rather irregular longitudinal series of larger widely spaced punctures, the external ones more distinct in the basal half; interstices of the fine punctation on both the black and rufous portions finely but deeply microreticulate and dull, on the flavous portion shining;

the side margin strong, continuing entirely round the apex and joining the sutural stria; shoulders widely rounded; sides, in lateral view, bisinuate. Venter black, mentum irregularly but moderately closely finely punctulate, anteriorly feebly transversely rugose, the punctural interstices obsoletely microreticulate, rather shining; gular plate bright flavous. Legs flavotestaceous, the femora beneath with a median oval black macula, sparsely coarsely setigerous punctate; hind tibiae beneath with a single large median seta; anterior tarsi of the male with the terminal segment moderately inflated, the anterior ventral angles acute; anterior claw of the anterior tarsi of the male particularly stout, the apex rounded, posterior claw very slender. Edeagus very similar to that of S. caffrum Boheman, but with the apical portion longer, more gradually attenuate and the ventral face without broad transverse rugae.

Holotype &. Belgian Congo: [Matadi (M. Tschoffen)] (in the Inst. Roy. Sci. Nat. Belg.).

Paratypes : [Belgian Congo : Lulua, Kapanga, X.1932-1.1933 (G. F. OVERLAET), 59  $\sigma'\sigma'$ , 84 Q Q ] (in the Congo Museum, Tervueren).

This species was named but undescribed by D'ORCHYMONT. It is clearly very closely related to *S. caffrum* Boheman which occurs in the same areas and is separable only with difficulty on slight difference in the form of the aedeagus, and in the more widely rounded elytral shoulders. The specimens from Kanziko are a rather distinct colour aberration with the apical fifth of the elytra black, so that the specimens appear to be black with a post-humeral rufous spot and with a transverse ante-apical flavous band.

#### Sphæridium obscurum Régimbart.

Sphæridium obscurum Régimbart 1906, Ann. Soc. ent. France, **75**, 271. Sphæridium obscurum Marcuzzi 1943, Ann. Mus. Civ. Stor. nat. Genova, **61**, 113.

Sphæridium corradinii Marcuzzi 1943, loc. cit., 108, 112, fig. B, pl. 4, fig. 7. Sphæridium obscurum d'Orchymont 1943, Bull. Mus. roy. Hist. Nat. Belg., 19, n° 39, 12, 30.

Mission G. F. DE WITTE: Rutshuru, 20-24.VI.1934, 4  $\sigma\sigma$ , 1  $\varsigma$ ; Nyarusambo, 28.VI-2.VII.1934, 1  $\sigma$ , 1  $\varsigma$ ; mont Sesero, près Bitashimwa (bambous), 2.000 m, 1-3.VII.1934, 14  $\sigma\sigma$ , 10  $\varsigma$   $\varsigma$ ; Ruanda: Ninda, 2.150 m, 18-26.IX.1934, 47  $\sigma\sigma$ , 111  $\varsigma$   $\varsigma$ ; Gahinga, volcan Rwebeye, 3.000 m, 26.IX.1934, 1  $\varsigma$ ; Rd. Kundhuru ya Tshuve-Ninda, 2.600 m, 18.IX.1934, 2  $\sigma\sigma$ , 2  $\varsigma$   $\varsigma$ ; Rutshuru, 1.285 m, 10-16.X.1934, 1  $\varsigma$ ; Visoke (Kibga), 2.400 m, 8-19.II.1935, 31  $\sigma\sigma$ , 50  $\varsigma$   $\varsigma$ ; S. Karisimbi, Nyabirehe, 2.400 m, 22.II.1935, 1  $\sigma$ , 1  $\varsigma$ ; Kinago, près mont Hehu, 2.400 m, 9-10.III.1935, 5  $\sigma\sigma$ , 1  $\varsigma$ ;

Kibati, 1.900 m, IV-V.1935, 1  $\sigma$ ; N.-E. Gandjo, 2.400 m (Kihorwe à Ilega), VI.1935, 1  $\wp$ ; Rd. Kundhuru ya Tshuve (col Gah.-Sab.), 2.600 m., 20.IX.1934, 3  $\sigma$   $\sigma$ , 2  $\wp$   $\wp$ .

Mission H. Damas: Ngoma, lac Biuniu, 3-10.IX.1935, 1 o.

#### Sphæridium abditum D'ORCHYMONT.

Sphæridium abditum d'Orchymont 1943, Bull. Mus. Roy. Hist. nat. Belg., 19, n° 39, 14, 20, fig. 10.

Recently described on material from the Belgian Congo: Eala, etc. and also known to me from Tanganyika: Dodoma, 1918 (H. L. Andrewes coll.).

Mission G. F. DE WITTE: Burunga (Mokoto), 9-10.III.1934, 2 ♀ ♀.

Coll. L. Lippens : S. lac Edouard : riv. Rwindi, 1.000 m, 8.II.1936, 1  $\,$   $\,$   $\,$  S. lac Edouard : Kitembo, 925 m, 4.IV.1936, 1  $\,$   $\,$   $\,$ 

#### Sphæridium abductum sp. nov.

Piceous or black, the sides of the pronotum widely, the apex of the elytra with a large common patch and the sides narrowly to the base flavous; lateral margin of the elytra continued round the apex and joined to the sutural stria; hind tibiae with two ventral setae; venter yellow variegated with black.

Head black, the anterior edge of the labrum with a very narrow band of short golden setæ; finely, regularly and very densely punctate, the interstices about equal to the diameter of the punctures, quite shining; labrum almost impunctate, basally obsoletely transversely reticulate, closely densely setose-punctulate along the anterior edge. Pronotum black, the sides quite widely flavous; sides rather strongly rounded, the posterior angles bluntly obtuse, the anterior angles rounded; marginal beading strong, continued round the posterior angles for a distance about equal to onequarter of the width of the base, continued round the anterior angles and finely quite across the anterior edge; punctation on the disc as on the head, towards the sides a little stronger and slightly less dense, interstices shining. Scutellum elongate, black, punctured as on the head. Elytra black or rufopiceous, the sides from the shoulder narrowly and the apex widely flavous, the piceous area frequently continuing as a narrow band along the internal edge of the narrow flavous marginal band almost up to the apex; rather densely punctured as on the pronotum, i.e., more finely and densely on the disc, a little more strongly and less closely laterally and posteriorly; basally the interstices are quite shining, towards the apex reticulate, very obsoletely in the male, distinctly in the female; also shewing some irregular oblique wrinkles; sides strongly margined, the margin continuing strongly round the apex to join the sutural stria. Venter yellow, the mentum black, sharply and not very closely punctulate, the interstices finely microreticulate; prosternum flavous; metasternum flavous with a broad median spot, a rectangular patch on each side and an elongate spot on the episterns black; ventrites black, the posterior edge narrowly testaceous and with a geminate dull rufo-flavous spot on each segment just within the side margin. Legs flavous, femora with a median oval spot on the ventral face black; anterior tarsi of the male with the fifth segment not angulate beneath, the anterior tarsal claw much enlarged, stout, very strongly curved, posterior claw, simple, slender; hind tibiæ with two median setæ beneath. Ædeagus with



Fig. 12.

Sphxridium abductum sp. nov. Holotype!

Ædeagus, ventral aspect. ×30.

the median lobe becoming strongly dorso-ventrally flattened towards the apex, broader than at the base, the apex sub-acute; median unpaired ventral piece transversely truncate at the apex; median lobe on the ventral face with a succession of transverse ridges and impressions in the apical half; lateral lobes only attaining about half the length of the median lobe, narrowed to the sub-acute apex.

Holotype of. Belgian Congo: Albert National Park.

Mission G. F. DE WITTE: Burunga (Mokoto), 9-40.III.1934; 5,23 × 3,42 mm.

I have adopted for this species, recognised by D'ORCHYMONT but unpublished, the name given in collection by him.

The new species is undoubtedly very closely related to what is accepted, since 1919, as being *S. abbreviatum* Boheman. It differs from that species principally by the succession of transverse ridges on the ventral side of the median lobe (cf. *S. caffrum* Boheman) and by the less reticulate elytra, only reticulate in the apical half, and by the stouter anterior claw of the anterior tarsus of the male. The comparaison is made with males from Natal: Kloof, 1.500 ft., which agree perfectly with D'Orchymont's conception of *abbreviatum* based on his examination of the female type specimen.

#### Sphæridium exile BOHEMAN.

Sphæridium exile Boheman 1851, Ins. Caffr., 1, 607, ex parte. Sphæridium senegalense Marcuzzi 1943, Ann. Mus. Civ. Stor. nat. Genova, 61, 104, pl. 3, fig. 3. Sphæridium exile d'Orchymont 1943, Bull. Mus. Roy. Hist. nat. Belg., 19,

n° 39, 5.

This species has only recently been definitely identified, following a re-examination of the type series. This shews the species to be truly distinct from *S. senegalense* Castelnau with which d'Orchymont (1919, Ann. Soc. ent. France, **88**, 115) was inclined to synonymise it after an examination of a co-type male.

Mission G. F. de Witte : Burunga (Mokoto), 9-10.III.1934, 1  $\circ$  . Coll. L. Lippens : S. lac Édouard, riv. Rwindi, 1.000 m, 8.II.1936, 2  $\circ$   $\circ$  S. lac Édouard, Kitembe, 925 m, 4.IV.1936, 1  $\circ$  .

#### Sphæridium thomsoni D'ORCHYMONT.

Sphæridium pictum J. Thomson 1858, Arch. Entom., 2, 40 (nec Ménétriés 1832).

Sphæridium thomsoni D'ORCHYMONT 1919, Ann. Soc. ent. France, 88, 118. Sphæridium thomsoni MARCUZZI 1943, Ann. Mus. Civ. Stor. nat. Genova, 61, 112, fig. D.

Sphæridium thomsoni D'ORCHYMONT 1943, Bull. Mus. Roy. Hist. nat. Belg., 19, n° 39, 20.

Mission G. F. de Witte : Kivu : Rutshuru, 1.285 m, 23-30.XI.1933, 1  $\sigma$ ; idem, 22.V-20.VI.1934, 15  $\sigma$   $\sigma$ , 9  $\circ$   $\circ$ 

#### Sphæridium sp.

A single female from Mission G. F. DE WITTE: Burunga (Mokoto<sup>1</sup>, 9-10.III.1934 cannot be identified. It is remarkable in possessing the marginal bead continuing entirely round the apex of the elytra and the hind tibiae with three ventral spines on each side. Only a single female has previously been recorded as combining this particular pair of characters

(Belgian Congo: Mogondé) which d'Orchymont has utilised for the primary division of the genus into two groups. This specimen was taken in company with bottegoi Marcuzzi, simplicipes Marcuzzi, exile Boheman, abditum d'Orchymont and abductum m. of which the first three named species normally have only a single spine, the other two species two spines on the ventral face of the hind tibiæ. The unique female before me, measuring  $5.81 \times 3.68$  mm, whilst resembling certain specimens of abditum in colour differs markedly in the presence of a very fine microreticulation between the thoracic and elytral punctation and also in the distinctly less close punctation of the sides of the pronotum and elytra. The identification of this female must await the discovery of males with three setæ beneath the hind tibiæ on each side and the elytral margin continuing round the apex of the elytra to join the sutural stria.

#### Cercyon (s. str.) dieganus Régimbart.

Cercyon dieganus Régimbart 1903, Ann. Soc. ent. France, 72, 48. Cercyon (s. str.) dieganus d'Orchymont 1948, Proc. Zool. Soc. Lond., 117, (iv), 723.

A. D'ORCHYMONT has already pointed out the differences between the form attributed to *dieganus*-type, occurring in Madagascar, East Africa, Belgian Congo and Nigeria and the form attributed to this species found in Abyssinia. The two specimens before me both belong to the type-form, i.e. with the external edge of the elytra black, not reddish-yellow, for half the length from the shoulder and the median lobe of the ædeagus exceeding the lateral lobes in length.

Mission H. Damas : Ishango, riv. Semliki, 1.000 m, 4.VI.1935, 1  $\circlearrowleft$ ; Vitshumbi, 925 m, 13.I.1936, 1  $\circlearrowleft$ .

#### [Cercyon (s. str.) putricola Wollaston.]

Cercyon putricola Wollaston 1867, Col. Hesperid., 49. (Cape Verde Islands.) Cercyon flavocinctus Régimbart 1903, Ann. Soc. ent. France, 72, 49. (Madagascar.)

Cercyon flavocinctus Régimbart 1907, Ann. Mus. Civ. Stor. nat. Genova, (iii), 3, (43), 57. (Cape Verde Islands. Congo.)

Cercyon aethiops Knisch 1922, Arch. f. Naturg., 88, A, (v), 93. (Nigeria.) Cercyon (s. str.) putricola d'Orchymont 1942, Bull. Mus. Roy. Hist. nat. Belg., 18, n° 26, 7.

Cercyon (s. str.) putricola d'Orchymont 1948, Proc. Zool. Soc. Lond., 117, (iv), 724. (Abyssinia.)

The above synonymy was put forward by D'ORCHYMONT who wrote: « Je n'ai vu celle-ci que de Madagascar et de Lagos, mais RÉGIMBART renseigne aussi les îles du Cap-Vert pour son *flavocinctus* ». The record for *flavocinctus* from the Cape Verde Islands dates from 1907 by RÉGIMBART who described the species in 1903 on a single specimen of unstated sex from

Tananarive (Sikora). In addition to the type material of *putricola* from the Cape Verde Islands I have seen specimens from Uganda, Abyssinia, Portuguese East Africa and Madagascar. I am in complete agreement with D'ORCHYMONT as to the conspecificity of the three forms.

Mission H. Damas : [Uganda : Kisenyi, lac Édouard, 925 m, 17.VI.1935, 1  $\, {\mathbb Q}$  ].

#### Cercyon (s. str.) pictus Régimbart.

Cercyon pictus Régimbart 1907, Ann. Mus. Civ. Stor. nat. Genova, (iii), 3, (43), 56.

Cercyon (s. str.) pictus d'Orchymont 1942, Bull. Mus. Roy. Hist. nat. Belg., 18, n° 26, 13.

Two female specimens agreeing very closely indeed with specimens of the type series from Fernando Po which are before me. The mentum of this species is finely but very densely punctulate, the punctures longitudinally confluent and the surface therefore finely longitudinally rugose; the prosternum is finely longitudinally carinate in the middle, the mesosternal lamella lanceolate, five times as long as wide, feebly concave in the middle, the metasternal tabella almost regularly pentagonal, finely and not very closely punctulate.

Mission G. F. DE WITTE : Rutshuru, 1.285 m, 22.V.-4.VI.1934, 1  $\circlearrowleft$ ; volcan Nyamuragira, Mayumbu, 2.100 m, 4-26.VI.1935, 1  $\circlearrowleft$ .

#### Cercyon (s. str.) sp.

Cercyon (s. str.) pictus Régimbart, d'Orchymont det. in coll.

A single female (mesocerci seen), determined as pictus by D'ORCHYMONT is certainly not that species. It appears to be an undescribed form but I am not prepared to give it a name on the basis of a single specimen. It differs from authentic C. pictus Régimbart in the slightly finer, less deeply impressed and rather less close punctation of the pronotum, particularly towards the sides, in the finer, less impressed elytral striæ which become obsolete before reaching the apex, the tenth stria obsolete, composed of a scarcely discernible series of punctures, the sparsely punctulate, finely microreticulate and unrugulose mentum, the higher prosternal carina, the broader mesosternal lamella which is both longitudinally and transversely convex and densely punctured, in the less sparse punctation of the metasternal tabella. The specimen also differs in having the sutural and external intervals from base to apex and the basal half of the eighth interval black, the remainder of the elytra being rufo-testaceous, the striæ not darker; the pronotum is black with a moderately broad lateral testaceous border which is continued along the base for one-third of its width on either side.

Mission G. F. DE WITTE: South Visoke, Kibga, 2.400 m, 8-19.II.1935, 1 Q.

#### Cercyon (s. str.) tigreanus Gemminger et Harold.

Cercyon limbatus Roth 1851, Arch. f. Naturg., 1, 123 (nec Mannerheim 1843). Cercyon tigreanus Gemminger & Harold 1868, Cat. Col., 2, 499.

Cercyon limbicollis Régimbart 1906, Ann. Soc. ent. France, 75, 270.

Cercyon (s. str.) tigreanus D'Orchymont 1942, Bull. Mus. Roy. Hist. nat. Belg., 18, n° 26, 13.

Cercyon (s. str.) tigreanus d'Orchymont 1948, Proc. Zool. Soc. Lond., 117, (iv), 724.

Mission G. F. DE WITTE: Rutshuru, 1.285 m, 18-23.VI.1934, 1 Q.

#### Cercyon (s. str.) vulcanicus sp. nov.

Broadly oval, almost equally rounded anteriorly and posteriorly, convex, rufo-testaceous, the head, the pronotum widely on the disc, the elytra on the sutural interval, the striæ and the 8th, 9th and external intervals black; the elytra ten-seriate, the first to ninth weakly impressed, striiform; intervals weakly convex, moderately densely punctate, interstices shining.

Head black, labrum testaceous; anterior edge of the fronto-clypeus regularly rounded, finely but sharply margined, testaceous; moderately thickly punctulate, the punctures fine, about the size of an eye facet and separated by about one and one-half times their diameter, interstices shining. Pronotum testaceous, with a large black discal macula attaining both anterior and posterior edges; the sides very weakly rounded, finely margined, the margin feebly continued round both anterior and posterior angles; punctulate as on the head but with a sparse scattering of distinctly larger deeper punctures. Scutellum piceous. Elytra rufo-testaceous, the sutural interval, the striæ and the external intervals black or piceous from base to apex, the eighth interval black at least from the base to beyond the middle; the nine internal series distinctly but shallowly striiform, the impression not clearly punctate, the seventh, eighth and ninth series more distinctly punctate and less striiform anteriorly, the tenth series not at all striiform, consisting of a series of larger punctures from the shoulder to the middle of the length of the elytra; interseries very weakly convex, almost flat even posteriorly, rather densely finely punctulate, much more finely near the apex, the interstices barely more than the diameter of the punctures. entirely shining; side margin from the shoulder to behind the middle distinctly but finely serrulate. Venter black; mentum dull, sharply microreticulate, obsoletely punctulate; proepisterns flavous; prosternum finely longitudinally carinate, the median portion laterally delimited by a distinct low tectiform ridge on each side parallel to the median carina; mesosternal lamina ovate, two and one-half times as long as wide, the summit of the lamina rugosely punctate, longitudinally shallowly excavated; metasternal

tabella pentagonal, rather coarsely closely punctate, the interstices in the middle about one-half the diameter of the punctures, shining, with a vague oblique linear reticulate impression on each side; ventrites rufo-testaceous, with an indistinct transverse fuscous band; first ventrite with a distinct fine median longitudinal carina and across the base finely longitudinally rugulose, the remainder of the surface and the following segments very finely reticulate, dull, with a dense short hydrofugal pubescence except the apex of the fifth segment very narrowly. Legs testaceous, the anterior femora broadly piceous in the middle. Aedeagus short, gradually attenuate to the narrowly rounded apex, distinctly dorso-ventrally flattened and strongly longitudinally curved with the convexity ventral.

Holotype of. Belgian Congo: Albert National Park.

Mission G. F. de Witte : Volcan Visoke, 2.800-3.300 m, 13-14.II.1935;  $3.097\times1,935$  mm.

Paratypes : 1  $\,$   $\,$   $\,$  , same particulars as holotype, 3,613  $\times$  2,258 mm. 1  $\,$   $\,$   $\,$  vers Rweru, volcan Mikeno, 2.400 m, «bambous », 26-27.VII.1934; 1 specimen, Tshamagussa (Bweza), 2.250 m, «bambous », 9.VIII.1934; lac Kanyamenoni, vers volc. Musule, 2.300 m, 14.VIII.1934, 1 specimen.

This large species superficially suggests *pictus* and the immediately preceding unnamed species. It is readily distinguished by the stronger and denser punctation, the reticulate dull mentum, form of the prosternum, broader mesostitum and colour pattern. It is undoubtely a member of *Cercyon* (s. str.) by the flattened horizontal epipleurs in the thoracic region although the form of the prosternum is unusual in this section of the genus.

#### Cercyon (st. str.) sturmi ROTH emend.

Cercyon sturmii Roth 1851, Arch. f. Naturg., 17, 123.

Cercyon (s. str.) bisignatus d'Orchymont 1937, Bull. Ann. Soc. ent. Belg., 77, 460.

Cercyon (s. str.) sturmi d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 359.

Mission G. F. DE WITTE: Kivu: Rutshuru, riv. Fuku, 1.250 m, 5.VII.1935, 1 specimen; Kivu: Rutshuru, Lubirizi, 1.285 m, 13.VII.1935, 1 specimen; Kivu: Rutshuru, 1.285 m, VII.1935, 1 specimen.

#### Cercyon (s. str.) sodalis sp. nov.

Testaceous, the vertex of the head, the disc of the pronotum widely, the elytral suture, a large marginal humeral spot, the eighth and ninth interseries from the middle to the apex and an oval sub-apical spot between the fourth and sixth elytral interseries, black or piceous; elytral series, at least the internal ones, weakly striiform posteriorly; mesosternal lamina narrowly lanceolate.

Head testaceous, the frons and vertex piceous; anterior edge of the clypeus almost straight, finely margined; finely but not very closely punctulate, the punctures a little larger than an eye facet, the interstices almost twice the diameter of the punctures, shining. Pronotum piceo-testaceous, the anterior edge narrowly, the sides more broadly rufo-testaceous; sides feebly rounded, finely margined, the margin continued round the anterior but not round the posterior angles; punctured as on the head. Scutellum piceous. Elytra rufo-testaceous, the sutural interval, an oval sub-apical spot between the fourth and sixth striæ, a marginal humeral macula attaining the seventh serial row internally but not exceeding one-third of the length of the elytra and a marginal band from behind the middle to the apex attaining the eighth serial row internally, black or piceous; with ten serial rows of punctures, the sutural to sixth series shallowly but distinctly and finely striiform, at least from some distance behind the base, the tenth series not extending beyond the middle of the length; internal interseries anteriorly and the external interseries flat, the internal interseries posteriorly feebly convex; interseries anteriorly punctured as on the pronotum, posteriorly much more finely and sparingly, the interstices entirely shining. Venter fusco-testaceous, mentum anteriorly shallowly excavated, impunctate, somewhat obsoletely transversely reticulate, sub-nitid; prosternum with a fine longitudinal median carina; mesosternal lamella elongate-lanceolate, about five times as long as wide, finely sparingly punctulate; metasternal tabella irregularly sparsely punctate. Legs testaceous; meso- and meta-femora beneath irregularly sparsely setigerous punctate, obliquely striolate, strongly shining. Edeagus with the median lobe only very slightly longer than the lateral lobes, gradually attenuate from the base to shortly before the apex, the sides then more sharply convergent to the acute apex.

Holotype of. Belgian Congo: Albert National Park.

Mission G. F. de Witte : Shamuheru, volcan Nyamuragira, 1.843 m, 14-26.VI.1935; 2,156  $\times$  1,345 mm.

Paratypes : 1 Q, Gitebe, volcan Nyamuragira, 2.324 m, 14-26.VI.1935; 1 specimen, same particulars.

This species is closely related to *C. sturmi* Roth which it resembles greatly in size and sculpture but the elytral striae are more impressed, the mentum is impunctate and transversely striolate, the mesostitum is broader, the colour pattern is distinctly different and the ædeagus is more elongate, more slender, the median lobe more acuminate. It resembles *C. styphelus* d'Orchymont more closely in the degree of impression of the striæ but the mesostitum is longer, the mentum is shorter and more transverse, the ædeagus is more slender, the apex more acute and the apical attenuation straight-sided, not progressively greater and therefore rounded. The colour pattern is also distinctly different.

#### Cercyon (s. str.) wittei sp. nov.

Narrowly oval, rather attenuate behind, flavo-testaceous, the head and a marginal spot behind the shoulder piceous or black; elytra ten striate, the striæ not very deeply impressed, the interstriæ progressively more convex behind; metasternal tabella with the postero-lateral sides prolonged forwards to the anterior angles of the metasternum.

Head black or piceous, longitudinally and transversely flatly convex, the anterior edge of the clypeus very widely rounded, almost straight, finely margined; moderately closely and fairly strongly punctured, the punctures weakly excentric, the interstices from one to two times the diameter of the punctures. Pronotum flavo-testaceous, the sides widely and slightly excentrically rounded, finely margined, the margin barely passing round the anterior and posterior angles; on the disc moderately closely, the interstices from one and one-half to twice, towards the sides distinctly less closely and more finely punctulate, the interstices strongly shining. Scutellum piceous, irregularly finely punctured. Elytra ovate, ten striate, the striæ not very deeply impressed but the interstriæ, particularly internally and posteriorly moderately convex and the striæ therefore very distinct, externally less striate, becoming more strongly punctate-seriate; interseries anteriorly and laterally not very convex, rather finely and sparsely punctate, strongly shining; rufo-testaceous, the sutural interval infuscate; in about 50 % of the specimens the external portion of the elytra from the margin to the seventh stria and from the shoulder to about the middle black or piceous. Venter piceo-testaceous, the mentum anteriorly shallowly excavated, finely microreticulate, the areolæ round, not transverse; gular plate rugose-punctate; prosternum sharply carinate; mesosternum narrowly ovate, four times as long as wide, finely and rather confluent-punctate; metasternal tabella prolonged to the anterior angles of the sternum by distinct but fine carinæ (« femoral lines »), the tabella rather coarsely and sharply but not particularly closely punctate, area outside the tabella finely granulose and shortly pubescent. Legs testaceous, meso- and metafemora beneath sparsely and finely setigerous punctate, obliquely striolate, shining. Ædeagus with the median lobe barely longer than the lateral lobes, subparallel almost to the apex, the sides then sharply convergent, the extreme apex acutely rounded.

Holotype &. Belgian Congo: Albert National Park.

Mission G. F. DE WITTE: Ruanda, lac N'Gando, pied volcan Karisimbi, 2.400 m, 6.111.1935;  $2.000 \times 1,152 \text{ mm}$ .

Paratype : South Visoke, Kibga, 2.400 m, 8-19.II.1935, 3  $\circlearrowleft$  Ruanda, volcan Visoke, 2.400-3.300 m, 11-14.II.1935, 4  $\circlearrowleft$  riv. Bishakishaki, Kamatembe, 2.100 m, 7-23.I.1935, 1 specimen; Shamuheru, volcan Nyamuragira, 1.843 m, 14-26.VI.1935, 4 specimens; Mission G. F. DE WITTE : Tshamugussa (Bweza), 2.250 m, « bambous », 10.VIII.1934, 1 specimen.

Belonging to the group of species around *C. atricapillus* characterised by the presence of distinct femoral lines running obliquely forwards to the anterior angles of the metasternum this species is somewhat closely related to *C. tachyorictidis* Jeannel & Paulian, described from the burrows of the Mole Rat (*Tachyoryctes*). Apart from the differences of colour the head and pronotum are distinctly more sparsely punctulate, the sixth, seventh and tenth elytral striæ attain much more closely to the base, the dorsum is much more shining, the mesosternal lamina is broader, more distinctly punctulate and the mentum is distinctly microreticulate, scarcely visibly punctate.

### Cercyon $(s.\ str.)$ atricapillus (Marsham).

Dermestes atricapillus Marsham 1802, Ent. Britt., 1, 72.

Dermestes nigriceps Marsham 1802, Ent. Britt., 1, 72.

Dermestes laevis Marsham 1802, Ent. Britt., 1, 73.

Cercyon atriceps Stephens 1829, Ill. Brit. Ent Mand., 2, 151.

Cercyon testaceum Stephens 1829, Ill. Brit. Ent. Mand., 2, 152 ex parte.

Cercyon vicinalis Walker 1859, Ann. Mag. Nat. Hist., (iii), 3, 258. non auctt.

Cercyon nigriceps Motschulsky 1863, Bull. Soc. Imp. Nat. Mosc., 2, 445.

Cercyon atriceps Gemminger & Harold 1868, Cat. Col., 2, 496.

Cercyon (s. str.) atricapillus J. Balfour-Browne 1939, Ent. Mon. Mag., 75, 3.

Mission G. F. de Witte: Kivu: Sake, 1.560 m, 19-22.II.1934, 1 specimen; Kivu: Rutshuru, 1.285 m, 1-6.VI.1935, 3 specimens; Kivu: Rutshuru, riv. Fuku, 1.250 m, 6.VII.1935, 1 specimen.

#### **Cercyon** (s. str.) sp.

A single specimen of undetermined sex which appears to be of a species very near to the preceding but which is, nevertheless, certainly distinct therefrom. The form is rather more broadly oval, the punctation of the head and pronotum is clearly sparser and less impressed, the punctures much less distinctly sublunate or excentric; the elytral striæ are more deeply impressed, the interstices less evidently punctulate, more shining; the mentum is entirely dull, microreticulate, almost impunctate; the mesosternal lamella is shorter, distinctly though not greatly broader and more ovate, the summit of the lamella longitudinally shallowly excavated, the impression relatively strongly punctured; the metasternal tabella broader, similarly laterally delimited by femoral lines which attain the anterior angles of the sternum, a little more strongly punctured and the outer edge of the antennal cavities on the prosternum is arcuate, not angulate.

The identification of this specimen must await further study of African specimens attributed to *atricapillus* and of additional material.

Mission G. F. DE WITTE: Munagana, 2.000 m (Djomba), 23.VIII.1934.

#### Cercyon (s. str.) subtilis Knisch.

Cercyon (s. str.) subtilis Knisch 1922, Arch. f. Naturg., 88, A, (v), 95.

A single specimen which was identified by D'ORCHYMONT as this species. The only specimen in the British Museum is a female from Lagos received from Knisch which bears both Knisch's and the British Museum co-type labels. I do not think that these co-type labels are properly affixed since it is clear from the remarks of Knisch that he doubted the conspecificity of the East and West African material and this West African specimen bears, in fact, a further label in Knisch's handwriting « spec. propr. » indicating that he considered it to be distinct.

Mission G. F. DE WITTE: Mont Sesero, près Bitashimwa, 2.000 m (bambous), 2-3.VIII.1934, 1 specimen (? ♀).

#### Cercyon (s. str.) oosternoides Knisch.

Cercyon (s. str.) oosternoides KNISCH 1922, Arch. f. Naturg., 88, A, (v), 96.

A single specimen, rather teneral, which agrees closely in sculpture with a co-type of this species in the British Museum.

Mission G. F. DE WITTE: Ruanda: lac N'Gando, pied volcan Karisimbi, 2.400 m, 8.III.1935, 1 specimen.

#### Cercyon (s. str.) parastromoides J. Balfour-Browne.

Cercyon (s. str.) parastromoides J. Balfour-Browne 1948, Ann. Mag. Nat. Hist., (xi), 14, (1947), 818.

This species has been recently described on a few specimens from Uganda and the single specimen detailed below.

Paratype: Belgian Congo: Albert National Park.

Mission H. Damas: Ngesho, 2.000 m, 3.VIII.1935, 1 specimen.

#### Parastromus cristatus J. Balfour-Browne.

Parastromus cristatus J. Balfour-Browne 1948, Ann. Mag. Nat. Hist., (xi), 14, (1947), 822. (Preliminary diagnosis.)

Rufo-testaceous, broadly ovate, moderately convex, head and pronotum sub-rugosely punctate; elytra with ten deeply impressed catenate-punctate striæ, the interstriæ, except in the scutellar region, strongly convex.

Head rufo-testaceous, the eyes small and not very prominent; densely and moderately coarsely sub-rugosely punctate, interstices very narrow, shining; antennæ (including the club) and palpi testaceous, the pseudo-basal segment of the palpi feebly inflated apically. Pronotum rufo-testaceous, transversely

and longitudinally convex; coarsely sub-rugosely punctate, a little more coarsely than on the frons, the interstices shining, much less than the diameter of the punctures. Elutra rufo-testaceous, with ten deeply impressed striæ, the impression distinctly catenate-punctate; with a catenatepunctate impressed marginal stria; the interstriæ except in the scutellar region compressed and strongly convex, in the scutellar region weakly convex, very finely and sparingly sublinearly punctulate, each puncture emitting a short fine hair; the interstriæ posteriorly equally elevated. Venter rufescent; mentum closely sub-rugosely coarsely punctate, interstices shining; prosternum longitudinally tectiform and carinate in the middle; mesosternal lamella ovate, anteriorly acutely pointed, posteriorly sharply rounded, two and one-half times longer than wide, strongly coarsely punctured; metasternal tabella coarsely and moderately copiously punctured, the interstices about equal to the diameter of the punctures, strongly shining; third, fourth and fifth ventrites apically almost glabrous, finely punctulate. Legs testaceous, the ventral (posterior) face of the anterior femora coarsely, of the intermediate and posterior femora slightly more finely, not very closely setigerous punctate, interstices shining; tarsi short, with long silvery hairs beneath.

Holotype: Belgian Congo: Albert National Park.

Mission G. F. de Witte : Kivu : Rutshuru, 1.250 m, 4.VII.1935; 1.762  $\times$  1,084 mm. Unique.

This new species, belonging to a recently described genus, much resembles species of *Armostus*. I have not seen *Cercyon capensis* (D'ORCHYMONT), described as an *Armostus*, but I think there can be little doubt that it belongs here and that the present species will be found to be closely related thereto.

#### Pelocyon gen. nov.

This new genus was named by D'ORCHYMONT in collection but no diagnosis has been published. The genus is evidently related to *Parastromus* m. by the ventral morphology.

Head with the side margins sharply emarginate in front of the eye, allowing the insertion of the antennae to be seen from above; pronotal and elytral convexities continuous; elytra ten striate, the internal series impressed, striiform; mentum deeply excavated in the anterior half in the middle; prosternum simply triangular, longitudinally carinate, tectiform, the antero-lateral portion delimited from the antennal cavities by an oblique carina and short abrupt declivity; mesosternal lamella ovate; metasternal tabella transverse, postero-laterally delimited by a strong femoral line which extends obliquely outwards, becoming fainter and does not reach the anterior angles of the sternum; with a post-mesocoxal suture (« Line of thickening »)

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which, at its outer ends, curves backwards and meets the metepisternal suture at about the middle; basal ventrite with a strong median longitudinal carina.

Genotype: Oosternum jeanneli D'ORCHYMONT.

This new genus differs essentially from *Parastromus* by the structure of the mentum and prosternum; the tabella of the metasternum is also less transverse, the convexities of the pronotum and elytra are continuous and the tenth elytral stria is barely distinguishable as a quite unimpressed line of rather widely spaced punctures. The original doubtful attribution to *Oosternum* (1924, Ann. Mus. Civ. Stor. nat. Genova, **51**, 261) cannot be maintained, the structure of the prosternum being fundamentally different. D'ORCHYMONT described the prosternum as being abruptly elevated above the lateral antennal cavities « as in *Oosternum* » but this is not an accurate



Fig. 13. — Prosternum of

- a. Pelocyon jeanneli (D'ORCHYMONT);
- b, Oosternum horni d'Orchymont. ×100.

description of the morphology of the prosternum in *Oosternum*. In that genus the median portion of the prosternum is broadly pentagonal with the base anterior and the five sides approximately equal, the surface almost flat, the antero-lateral sides of the elevated portion are sharply and deeply emarginated for the reception of the apex of the rather elongate antennal scape; there is a fine longitudinal median carina. In *Pelocyon*, on the other hand, the form of the median portion of the prosternum is an irregular pentagon with the base anterior; the antero-lateral sides are very short, straight, not the least emarginate, the surface weakly tectiform and with a sharp and distinct longitudinal median carina.

#### Pelocyon jeanneli (D'ORCHYMONT).

Oosternum jeanneli d'Orchymont 1924, Ann. Mus. Civ. Stor. nat. Genova, 51, 261.

Mission G. F. DE WITTE: Munagana, Djomba District, 2.000 m, 23.VIII.1934, 1 specimen; Kanyabayongo, Kabasha Escarpment, 1.760 m, 7.XII.1934, 1 specimen.

#### Oosternum horni D'ORCHYMONT.

Oosternum horni d'Orchymont 1914, Ent. Mitteil., 3, 326, fig. 2.

This species was described from Formosa and has since been recorded from various places in the Oriental Region. These are the first specimens to be definitely recorded from Africa. The locality and altitude suggest that the species is of natural occurrence in East Africa and it is therefore interesting that I have recently recorded a specimen of what is probably this species from a moderate elevation in the Nimba Mountains, West Africa (J. Balfour-Browne, Rev. Zool.-Bot. Afr., in Press). The distribution of the species therefore covers a wide area.

Mission G. F. DE WITTE: Kanyabayongo, Kabasha Escarpment, 1.760 m, 7.XII.1934, 2 specimens; Rutshuru, 1.285 m, 3.VII.1935, 1 specimen.

# Quadristernum gen. nov.

Subdepressed, head with the anterior margin of the fronto-clypeus immediately in front of the eye emarginate, allowing the insertion of the antennæ to be seen from above; side margins of the pronotum not at all inflexed, the dorsal surface, therefore, not visible at the sides from below; elytra with ten punctured striæ; prosternum flat, without trace of a median longitudinal carina, elongate, quadrilateral, the base and sides finely margined, apex weakly emarginate, on each side near the base a deeply incised short fovea for the reception of the apex of the antennal scape; mesosternum flat, quadrilateral, the sides feebly divergent posteriorly, finely margined, irregularly, sharply and moderately densely punctate; metasternum with a large irregularly hexagonal median glabrous portion, feebly transversely convex, sharply elevated, punctate as on the mesosternal lamina, posterior portion behind the femoral lines and on the episterns very finely granular and very sparsely shortly pubescent; basal ventrite with a distinct longitudinal median carina.

Genotype: Quadristernum africanum sp. nov.

The form of the mesosternal process and the relatively widely separated mesocoxae suggest that this new genus should be placed in the *Megasternini*. This appearance is, however, certainly deceptive and the genus undoubtedly belongs to the *Cercyonini* as is shewn by the following subsidiary characters: femoral lines moderately convergent behind, the tabella distinctly elevated, the sculpture markedly different from that in the area anterior to the femoral lines; elytra not overlapping the sides of the thoracic sterna, the metasternal episterns fully visible throughout their length; elytral epipleurs distinct, wide in the metasternal region and horizontal.

The relationships of this genus are obscure. The particular form of the mesosternum is very distinct from that of all other described forms, but the structure of the prosternum, although very isolated, having the deeply incised foveæ on each side near the base for the reception of the apex of the

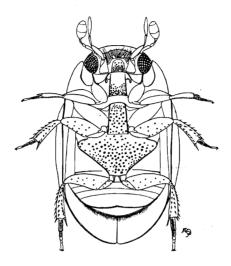


Fig. 14. — Quadristernum africanum gen. nov., sp. nov. Ventral aspect. ×25.

antennal scape suggest a connection with *Oosternum* among existing genera, and it is considered that the genus should stand next after that genus in the arrangement of the genera in the subfamily *Sphaeridiinae*.

#### Quadristernum africanum sp. nov.

Subdepressed, regularly oval, widest at about the middle; head and pronotum piceous or black, elytra brunneo-testaceous, elytra ten striate-punctate, the interstriæ sub-nitid or dull.

Head black; anterior margin finely beaded, feebly emarginate in the middle, regularly and sharply punctulate, the punctures slightly excentric and slightly larger than an eye-facet, separated by a distance about one and one-half times their diameter, the interstices shining. Pronotum black or piceous, the sides vaguely paler; sides finely margined, the margin continued round the obtuse posterior angles along the base to one-third of the width of the base; anterior angles sharply rectangular; punctured a little more strongly and more densely than on the head, the interstices being about equal the diameter of the punctures. Elytra brownish-testaceous, with ten punctate striæ, the striæ not strongly impressed on the disc and almost

obsolete towards the sides, the first to fifth strike beginning shortly behind the base, the sixth to tenth some distance behind the base; interstriæ very weakly convex or almost flat, in the type specimen quite dull, very finely microreticulate and with sparse fine punctures, in the cotype subnitid, very obsoletely finely microreticulate, the sparse fine punctures more distinct; sutural apices of the elytra in the type very slightly produced and subacutely rounded; in the cotype not at all produced and widely rounded; with a very short and fine adpressed sparse pubescence. Venter black or piceous; mentum rather coarsely and closely, subrugosely punctate; prosternum impunctate and microreticulate basally, apically subnitid and moderately finely closely punctate; mesosternum strongly and sharply punctate, the punctures about the same size as those of the pronotum but slightly less close; metasternal tabella punctured as on the mesosternum, behind the femoral lines and on the episterns finely granulose with very short and sparse fine hairs; ventrites piceo-testaceous, very finely microreticulate, subnitid. Legs testaceous; tarsi not longer than their tibiae, with very short pubescence beneath.

Holotype (? ♥), Belgian Congo: Albert National Park.

Mission G. F. de Witte: Ruanda, lac N'Gando, pied volcan Karisimbi, 2.400 m, 8.III.1935.

Paratype : Mubilia, volcan Nyamuragira,  $2.000~\mathrm{m},~14\text{-}26.\mathrm{VI}.1935,~1~\mathrm{specimen}.$ 

# Tectosternum brunneum sp. nov.

Dark castaneous brown, head and pronotum impunctate, dull, finely but distinctly microreticulate; elytra rather sparingly and more or less distinctly linearly punctate.

Head castaneous, paler anteriorly, impunctate, distinctly but finely microreticulate. Pronotum castaneous, sculptured as on the head, the reticulation a little more distinct towards the sides. Elytra castaneous, the sides and apex paler, with a number of moderately distinct linear series towards the middle, the serial character of these punctures more evident externally, basally and apically virtually impunctate; surface dull, finely microreticulate as on the head. Venter brunneo-testaceous; mentum impunctate, finely transversely microreticulate; prosternum highly longitudinally carinate in the middle, anteriorly strongly tectiform; mesosternum lanceolate, the base transverse and intimately in contact with the metasternum; transversely reticulate and moderately distinctly and fairly densely punctate; metasternum with the tabella reticulate, rather indistinctly and somewhat sparingly punctate in the middle only, the sides virtually impunctate. Legs testaceous.

Holotype (sex undetermined). Belgian Congo : Albert National Park. Mission G. F. de Witte : Kivu : Rutshuru, 1.285 m, 7.VI.1935; 1,681  $\times$  0.798 mm.

This genus has only recently been described on a species (*exstriatum* J. Balfour-Browne) from West Africa which was based on a single specimen. The occurrence of a second species, also based on a single specimen, from a locality almost 3.000 miles distant is of interest. The biology of the species is unknown.

The new species may be easily separated from *exstriatum* by the dull, microreticulate and impunctate head and pronotum, the much less dense and more or less distinctly linear elytral punctures, the much less closely punctate mesosternum and metasternum which are reticulate, not shining as in the compared species. The form of the new species is also very distinct, much more oval, more strongly attenuate posteriorly so that the apex of the elytra seems almost conical.

This specimen bears a provisional identification label by D'ORCHYMONT, « *Noteropagus* ». The form, at first sight, suggests that genus of the *Megasternini* but the convexity is much less and the seriate rows of punctures do not attain the apex.

# Pachysternum capense (Mulsant).

Cryptopleurum capense Mulsant 1844, Ann. Soc. Agr. Lyon, 7, 381. Cercyon scapulare Boheman 1851, Ins. Caffr., 1, 608. Cercyon figuratus Gerstaecker 1867, Beitr. Ins.-Fauna Zanzibar, 26. Cercyon rufocaudatum Fairmaire 1893, Ann. Soc. ent. Belg., 37, 526. Pachysternum capense Alluaud 1899, Bull. Soc. ent. France, 379. Pachysternum capense d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 360.

Mission G. F. DE WITTE: Mont Sesero, near Bitashimwa, 2.000 m (bambous), 2-3.VIII.1934, 7 specimens; Burambi, volcan Muhavura, 2.325 m, 5.IX.1934, 1 specimen.

#### Pachysternum capillatum D'ORCHYMONT.

Pachysternum capillatum d'Orchymont 1942, Bull. Mus. roy. Hist. Nat. Belg., 18, n° 26, 18.

Mission G. F. DE WITTE: Riv. Nyamuronge, near Mugando, 21.IV.1945, 1 specimen.

#### Pachysternum gestroi D'ORCHYMONT.

Pachysternum gestroi d'Orchymont 1924, Ann. Mus. Civ. Stor. nat. Genova, 51, 264.

Pachysternum gestroi d'Orchymont 1948, Proc. Zool. Soc. Lond., 117, (iv), 719.

Mission G. F. de Witte: Kanyabayongo, Kabasha Escarpment, 1.760 m, 7.XII.1934, 2 specimens; Kabasha Escarpment, 1.500 m, 12.XII.1934, 1 specimen.

Both the above are slightly teneral specimens with the elytral series a little more striiform than is usual but I am unable to find any other distinctive character which would support a specific distinction.

# Pachysternum wittei sp. nov.

Convex, ovate, somewhat attenuate posteriorly, head black, pronotum and elytra testaceous; elytra ten-seriate; prosternum longitudinally carinate; anterior tibiæ with the outer edge not emarginate before the apex.

Head black, the fronto-clypeal suture and anterior margin of the clypeus testaceous; rather densely finely punctulate, each puncture the centre of short radiating impressions which anastomose on the clypeus to form a reticulation but which do not anastomose on the frons. Pronotum piceotestaceous, densely covered with a fine but sharply impressed punctation; each puncture, as on the frons, the centre of short radiating impressions which, at the sides but not on the disc, anastomose to form a fine reticulation; with a basal series of more distinct and larger punctures; sides widely obtusely angulate in the middle and feebly inflexed; the posterior angles rectangular. Elytra testaceous, the apex paler; with ten series of punctures, each separated from the immediately anterior one by a distance at least equal to its diameter, not perceptibly striiform and becoming obsolete well before the apex; the first to fifth series beginning just behind the base, the sixth to tenth at almost one third of the length of the elytra from the base; interseries flat, internally in the scutellar area distinctly, externally very finely and indistinctly punctulate; with a sparse, fine and short pubescence. Venter piceo-testaceous; mentum finely punctulate and distinctly reticulate; prosternum pentagonal, the antero-lateral sides very short, with a median longitudinal carina; mesosternum pentagonal, the base posterior and the postero-lateral sides very short, rather coarsely but shallowly punctate, reticulate, subrugulose; metasternum in front of the femoral lines rather densely and strongly punctulate, the interstices reticulate; the femoral lines elevated and costiform anteriorly, behind the femoral lines less strongly and more finely punctulate; basal ventrite finely punctate in the basal half, second to fifth ventrites finely reticulate and apparently glabrous. Legs testaceous; anterior tibiæ not the least emarginate on the outer edge just before the apex, the stout marginal setæ here quite uniform; tarsi normal.

Holotype (sex undetermined). Belgian Congo : Albert National Park. Mission G. F. de Witte : Kibga, South of volcan Visoke, 2.400 m, 8-19.II.1935;  $2{,}044\times1{,}428$  mm.

This new species is apparently related to the preceding by the carinate prosternum and the entire outer edge of the anterior tibiæ. It may be distinguished by the much more copious and more distinct punctation of the head and pronotum, the anastomosis of the radiating impressions on the clypeus and sides of the pronotum to form a distinct reticulation; the greater spacing between the serial elytral punctures; the stronger and denser punctation of the metasternum, the distinct alveolar reticulation between the punctures of the metasternum, the short fine pubescence on the elytra and, finally, by the greater size.

# Pachysternum sulcatum sp. nov.

Oval, anteriorly rounded, posteriorly somewhat attenuate, the sides in the basal half of the elytra parallel; brownish testaceous; pronotum without a basal series of punctures; elytra with ten sharp longitudinal costæ separating strong longitudinal sulci; prosternum with a longitudinal carina; anterior tibiæ with the outer edge before the apex entire, unemarginate.

Head piceous brown, paler anteriorly, very closely but not very deeply and guite finely punctate on the vertex, the punctures about the same size as an eye-facet, slightly less densely on the frons, the fronto-clypeal suture bare, the clypeus very densely and closely punctate; vertex and frons somewhat obsoletely, the clypeus very distinctly microreticulate, frontoclypeal suture shining; anterior angles of the clypeus rather prominently Pronotum brownish-testaceous, rather closely and finely indistinctly punctate, towards the sides more closely than on the disc, the interstices obscurely microreticulate and rather dull, each puncture giving rise to a very short erect stiff hair, the apex of which appears to be truncate; base without a transverse row of distinctly larger punctures; anterior angles abruptly rectangular, posterior angles slightly obtuse, the sides somewhat obtusely angulate in the middle and feebly inflexed, sharply margined. Elytra brownish-testaceous, in the basal half at the sides subparallel, the sides here being formed by the tenth costa owing to the inflexion of the sides in the basal half; with the suture and with ten longitudinal acutely carinate costæ separated by deep longitudinal sulci; the costæ unequal, the second, fourth, sixth and eighth distinctly more elevated, particularly posteriorly (the second more strongly elevated that the remainder), than the first, third, fifth and seventh; the ninth and tenth less acutely carinate and approximately equally elevated; the costæ along the summit extremely finely irregularly granulose; the sulci quite strongly, irregularly and quite sparingly punctate right to the apex; the suture about equally elevated with the first costa; side margins in the basal half inflexed, in dorsal aspect the sides being formed by the elevated tenth costa. Venter piceo-testaceous, mentum transverse, rather sparingly but finely and sharply punctate, dull, strongly microreticulate; prosternum quite narrowly pentagonal, the base anterior, with a low median longitudinal carina, the apex deeply acutely bifurcate, rugulose; mesosternum pentagonal, the sides subequal, anterior process acute, coarsely densely punctate; metasternum strongly and densely and quite deeply punctate, the punctures in the middle smaller than those towards the sides, the interstices microreticulate, the punctures shining; femoral lines prominent and almost carinate anteriorly; basal ventrite with a low longitudinal median carina; all ventrites densely punctate, the punctures similar to those of the middle of the metasternum. Legs testaceous; anterior femora with the posterior face coarsely punctate; middle and hind femora relatively slender; anterior tibiae with the external edge entire, not the least emarginate before the apex.

Holotype (? of). Belgian Congo: Albert National Park.

Mission G. F. DE WITTE: Ruanda, Nyabirehe (pied volcan Karisimbi), 2.400 m, 22.II.1935;  $2.268 \times 1,512 \text{ mm}$ .

This remarkable and isolated species might readily be mistaken for a Cryptopleurum owing to the deeply sulcate elytra, a character hitherto unknown in the genus *Pachysternum*. p'Orchymont has already (1924, Ann. Mus. Civ. Stor. nat. Genova, 51, 263) stated that the validity of Pachysternum as a genus distinct from Cryptopleurum is doubtful. In a recent paper (J. Balfour-Browne, Rev. Zool.-Bot. Afr., in Press) I have pointed out that in species of Cryptopleurum the seventh and eighth striae are habitually approximated in a single common sulcus whilst in *Pachysternum* these striae are habitually separated by a distance equal to that separating them from the neighbouring stria on each side. Slight though this difference may be it proves constant and is, as such, a useful supplementary generic character. On this basis the present new species is to be attributed to Pachysternum, the elevated costae apparently taking the place of the serial punctures normal in the genus. This homology of the costæ with the serial punctures is assumed since the punctation in the sulci is distinctly irregular, not the least seriate and therefore out of character. In the carinate prosternum and the simple anterior tibiæ the species is sharply differentiated from capense (MULSANT), capillatum D'ORCHYMONT and macarthuri J. Balfour-Browne, which form one section of the genus but it is very easily distinguished from all the remaining species described from Africa by the sulcate elytra.

# Pigrillum wittei sp. nov.

Dark rufo-castaneous, regularly oval, highly convex, subnitid, extremely finely and sparingly pubescent.

Head rather densely evenly punctate, the punctures rather larger than an eye-facet and separated by a distance equal to their diameter; interstices highly shining; fronto-clypeal suture very faint, quite transverse, slightly impressed, the impression shallower in the middle; anterior edge of the clypeus almost regularly rounded. Pronotum almost transverse, the posterior edge evenly rounded, the side margins feebly inflexed; regularly punctured, the punctures the same size as those of the head but separated by a distance almost twice their diameter, the interstices highly shining; with a basal series of punctures which are the same size as the general punctation but separated by not more than their diameter. Elytra ten striate, the striæ only shallowly impressed except near the apex except for the sutural stria which is quite strongly impressed from about the middle,

the striæ very closely but finely punctate; interstriæ flat except posteriorly where they are feebly convex, with a scattered punctation, the punctures the same size as those of the striæ but separated by about three times their diameter; the five internal striæ almost attaining the base, the 6th to 10th striæ beginning between one third and one half the length of the elytra from the base. Venter rufo-castaneous; mentum shining, with sparse fine punctures, anteriorly with a few fine transverse strioles; prosternum irregularly pentagonal, the base anterior, the antero-lateral sides short, finely longitudinally carinate in the middle line; sub-rugose; mesosternum clearly pentagonal, about as long as wide at the base, the median portion forming an elongate finely margined area which is strongly shining and closely punctate, the portion external to the fine margins declivous and distinctly pubescent; metasternum with the median portion highly polished, feebly raised, irregularly punctate, the punctures sparse in the middle, closer laterally; the femoral lines very distinct, slightly sinuous, attaining the antero-lateral angles of the sternum and evidently raised and carinate externally; sternum behind the femoral lines very closely and shallowly punctate, the punctures moderately fine, reticulate, dull; basal ventrite elongate, quite as long as the second, third and fourth segments taken together, with a distinct longitudinal median carina and quite strongly but shallowly and fairly closely punctate, reticulate both in the punctures and on the interstices; second to fifth ventrites finely microreticulate, almost impunctate. Legs short, the anterior tibiæ entire, not emarginate externally before the apex.

Holotype (sex undetermined) : Belgian Congo : Albert National Park. Mission G. F. de Witte : Kivu : Rutshuru, 1.285 m, 29-30.XII.1933;  $2,223\times1,425$  mm.

Easily distinguished from the genotype, *P. villosum* (Régimbart) and *P. burgeoni* D'Orchymont by the much smaller size and the regularly oval, not almost hemispherical form, there can be no doubt that this species belongs to the present genus owing to the combination of the carinate prosternum and the entire anterior tibiæ, without external emargination before the apex, characters which effectually exclude it from *Pachysternum*.

# Cryptopleurum suturatum Régimbart.

Cryptopleurum sulcatum Wollaston 1867, Col. Hesperid., 49 (non Motschulsky 1863).

Cryptopleurum suturatum Régimbart 1907, Ann. Mus Civ. Stor. nat. Genova, 43, 60.

Cryptopleurum wollastoni Knisch 1924, Coleopt. Cat., Junk, 79, 162.

Cryptopleurum suturatum d'Orchymont 1924, Ann. Mus. Civ. Stor. nat. Genova 51, 266.

Crytopleurum suturatum d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 362.

Cryptopleurum suturatum J. Balfour-Browne, Rev. Zool-Bot. Afr., in Press.

Mission G. F. de Witte: Kanyabayongo, Kabasha Escarpment, 1.760 m, 6.XII.1934, 1 specimen.

# Cryptopleurum costatum (BOHEMAN).

Cercyon costatum Boheman 1851, Ins. Caffr., 1, 610. Cryptopleurum costatum d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 361.

Three specimens, larger than the size of the types given by D'ORCHYMONT, which I ascribe here with some doubt. The description of BOHEMAN, even when supplemented by that of D'ORCHYMONT, does not entirely apply to the specimens before me. In these specimens the clypeus is in two distinct planes, at the base transversely shallowly concave, anteriorly convex, the demarcation between the two areas forming a sharp curved carina, quite prominent in the middle; the frons has the median area delimited anteriorly along the fronto-clypeal suture by a transverse carina surmounted by a linear series of stiff golden setae which, at the sides follow the inner edge of the eye to the level of the posterior margin, there the series again curves transversely across the head to a distance equal to one third of the width of the frons and again curves forwards along the sides of a shallow longitudinal groove almost up to the fronto-clypeal suture. The serial rows of the pronotum also follow a distinct pattern, there being four longitudinal series on each side, the admedian series obscurely branching into two near the base; the marginal series runs along the ridge of a distinct carina which delimits a strongly inflexed portion of the notum. The femoral lines of the metasternum are not, as described by D'ORCHYMONT, « fine prominent lines » but are obsolete over the greater part of their length, visible only as a fine carina at their base and in the anterior angle of the sternum. These differences may not prove, on comparison with the types, to be of full specific value and I have preferred to leave these specimens as doubtfully costatum until a comparaison with authentic material can be made.

Mission G. F. DE WITTE: Mayumbu, volcan Nyamuragira, 2.100 m, 4-26.VI.1935, 2 specimens  $(1,540\times1,120$  and  $1,624\times1,148$  mm); Nyasheke, volcan Nyamuragira, 1.820 m, 14-26.VI.1935, 1 specimen  $(1,708\times1,204$  mm).

#### Cryptopleurum rotundum sp. nov.

Broadly oval, depressed, castaneous; head and pronotum densely finely punctate, pubescent, the punctural interstices shining; elytra with the suture and nine longitudinal costæ elevated distinctly above deep sulci, the summit of each costa with a close linear row of fine punctures, each emitting a short golden seta; venter piceo-castaneous, meso- and metasterna densely and quite strongly punctate.

Head very densely finely punctate, with a sparse deciduous golden pubescence, the punctural interstices evidently less than the diameter of the punctures, shining; fronto-clypeal suture transverse, very distinct; base of the clypeus transversely depressed, anteriorly rather strongly convex, anterior edge very finely margined and shallowly emarginate in the middle; the anterior angles of the clypeus moderately prominently obtuse; antennæ and palpi rufo-testaceous, the pseudobasal segment of the palpi and the antennal scape sharply microreticulate, microgranulate. Pronotum densely punctate, posteriorly a little more strongly so, sparsely setose, the setæ rather stiff and semi-recumbent, not adpressed; sides strongly angulate in the middle and considerably inflexed, the false margin angulate, tectiform and with a linear series of golden setæ; interstices of the punctation dorsally shining, on the inflexed portion finely microreticulate. Elytra broadly oval, posteriorly widely rounded, the suture and nine sharply carinate longitudinal costæ of subequal elevation, the edge beyond the ninth costa in the basal half inflexed, each costa with a close linear series of fine punctures, each puncture emitting a semi-recumbent golden seta, the setæ in contact throughout their length and simulating a very sharp carina; intercostæ strongly (including the marginal in the basal half) sulcate and each bearing a linear series of coarse sharp punctures except the seventh which bears two linear series, the seventh and eighth; all costæ except the eighth beginning at the base, the eighth slightly behind the base; suture with a marginal series of sharp punctures, most distinct at the base where they are as large as those at the base of the pronotum, progressively finer and evanescent at two-thirds of the length from the base; surface strongly shining. Venter piceo-castaneous in the middle; mentum strongly transverse, sharply finely punctate and microreticulate; prosternum broadly pentagonal, the apex widely angulately excised, sculptured as on the mentum; mesosternum broadly pentagonal, densely and sharply moderately strongly punctate, interstices shining, much less than the diameter of the punctures; metasternum in front of the femoral lines sculptured as on the mesosternum, behind the coxal lines and on the posterior (visible) portion of the metasternal episterns more shallowly and much more sparsely but as strongly punctate; femoral lines forming a fine sinuate low carina and attaining the anterior angles of the sternum; basal ventrite with a longitudinal median carina, very coarsely but quite shallowly punctate, microreticulate both in the punctures and on the interstices; second to fifth ventrites quite coarsely and shallowly punctate, microreticulate. Legs rufotestaceous, anterior femora on the posterior face strongly and sharply punctate, interstices obsoletely reticulate; middle and hind femora beneath sparingly finely punctate, shining.

Holotype (? ♀). Belgian Congo: Albert National Park. Mission G. F. DE WITTE: Kivu: Rutshuru, 1.285 m, 16.X.1934 (2,076 × 1,568 mm).

4

Paratypes: Kanyabayongo, Kabasha Escarpment, 1.760 m, 7.XII.1934, 1 specimen (1,784 × 1,344 mm); Kivu: Nyongera, near Rutshuru, 1.218 m (Butumba), 17.VII.1935, 1 specimen (1,748 × 1,400 mm).

In spite of the distinctly smaller size of the two paratype specimens and of their redder colour I am quite unable to find any structural differences from the type. This new species resembles a large specimen of *C. suturatum* Régimbart in form, but the sharper and more elevated costæ, the larger punctures in the sulci and the much denser punctation of the head and pronotum distinguish it from that species.

# Cryptopleurum histeroides sp. nov.

Short, very widely rounded, depressed, black; pronotum with the sides very sharply angulately inflexed; elytra ten striate, with a very strongly developed, flattened costa in the eighth interval forming a very marked false pleural margin; sutural apex up to the third stria forming a prominent rounded tubercle.

Head black, the fronto-clypeal suture and the anterior edge of the clypeus rufescent; frons flattened, closely and finely sharply punctate, the interstices from half to equal to the width of the punctures, very finely microreticulate; basal half of the clypeus similarly sculptured to the frons, anterior half of the clypeus impunctate, microreticulate; fronto-clypeal suture quite transverse, highly shining; from close to the inner margin of the eye on each side with a longitudinal line of fine golden setae. Pronotum strongly transverse, twice as wide at the base as long in the middle, closely punctate as on the frons, the interstices reticulate, rather depressed, a low indistinct tubercle in the middle behind the anterior edge with a very vague shallow median longitudinal impression dividing the tubercle; sides very strongly and sharply inflexed, with a sharply raised marginal carina, dorsal to the carina a wide shallow longitudinal fovea, inflexed portion of the notum below the false lateral pleuron impunctate, extremely finely granulose, the margin acutely angulate in the middle. Scutellum short, as long as wide at the base, punctate. Elytra very broad, broader than the length along the suture, with ten distinct longitudinal series of quite large strongly and sharply impressed punctures, the first to eighth somewhat striiform; elytral apices from the suture to the third stria developed into a distinct low tubercle; interstriæ one to six feebly convex, a little more distinctly so at the base, with a sharply impressed scattered punctation, the punctures finer than those of the pronotum, microreticulate, dull; seventh interseries narrow, much narrower than the remainder, impunctate, highly shining; eighth interseries produced into a very prominent strong carina, posteriorly almost overhanging the eighth stria, which forms a distinct false pleural margin; ninth series to the true margin inflexed and ventral, tenth series not extending beyond one-half of the length of the elytra, interseries dull,

reticulate, obsoletely sparsely punctate; margin with a very sharply impressed series of strong punctures; sutural apices rectangular. *Venter* black, the abdomen piceo-testaceous; mentum very transverse, three times as wide as long, extremely finely obsoletely punctulate, extremely finely microreticulate; prosternum pentagonal, widest at about the middle, the apex (posteriorly) deeply angulately emarginate, antero-lateral sides about one-quarter of the basal width, virtually impunctate, extremely finely microreticulate; mesosternum strongly transverse, twice as wide as long, flat, sides obsoletely margined, anterior angle obtuse, rather closely, sharply,

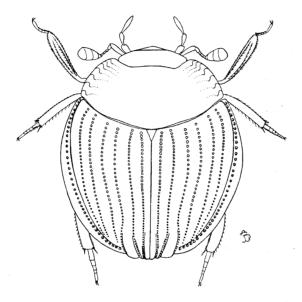


Fig. 15. — Cryptopleurum histeroides sp. nov. Dorsal aspect. ×25.

moderately strongly punctate, the interstices half or less than half the diameter of the punctures, microreticulate; metasternum transverse, in the middle quite closely and finely, towards the sides less closely and much more strongly punctate, on the disc obsoletely, round the edges distinctly microreticulate; in the middle very vaguely shallowly longitudinally impressed; femoral lines very indistinct, externally running parallel to the metepisternal suture; behind the mesocoxæ with an oblique shallow impression, delimited posteriorly by a fine carina, the impression rugose, shining; basal ventrite with a median longitudinal carina, quite strongly and quite densely but rather shallowly punctate, interstices reticulate; second, third and fourth ventrites very finely rugulose punctulate, fifth ventrite impunctate, microgranulate. Legs rufo-testaceous; anterior femora with the posterior face quite finely and sparingly sharply punctate, strongly

microreticulate; meso- and metafemora beneath impunctate, sharply and finely obliquely striolate; tarsi short, barely half the length of their tibiæ.

Holotype: Belgian Congo: Albert National Park.

Mission G. F. DE WITTE: Kinyamahura, Djombe District, East of Rutshuru, 1.800 m, 23-VIII.1934  $(2,072 \times 1,700 \text{ mm})$ .

Paratypes: 1 specimen, same particulars as holotype (2,016  $\times$  1,540 mm). Kivu: Ngesho (Mushari, 40 km West of Rutshuru, towards Mokoto Lakes), 2.000 m, 6.IV.1934 (1,876  $\times$  1,568 mm); Mission G. F. de Witte: riv. Kihuhuma, rég. Mugando, 27.IV.1945, 2 specimens; [French West Africa: Nimba Mountains, 700-900 m, secondary Forest, 1-20.IX.1946, on *Elais* (A. VILLIERS coll.).]

A preliminary diagnosis of this species has recently been sent to press (Rev. Zool.-Bot. Afr.). The very depressed wide form and the remarkable development of the carina on the sides of the pronotum and the eighth interseries of the elytra effectively isolate this species from its congeners. The form is suggestive of *Hister* but the dull surface, the lateral costa and the concealed pygidium readily distinguish it from that family.

#### Pyretus gen. nov.

Broadly oval, attenuated behind, convex; sides of the pronotum feebly inflexed; elytra with nine alternating costæ and sulci; prosternum irregularly quadrilateral, the apex (posterior) being deeply angulately emarginate; mesosternum broadly pentagonal, broader than long; metasternum transverse, without trace of femoral lines; basal ventrite without a median longitudinal carina; mesofemora distinctly obtusely angulate close to the base on the dorsal (anterior) edge.

Genotype: Pyretus gratus sp. nov.

This new genus is evidently derived from *Cryptopleurum* from which it differs in the irregularly quadrilateral prosternum with the posterior edge deeply angulately emarginated; the distinct angulation close to the base on the dorsal edge of the mesofemora which is almost flat and forms a slight angle with the anterior (apparently ventral) face instead of being rounded and merging imperceptibly with the anterior face; the entire absence of femoral lines on the metasternum and in the absence of a median longitudinal carina on the basal ventrite.

The quadrilateral prosternum appears to have been derived by the loss of the antero-lateral sides of the pentagonal sternum of *Cryptopleurum*. The absence of femoral lines is paralleled only by *Emmidolium* D'ORCHYMONT in the *Megasternini*, but that genus has a pentagonal prosternum and the basal ventrite with a median longitudinal carina. It is, therefore, justifiable to treat this form as being of full generic status since the presence of the longitudinal carina on the basal ventrite is a fundamental character of the tribe.

#### Pyretus gratus sp. nov.

Piceous, broadly oval, attenuate behind, convex; head and pronotum sharply microreticulate between the dense punctures; elytra with the suture and nine longitudinal rounded costæ moderately elevated, the external costa attaining scarcely more than half the length of the elytra; intercostae sulcate, seriate punctate.

Head black, the fronto-clypeal suture and anterior edge rufescent, closely and densely finely punctate, the punctures as large as an eye-facet and

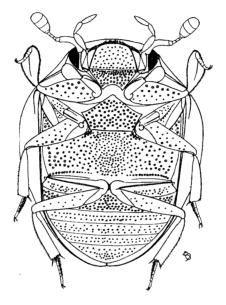


Fig. 16. — Pyretus gratus gen. nov., sp. nov. Ventral aspect. ×25.

sharply impressed; interstices about one-half the diameter of the punctures, dull, microreticulate; antero-lateral angles of the clypeus prominent; fronto-clypeal suture quite transverse, slightly impressed towards the sides; anterior edge of clypeus finely margined, straight in the middle; pseudo-basal segment of the maxillary palpi and the scape of the antennae finely and sharply microreticulate, microgranulate. *Pronotum* piceous, sculpture as on the head but the punctures a little larger and with an indistinct basal series of still slightly larger punctures; sides very obtusely angulate in the middle and very slightly roundly, not sharply inflexed; very finely and indistinctly pubescent. *Scutellum* very small, densely punctate. *Elytra* piceous, with the suture and nine longitudinal low costæ, feebly elevated,

the ninth barely extending beyond half the length of the elytra from the base, the costæ broad at the base, becoming narrower and more conspicuous towards the apex, very irregularly and very finely punctulate on the crest of the costa and with a fine reddish-gold hair in each puncture; with nine longitudinal sulci, internally towards the base much broader and shallower, the sulci each, except the seventh, with a more or less biseriate row of moderately distinct punctures, the seventh sulcus with two distinct serial rows; sutural interval in the basal half closely, finely and sharply punctate. Venter piceous, mentum transverse, half as long as broad, finely and sharply punctate, the punctural interstices about twice the diameter of the punctures, microreticulate; prosternum irregularly quadrilateral, broadest anteriorly, the sides regularly convergent behind, the apex widely angulately emarginate, densely and sharply punctate, interstices about three-quarters the diameter of the punctures, microreticulate; mesosternum pentagonal, wider than long, the antero-lateral angles prominent, strongly and deeply, sharply punctate, the punctures twice as large as those of the prosternum and separated by about one and one-half times their diameter, the interstices finely microreticulate; metasternum very transverse, two and one-half times wider than long, apparently quite without femoral lines, quite finely and moderately closely punctate in the middle, towards the sides evidently more sparingly and much more strongly punctate, the interstices in the middle strongly shining, towards the sides gradually more distinctly microreticulate and dull; basal ventrite without trace of a median longitudinal carina, quite closely and quite strongly punctate, interstices finely microreticulate, second to fifth ventrites as closely but much more finely punctate, the punctures the size of those on the mentum and becoming dense and subrugose at the apex of the fifth ventrite. Legs rufo-testaceous, posterior face of the anterior femora sparingly, strongly and sharply punctate, very sharply reticulate; intermediate femora beneath sparingly and sharply but quite strongly punctate in the basal half, very sharply microreticulate; metafemora beneath impunctate, dull, reticulate; intermediate femora at the base on the dorsal edge distinctly obtusely angulate, the dorsal face flat, forming a weak angle with the anterior (apparent ventral) face.

Holotype (? Q). Belgian Congo : Albert National Park. Mission G. F. de Witte : near mont Kamatembe (forest), 2.200 m, 12.IV.1934 (2,016  $\times$  1,568 mm).

This aberrant species superficially suggests the European *C. crenatum* (Panzer) in dorsal aspect. The structure of the intermediate femora, the entire absence of a longitudinal carina on the basal ventrite, the quadrilateral prosternum and the absence of femoral lines distinguish it sharply from all *Cryptopleurum*.

#### Subfam. HYDROPHILINÆ.

#### Paracymus minor Régimbart.

Paracymus minor Régimbart 1903, Ann. Soc. ent. France, 72, 33.

Paracymus minor Régimbart 1906, Ann. Soc. ent. France, 75, 263.

Paracymus punctillatus atomus d'Orchymont 1926, Phil. J. Sci., 30, 378.

Paracymus phalacroides minor d'Orchymont 1948, Proc. Zool. Soc. Lond., 117, (iv), 726.

Mission G. F. de Witte: Kanyabayongo, Kabasha Escarpment, 1.760 m, 7.XII.1934, 2 specimens.

Both specimens were identified by D'ORCHYMONT. In his discussion of the Abyssinian *Paracymus* D'ORCHYMONT (1948, loc. cit.) states that *minor* is possibly no more than a small form of *punctillatus* Rey, which, in turn, I have stated (1939, Ann. Mag. Nat. Hist., (xi), 4, 292) to be a synonym of *phalacroides* Wollaston. According to the specimens before me the pronotal punctures, being only about one-quarter the size of the elytral punctures, are very distinctly smaller than in typical *phalacroides* in which they are from one-half to two-thirds the size of the elytral punctures. The two specimens before me, 1,77 and 1,98 mm long, are evidently larger thon the type of *minor* (1 ½ mm according to Régimbart) but this may not be significant.

#### Paracymus chalceus Régimbart.

Paracymus chalceus Régimbart 1903, Ann. Soc. ent. France, 72, 32. Paracymus chalceus Régimbart 1906, Ann. Soc. ent. France, 75, 263.

Mission G. F. DE WITTE: Ruanda, Kirii Springs, near Ruhengeri, 1.800-1.825 m, 31.VIII-3.IX.1934, 3 specimens.

Mission H. Damas: Vitshumbi, South shore of Lake Edward, 925 m, 13.I.1936, 1 specimen; [Uganda: Kisenyi, Lake Edward, 925 m, 17.VI.1935, 3 specimens].

The specimens of the Mission de Witte were determined by d'Orchymont. These examples vary in size from 1,81 to 2,24 mm in length, giving a mean length almost exactly the 2 mm given by Régimbart for the types. As has been stated by d'Orchymont it is necessary to receive a considerable series from the type locality, Madagascar: Diego Suarez, before a correct understanding of the continental specimens attributed to *chalceus* can be arrived at.

# Paracymus alluaudianus Scott.

Paracymus alluaudianus Scott 1913, Trans. Linn. Soc. Lond., 16, 201. Paracymus (?) alluaudianus d'Orchymont 1948, Proc. Zool. Soc. Lond., 117, (iv), 726.

Mission G. F. DE WITTE: Kivu: Rutshuru, 1.285 m, 11.VII.1935, 1 o.

This specimen was doubtfully determined by D'ORCHYMONT. It does, however, agree extremely closely in the size and degree of impression of the punctures on the pronotum and elytra, the extent and character of the pubescence on the basal half of the intermediate femora beneath, and in the form of the median longitudinal carina of the basal ventrite with the holotype of alluaudianus. It differs only in being very slightly larger  $(2,296 \times 1,268 \text{ mm})$ , than the type of alluaudianus  $(2,184 \times 1,176 \text{ mm})$ , and in having the third and fourth antennal segments much less evidently separated, those of the right antenna appearing, in fact, to be largely fused so that the antenna appears to be only 7-segmented (4+3).

#### Laccobius gracilis Motschulsky.

Laccobius gracilis Motschulsky 1855, Etud. Ent., 4, 84. Laccobius parumpunctatus Régimbart 1905, Boll. Soc. ent. Ital., 36, (1904), 217. non 1903.

L'accobius parumpunctatus RÉGIMBART 1906, Ann. Soc. ent. France, 75, 263, non 1903.

Laccobius thermalis G. Müller 1941, Att. Mus. Civ. Stor. nat. Trieste, 14, 326.

Laccobius gracilis ab. col. d'Orchymont 1948, Proc. Zool. Soc. Lond., 117, (iv), 728.

Mission H. Damas: Riv. Katukuru, near Kamande, S.-W. of Lake Edward, 950 m, 6.V.1935, 5 specimens; [Bera, N. of Idjwi Island, Lake Kivu, 3.X.1935, 1 specimen; Mayuzu, warm springs, near Katana, W. shore of Lake Kivu, 3.X.1935, 9 specimens].

#### Helochares (Batochares) burgeoni D'ORCHYMONT.

Helochares (Batochares) burgeoni d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 294.

A short series of this species, recently described on three specimens from Uele: Moto. The type series are described as being immature. The specimens before me are fully mature and the ædeagus has been figured.

D'ORCHYMONT points out that the apical ventrite lacks the small ciliate emargination in the middle of the posterior edge which distinguishes the present subgenus readily from *Hydrobaticus*, but he has not remarked on the fact that the last ventrite is, in fact, very distinctly but shallowly emarginate in the middle of the posterior edge over nearly the middle third of the width.

Collection Hackars: Mutsora, 1.200 m. 1939, 3 ♂♂, 3 ♀♀.

# Helochares (Hydrobaticus) notaticollis Régimbart.

Helochares melanophthalmus var. notaticollis Régimbart 1906, Ann. Soc. ent. France, 75, 260.

Helochares (Hydrobaticus) notaticollis d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 299, fig. 3.

Mission G. F. de Witte: Riv. Fuku, tributary of Rutshuru River, 1.300 m, 25.XI-5.XII.1933, 23 specimens; Vitshumbi, 925 m, 9-12.X.1933, 11 specimens; Rutshuru, 1.285 m, 26.XI-16.XII.1933, 2 specimens; Munagana, Djombe district, 17-23.VIII.1934, 1 specimen; Ruanda: Ruhengeri, Mubungwa,



Fig. 17. — Helochares (Batochares) burgeoni d'Orchymont. Ædeagus, dorsal aspect. ×33.

1.800 m, 30-31.VIII.1934, 2 specimens; Ruhengeri, Kirii springs, 1.800 m, 31.VIII-3.X.1934, 180 specimens; Ruanda : riv. Penge, 1.800 m, 4-5.X.1934, 1 specimen; [Uele : Monga, 18.IV-8.V.1935, 1 specimen].

Mission H. Damas : Ruanda : riv. Sabeya, 1.470 m, 15.IV.1935, 1 specimen; [Bera, Lake Kivu, 1.460 m, 23.IX.1935, 1 specimen].

Collection H. Hegh: [Ruanda: Gabiro, 1934, 1 specimen].

Collection R. Verhulst : [Luvomiga Bay, Lake Kivu, 1.460 m, 27.IX.1935, 50 specimens].

#### Helochares (Hydrobaticus) strictus D'ORCHYMONT.

Helochares (Hydrobaticus) strictus d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 306, fig. 9 ex parte.

Mission G. F. DE WITTE: Ruanda: Ruhengeri, Kirii Springs, 1.800 m, 31.VIII-3.X.1934, 5 specimens; [Uele: Buta, 450 m, 11-13.V.1935, 10 specimens].

Mission H. Damas: Ruanda: Kisenyi, riv. Sabeya, 1.470 m, 15.IX.1935, 2 specimens; Bugazia, riv. Mosenda, 925 m., 15-19.V.1935, 4 specimens.

#### Helochares (Hydrobaticus) mersus D'ORCHYMONT.

Helochares (Hydrobaticus) mersus d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 307, fig. 9 ex parte.

Helochares (Hydrobaticus) mersus D'ORCHYMONT 1948, Proc. Zool. Soc. Lond., 117, (iv), 730.

Mission G. F. de Witte: Vitshumbi, 925 m, 5-12.X.1933, 3 specimens; Tshambi, Kabasha Escarpment, 975 m, 31.X-1.XI.1933, 3 specimens; riv. Byangugwe, S. of Kamande, 15-25.XI.1933, 2 specimens; Rwindi Camp, 1.000 m, 20-28.XI.1934, 17 specimens; Ndeko, near Rwindi Camp, 1.083 m, 27.XI.1934, 1 specimen; [Uele: Monga, 18.IV-8.V.1935, 6 specimens; Uele: Buta, 450 m, 1-13.V.1935, 1 specimen].

Mission H. Damas: Vitshumbi, 925 m, 15-16.I.1935, 1 specimen; idem, 11.XI.1935-16.I.1936, 10 specimens; [Kishushu et Biunde, 1.460 m, 4.X.1935, 1 specimen; Ishara peninsula, S. shore of Lake Kivu, 1.460 m, 15.X.1935, 1 specimen; Uganda: Kisenyi, Lake Edward, 912 m, 17.VI.1935, 3 specimens; Katwe, 912 m, 10.VI.1935, 3 specimens].

# [Helochares (Hydrobaticus) stenius D'ORCHYMONT.]

Helochares (Hydrobaticus) stenius d'Orchymont 1943, Bull. Mus. Roy. Hist. nat. Belg., 19, n° 20, 8, fig. 7, 8.

Mission G. F. DE WITTE: [Uele: Buta, 450 m, 11-13.V.1935, 21 specimens]. These specimens are all labelled as paratypes.

# Helochares (Hydrobaticus) livianus D'ORCHYMONT.

Helochares (Hydrobaticus) livianus d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 317, fig. 20.

Mission G. F. DE WITTE: Rutshuru, 1.285 m, 26.XI-16.XII.1933, 1 of.

Mission H. Damas : Ruanda : Ilega, N.-E. of Lake Gando, 2.400 m, 12.III.1935, 1  $\,$  ; Kisenyi, riv. Sabeya, 1.470 m, 15.IV.1935, 3 specimens; Ngesho, 40 km W. of Rutshuru, 2.000 m, 3.VIII.1935, 1  $\,$  ; Kisenyi, 1.500 m, 12.II.1936, 1  $\,$  ; [Nyamirundi peninsula, S. shore of Lake Kivu, 1.500 m, 14.X.1935, 1  $\,$  ].

#### Helochares (Hydrobaticus) collarti D'ORCHYMONT.

Helochares (Hydrobaticus) collarti d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 315, fig. 18.

Mission G. F. DE WITTE: Sake, Lake Kivu, 1.460 m, 10-22.II.1934, 1 of; Kikere Marshes, Nyarusambo, 2.226 m, 28.VI-2.VII.1934, 5 specimens; Ruanda: Ruhengeri, Kirii Springs, 31.VIII-1.IX.1934, 3 specimens; Kanyabayongo, Kabasha Escarpment, 1.760 m, 11.XII.1934, 1 specimen; riv. Bishakishaki, 2.100 m, 1-23.I.1935, 1 specimen; Ruanda: N.-E. of Lake Gando, 2.400 m, 9-12.III.1935, 4 specimens.

Mission H. Damas: Mokoto Lakes, Lake Lukulu, 1.700 m, 15.VIII.1935, 7 specimens.

# Helochares (Hydrobaticus) minax D'ORCHYMONT.

Helochares (Hydrobaticus) minax d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 316, fig. 19.

Mission G. F. DE WITTE: Ruanda: Ruhengeri, Kirii Springs, 31.VIII-3.X.1934, 5 specimens.

# Helochares (Hydrobaticus) dimorphus D'ORCHYMONT.

Helochares (Hydrobaticus) dimorphus p'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 322, fig. 25.

Mission H. Damas: Bugazia, riv. Mosenda, 920 m, 19.V.1935, 2 of.

The type of this species is from Bas Uele: Buta. Numerous paratypes are from Uganda and it is also known from a number of localities in the Belgian Congo.

#### Helochares (Hydrobaticus) mentinotus Kuwert.

Helochares mentinotus Kuwert 1888, Deutsche Ent. Zeit., 22, 292.

Helochares melanophthalmus Kuwert 1890, Verh. Nat. Ver. Brünn, 28, (1889), 38. non Mulsant 1844.

Helochares squalidus Sharp 1903, Res. Swed. Zool. Exp. Egypt 1901, n° 10, 7.

Helochares (Hydrobaticus) mentinotus D'Orchymont 1936, Bull. Mus. Roy. Hist. nat. Belg., 12, n° 23, 6, 8, 9, fig. 2, 3 and 4.

Helochares (Hydrobaticus) mentinotus d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 297.

This species was described from Egypt. It is also known to occur in the Sudan and Abyssinia and has recently been recorded with precisely the same form of aedeagus from Belgian Congo: Kinshasa by D'ORCHYMONT.

Mission H. Damas : Kamande, 925 m, 4-7.V.1935, 1  $\sigma$ , 2  $\circ$   $\circ$ ; idem, 18.XI.1935, 1  $\circ$ ; Lula River, Kamande, 925 m, 8.V.1935, 2  $\circ$   $\circ$ ; [Uganda : Kayanza, N.-E. shore of Lake Edward, 920 m, 6.VI.1935, 1  $\sigma$ ; Kasinga Channel, 925 m, 11.VI.1935, 1  $\sigma$ ].

#### Helochares (Hydrobaticus) spp.

The following two females cannot be identified in the absence of comparable males from the same station.

Mission G. F. DE WITTE: Lake Magera, at base of Mt. Kirorirwe, E. side, 2.000 m, 26.II-7.III.1934; Ruanda: Kirii Springs, Ruhengeri, 3.X.1934.

# Helochares (Crephelochares) africanus D'ORCHYMONT.

Helochares (Crephelochares) africanus D'ORCHYMONT 1937, Mem. Est. Mus. Zool. Univ. Coimbra, nº 96, (1936), 7, fig. 2.

Helochares (Crephelochares) africanus d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 163, fig. 6.

Mission H. Damas : Vitshumbi, 925 m, 11.XII.1935, 1 Q; [Uganda : Kisenyi, Lake Edward, 925 m, 17.VI.1935, 1 of, 1 Q].

This species was described from the Zambezi. I have seen specimens from Portuguese East Africa: Xinavane (C. B. HARDENBERG leg.). The aedeagus of the male from Kisenyi is entirely similar.

# Helochares (Crephelochares) spp.

The following three females cannot be identified in the absence of males taken at the same time.

Mission H. Damas: Bugazia, Lake Edward, 925 m, 13-16.V.1935.

Mission G. F. DE WITTE: Riv. Bishakishaki, Kamatembe, 2.100 m, 7-23.I.1935, 2 specimens.

# Helochares (s. str.) longipalpis (MURRAY).

Philhydrus longipalpis Murray 1859, Ann. Mag. Nat. Hist., (iii), 4, 123.

Helochares longipalpis Régimbart 1903, Ann. Soc. ent. France, 72, 26.

Helochares filipalpis Sharp 1903, Res. Swed. Zool. Exp. Egypt 1901, n° 10, 6.
Helochares longipalpis Régimbart 1907, Ann. Mus. Civ. Stor. nat. Genova, (iii), 3, [43], 48.

Helochares (s. str.) longipalpis J. Balfour-Browne 1939, Bull. Soc. Fouad, 1, Ent., (1938), 33.

Helochares (s. str.) longipalpis d'Orchymont 1943, Bull. Mus. Roy. Hist. nat. Belg., 19, n° 26, 7, footnote (27).

Mission G. F. DE WITTE: Vitshumbi, 925 m, 5-22.X.1933, 3 specimens; riv. Fuku, Rutshuru, 25.XI-5.XII.1933, 2 specimens; Bulengo, near Lake Mugunga, 1.560 m, 29.I.1934, 2 specimens; Ruanda: Ruhengeri, Kirii Springs, 1.800-1.825 m, 31.VIII-3.X.1934, 24 specimens; Rutshuru, 1.285 m, 16-30.X.1934, 1 specimen; Rwindi Camp, 1.000 m, 20-28.XI.1934, 3 specimens; [Uele: Monga, 18.IV-8.V.1935, 6 specimens; Uele: Buta, 450 m, 11-13.V.1935, 4 specimens].

Mission H. Damas: Kamande, 925 m, 4.V.1935, 2 specimens; riv. Lula, near Kamande, 925 m, 8.V.1935, 1 specimen; riv. Mosenda, Bugazia, 17.V.1935, 1 specimen; Vitshumbi, 925 m, 11.XII.1935-14.I.1936, 19 specimens; Rwindi, 1.000 m, 15.I.1936, 1 specimen; Kianga, near Kamande, 925 m, 19.XI.1935, 1 specimen; Kimboho, mouth of riv. Lunyasenge, Lake Edward, 925 m, 28-30.XI.1935, 9 specimens; [Uganda: Kisenyi, Lake Edward, 912 m, 17.VI.1935, 98 specimens].

# Helochares (s. str.) dilutus (ERICHSON).

Hydrobius dilutus Erichson 1843, Arch. Naturg., 9, (i), 228.

Helochares niloticus Sharp 1903, Res. Swed. Zool. Exp. Egypt 1901, nº 10, 7. Helochares (s. str.) dilutus d'Orchymont 1933 Bull. Ann. Soc. ent. Belg., 73, 400.

Helochares (s. str.) dilutus d'Orchymont 1936, Ann. Transvaal Mus., 17, 113. Helochares (s. str.) dilutus d'Orchymont 1943, Bull. Mus. roy. Hist. nat. Belg., 19, n° 26, 1-5, fig. 1.

Mission G. F. De Witte: Rutshuru, 26.XI-16.XII.1933, 1 specimen; Lake Mugunga, near N'Zulu, Sake, 1.500 m, 3-4.II.1934, 1 specimen; riv. Molindi, 1.000 m, 30.IV-2.V.1934, 1 specimen; Ruanda: Ruhengeri, Kirii Springs, 1.800 m, 31.VIII-3.IX.1934, 2 specimens; Ndeko, near Rwindi, 1.083 m, 27.XI.1934, 1 specimen; Kitondo Marsh, 5 km N. of Gandjo, foot of Mt Kamatembe, 2.000 m, 7-23.I.1935, 3 specimens; N.-E. of Lake Gando, 2.400 m, 9-12.III.1935, 1 specimen; [Uele: Buta, 450 m, 11-13.V.1935, 1 specimen].

Mission H. Damas: Kamande, 925 m, 28.I.1935, 1 specimen; riv. Lula, Kamande, 8.II-8.V.1935, 17 specimens; Ruanda: Kisenyi, riv. Sabeya, 1.470 m, 15.IV.1935, 22 specimens; Bugazia, 925 m, 15.V.1935, 2 specimens; Lake Lukulu, Mokoto, 1.700 m, 15.VIII.1935, 11 specimens; Lake Magera, 2.000 m, 27.VIII.1935, 1 specimen; Vitshumbi, 925 m, 13-16.I.1936, 7 specimens; Kimboho, mouth of riv. Lunyasenge, 920 m, 27.XI.1935, 4 specimens; Rwindi, 1.000 m, 15.I.1936, 34 specimens; [Ruanda: Kinunu, 1.460 m, 24.X.1935, 1 specimen; Uganda: Kayanza, N.-E. shore of Lake Edward, 920 m, 6.VI.1935, 2 specimens; Katwe, 925 m, 10.VI.1935, 1 specimen; Kasinga, 925 m, 11.VI.1935, 1 specimen; Kishale, N.-W. shore of Lake Kivu, 1.470 m, 23.IX.1935, 1 specimen].

# [Helochares (s. str.) ellipticus Régimbart.]

Helochares ellipticus Régimbart 1907, Ann. Mus. Civ. Stor. nat. Genova, (iii), **3**, [**43**], 47. nec *Hydrophilus ellipticus* Fabricius 1801. Helochares (s. str.) ellipticus d'Orchymont 1933, Bull. Ann. Soc. ent. Belg., **73**, 306.

Mission G. F. DE WITTE: [Uele: Monga, 18.IV-8.V.1935, 4 specimens; Buta, 450 m, 11-13.V.1935, 1 specimen].

# [Helochares (s. str.) pallens (MAC LEAY).]

Enhydrus pallens MacLeay 1825, Annul. Jav., 35.

Helochares lewisius Sharp 1873, Trans. Ent. Soc. Lond, 60.

Helochares dispar Sharp 1903, Res. Swed. Zool. Exp. Egypt 1901, no 10, 7.

Helochares minutissimus Régimbart 1903, Ann. Soc. ent. France, 72, 27, nec Kuwert 1890.

Helochares minutissimus Régimbart 1906, Ann. Soc. ent. France, 75, 261, nec Kuwert 1890.

Helochares (s. str.) pallens d'Orchymont 1926, Bull. Ann. Soc. ent. Belg., 66, 232.

Helochares (s. str.) pallens J. Balfour-Browne 1939, Ann. Mag. Nat. Hist., (xi), 4, 293.

Helochares (s. str.) pallens d'Orchymont 1943, Bull. Mus. Roy. Hist. nat. Belg., 19, n° 26, 8.

Mission H. Damas : Uganda : Kisenyi, Lake Edward, 925 m, 17.VI.1935, 5 specimens.

#### Helochares (s. str.) pallens læviusculus Régimbart.

Helochares laeviusculus RÉGIMBART 1906, Ann. Soc. ent. France, 75, 261.

Mission H. Damas: Ishango, Semliki River, 1.000 m, 9.XII.1935, 1 specimen.

Although this insect is readily distinguishable from the preceding by the infuscate median portion of the head and pronotum and by the very much finer and rather sparser punctation, particularly of the elytra, the aedeagus of the two forms is entirely identical. It seems, therefore, to be probable that *laeviusculus* is not a distinct species but that it is a form comparable to the *dilutus consputus* (Boheman) form of the southern parts of Africa, distinguished from the type form of *dilutus* (Erichson) by the finer and slightly sparser punctation. For that reason the above new combination has been used to indicate the close relation of the two forms.

# [Peltochares conspicuus Régimbart.]

Peltochares conspicuus Régimbart 1907, Ann. Mus. Civ. Stor. nat. Genova, (iii), 3, [43], 49.

Mission G. F. DE WITTE: [Uele: Monga, 18.IV-8.V.1934, 1 specimen].

#### Enochrus (Methydrus) natalensis (GEMMINGER et HAROLD).

Hydrobius assimilis Вонеман 1851, Ins. Caffr., 1, 600, ex parte. nec Норе 1841.

Hydrobius natalensis Gemminger & Harold 1868, Cat. Col., 2, 480.

Philydrus assimilis (natalensis) BEDEL 1880, Ann. Soc. ent. France, (v), 10, [49], Bull. cxlviii.

Philydrus (Agraphilydrus) parvulus Kuwert 1888, Deutsche Ent. Zeit., 32, 280. nec Helochares parvulus Reiche 1856.

Philydrus (Agraphilydrus) parvulus Kuwert 1890, Verh. Nat. Ver. Brunn, 28, (1889), 56.

Philhydrus parvulus Guillebeau 1896, Bull. Soc. ent. France, 226.

Philhydrus parvulus Régimbart 1903, Ann. Soc. ent. France, 72, 31.

Philydrus parvulus Scott 1913, Trans. Linn. Soc. Lond., 16, 203.

Enochrus (Lumetus) natalensis D'ORCHYMONT 1919, Ann. Soc. ent. France, 88, 155.

Enochrus (Methydrus) natalensis d'Orchymont 1948, Proc. Zool. Soc. Lond., 117, (iv), 731.

Mission G. F. DE WITTE: Vitshumbi, 925 m, 7-9.X.1933, 1 specimen; Rwindi Camp, 1.000 m, 20-28.XI.1934, 1 specimens.

Mission H. Damas: Bugazia, W. shore of Lake Edward, 21.V.1935, 7 specimens; Kamande, 925 m, 8.V.1935, 1 specimen; Hangi, W. shore of Lake Edward, 950 m, 27.V.1935, 2 specimens; Vitshumbi, 925 m, 11.XII.1935-14.I.1936, 35 specimens; [Ruanda, riv. Kinunu, E. shore of Lake Kivu, 1.460 m, 24.X.1935, 1 specimen; Uganda, Kisenyi, E. shore of Lake Edward, 925 m, 17.V.1935, 4 specimens].

# Enochrus (Methydrus) circumductus (Régimbart).

Philhydrus circumductus Régimbart 1905, Boll. Soc. ent. Ital., **36**, (1904), 213. ? Philhydrus picinus Régimbart 1907, Ann. Mus. Civ. Stor. nat. Genova, (iii), **3**, [43], 51. non 1903.

Philhydrus picinus Régimbart 1908, Exp. Kilim.-Meru 1905-1906, Col., 7, 10. non 1903.

Enochrus (Methydrus) circumductus d'Orchymont 1948, Proc. Zool. Soc. Lond., 117, (iv), 732.

Mission G. F. de Witte: Kibati, 1.900 m, 19.I.1934, 1 specimen; Lake Magera, 2.000 m, 26.II-7.III.1934, 27 specimens; Tshumba, Mushari district, 2.100 m, 28.IV-2.V.1934, 3 specimens; Kikeri marsh, Nyarusambo, 2.226 m, 28.VI-2.VII.1934, 2 specimens; Ruanda: Ruhengeri, Kirii Springs, 31.VIII-3.X.1934, 5 specimens; Col Gahinga-Sabinyo, 2.500 m, 12-14.IX.1934, 5 specimens; Road from Kundhuru-ya-Tshuve to Ninda, 2.600 m, 18.IX.1934, 1 specimen; Rwindi Camp, 1.000 m, 20-28.XI.1934, 3 specimens; Kanyabayongo, Kabasha Escarpment, 1.760 m, 11.XII.1934, 11 specimens; riv. Bishakishaki, S. of Ngesho, 2.100 m, 7-23.I.1935, 3 specimens; Ruanda: Kirorirwe, N.-E. of Lake Gando, 2.400 m, 7-12.III.1935, 1 specimen; Mushumangabo Crater, E. of Volc. Nyamuragira, 2.075 m, 14-26.VI.1935, 2 specimens; Mayumbu Forest, Nyamuragira, 2.100 m, 14-26.VI.1935, 2 specimens.

Mission H. Damas: Ngesho, 2.000 m, 3.VIII.1935, 2 specimens.

It is noteable that all the above specimens were taken at altitudes exceeding 5.400 ft. (1.800 m). The species was described from Eritraea and has been recorded from Abyssinia at elevations down to 4.500 ft. (1.500 m). I have seen specimens from Uganda at an altitude of about 3.700 ft. and the species is mentioned by D'ORCHYMONT from the Congo but without locality or elevation. There is a record in D'ORCHYMONT [1936, Ann. Transvaal Mus, 17, (ii), 113] for *Enochrus ? picinus* (RÉGIMBART) from Tsotsoroga Pan, Kalahari Desert. I think it probable that this record may refer to the present species and not to the true *picinus* of RÉGIMBART from Madagascar.

The 1907 reference given above records the occurrence of this species, under the name *picinus* (Régimbart), from the Cape Verde Islands. This record requires confirmation. All the specimens I have seen from that locality are undoubtedly *E. hesperidum* (Sharp), a species previously re-described under the name *reductus* by Régimbart.

# Enochrus (Methydrus) anticus (Régimbart).

Hydrobius assimilis Boheman 1851, Ins. Caffr., 1, 600 ex parte. nec Hope 1841

Philhydrus anticus Régimbart 1905, Boll. Soc. ent. Ital., **36**, (1904), 214. Philhydrus anticus var. fulvescens Régimbart 1905, Boll. Soc. ent. Ital., **36**,

Philhydrus anticus var. fulvescens Régimbart 1905, Boll. Soc. ent. Ital., 36 (1904), 214.

Philhydrus anticus Régimbart 1906, Ann. Soc. ent. France, **75**, 262. Enochrus (Methydrus) anticus d'Orchymont 1948, Proc. Zool. Soc. Lond., **117**, (iv), 732, fig. 5 A.

Mission G. F. DE WITTE: Rutshuru, 1.285 m, 26.XI-16.XII.1933, 1 ♀. Mission H. Damas: Mosenda, Bugazia, 920 m, 19.V.1935, 1 ♂.

# Enochrus (Methydrus) hesperidum (SHARP).

Philhydrus melanocephalus Wollaston 1867, Col. Hesperid., 44. ex parte, non Olivier 1792, non Fabricius 1801.

Philhydrus hesperidum Sharp 1870, Ent. Mon. Mag., (iv), 5, 16.

Philhydrus reductus Régimbart 1905, Boll. Soc. ent. Ital., 36, (1904), 215.

Enochrus (Methydrus) anticus d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 375.

Mission H. Damas: Lake Kibuga, 1.052 m, 26.VII.1935, 5 specimens; [Uganda: Kisenyi, E. shore of Lake Edward, 912 m, 17.VI.1935, 1 specimen].

# Enochrus (Methydrus) alberti sp. nov.

Elongate-oval, black, the sides of the pronotum and elytra paler; strongly shining; prosternum strongly tectiform; mesosternal lamella high, the anteroventral angle rectangular; metasternum in the middle immediately behind the mesocoxæ highly tectiform; apical ventrite with a distinct ciliate emargination in the middle of the free edge.

Head black, shining, fairly densely, quite regularly punctete, the punctures about the size of an eye-facet and separated by a distance about one and one-half times their diameter; antero-lateral and lateral (frontal) systematic punctures twice the size of the general punctation, rather few in number; labrum punctured as on the frons, but a little more finely. Pronotum black, the sides widely fusco-testaceous, the pale area extending entirely or almost entirely across the anterior edge very narrowly; about as densely but more finely punctured than the head, the interstices highly shining, at least three times the diameter of the punctures; antero- and postero-lateral systematic punctures about three times the size of the general punctation; sides distinctly but finely margined, the margin continuing all round both the anterior and posterior edges very much more finely. Scutellum black, finely punctulate. Elytra black, the sides vaguely paler fuscous; highly shining, with a distinct sutural stria in the apical half, and

with a very fine general punctation, still finer than on the pronotum, the punctation denser near the suture, much sparser towards the sides; with the two internal longitudinal systematic series quite distinct, composed of rather irregularly spaced larger punctures, the external series very diffusely and irregularly scattered. *Venter* black, the apices of the ventrites pale fusco-testaceous; mentum shining, rather irregularly and moderately strongly punctured, the punctures anteriorly with a tendency to lateral coalescence and producing a vaguely rugose appearance; palpi rufotestaceous, the two distal segments approximately sub-equal in length; prosternum distinctly longitudinally tectiform in the middle, the anterior edge distinctly angulately produced in the middle; mesosternal lamina very

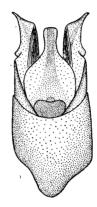


FIG. 18.

Enochrus (Methydrus) alberti sp. nov.

Ædeagus, ventral aspect. ×35.

thin and highly developed, the anterior ventral angle quite rectangular, without mucro; metasternum in the middle immediately behind the mesocoxæ highly tectiform, the intercoxal process quite laminiform, posteriorly in the middle with an elongate lozenge-shaped glabrous and impunctate area; apical ventrite in the middle of the free edge with a distinct small semicircular ciliate emargination. Legs fusco-testaceous, the tarsi testaceous; claws of the anterior tarsi of the male simple; the external claw of the intermediate tarsus of the male rather shorter and stouter than the inner claw and with a moderately distinct blunt sub-basal ventral tooth. Ædeagus with the lateral lobes terminally obliquely truncate, the outer angle very acute; median lobe rather globose at the base, attenuate towards the apex which is minutely truncate; near the apex dorsally with a distinctly raised rounded longitudinal carina.

Holotype  $\sigma$ : Belgian Congo: Albert National Park. Mission G. F. de Witte: Tshumba, Mushari District, 2.100 m, 27.IV-2.V.1934; 6,783  $\times$  3,363 mm.

Paratypes: 8  $\sigma \sigma$ , 7  $\circ \circ$ , same particulars as holotype; 6,897-6,669 mm long., 3,392-3,534 mm lat.

This new species was originally supposed to be the *ellipsoideus* (Régimbart) (from the Crystal Mountains, West Africa) which it resembles excessively closely in shape, colour and sculpture of the dorsum. However, when visiting Paris Museum I was able to examine the ex-typis specimens of Régimbart's collection and to decide that the present species is perfectly distinct. It may readily be distinguished from *ellipsoideus* by the compressed and laminiform intercoxal process of the metasternum which, in the compared species is not the least laterally compressed but normally feebly convex, and by the shape of the ædeagus which, in the compared species has the apex of the lateral lobes transversely truncate and the median lobe elongate, slender, filiform, except at the extreme apex which is feebly inflated and terminally transversely emarginate truncate.

# Sternolophus (s. str.) solieri Castelnau.

Sternolophus solieri Castelnau 1840, Hist. Nat. Ins., **2**, 54. Sternolophus (s. str.) solieri Zaitzev 1909, Rev. Russe d'Ent., (1908), 230.

Mission G. F. de Witte: Vitshumbi, 925 m, 27.IX-22.X.1933, 55 specimens; riv. Byangugwe, S. of Kamande, 15-25.XI.1933, 3 specimens; Rutshuru, 1.285 m, 26.XI-16.XII.1933, 3 specimens; riv. Molindi, near Lake Kibuga, 1.000 m, 30.IV-2.V.1934, 1 specimen; Ruanda: Ruhengeri, Kirii Springs, 31.VIII-3.IX.1934, 3 specimens; [Uele: Monga, 18.IV-8.V.1935, 327 specimens; Uele: Buta, 450 m, 11-13.V.1935, 14 specimens].

Mission H. Damas: Ruanda: Kisenyi, riv. Sebeya, 1.470 m, 15.IV.1935, 7 specimens; Biuniu, pond in crater of Mt. N'Goma, 1.460 m, 20.IV.1935, 1 specimen; Kamande, 4-8.V.1935, 30 specimens; riv. Mosenda, Bugazia, 925 m, 17-21.V.1935, 11 specimens; Semliki riv., Ishango, 920 m, 1.VI.1935, 4 specimens; riv. Molindi, Kibuga, 1.052 m, 26-27.VII.1935, 10 specimens; Ruanda: riv. Kinunu, 1.460 m, 27.X.1935, 1 specimen; Vitshumbi, 11.XII.1935-14.I.1936, 55 specimens; riv. Talia, near Kamande, 925 m, 18-21.XI.1935, 70 specimens; riv. Lunyasenge, Kimboho, 925 m, 21-30.XI.1935, 313 specimens; Rutshuru, 1.285 m, 18.I.1936, 7 specimens; Rwindi, 1.000 m, 15.I.1936, 7 specimens; [Uganda: Kayanga, 920 m, 6.VI.1935, 1 specimen; Kisenyi, Lake Edward, 912 m, 17.VI.1935, 2 specimens].

#### Sternolophus (Neosternolophus) angolensis (ERICHSON).

Hydrophilus angolensis Erichson 1843, Arch. Naturg., 9, 227.

Hydrophilus mundus Boheman 1851, Ins. Caffr., 1, 596.

Sternolophus comoriensis Fairmaire 1869, Ann. Soc. ent. France, (iv), 9, 195. Sternolophus angolensis Bedel 1892, Rev. d'Ent., 10, 322.

Sternolophus gracilis Régimbart 1907, Ann. Mus. Civ. Stor. nat. Genova, (iii), 3, [43], 47.

Sternolophus (s. str.) angolensis Zaitzev 1909, Rev. Russe d'Ent., 8, (1908), 232.

Sternolophus (Neosternolophus) angolensis d'Orchymont 1911, Mem. Soc. ent. Belg., 19, 57.

Apparently the commoner of these two species of *Sternolophus*, a total of 1.545 specimens being before me from the following stations:

Mission G. F. de Witte: Vitshumbi, 925 m, 27.IX-22.X.1933, 41 specimens; Tshambi, foot of Kabasha Escarpment, 975 m, 26.X-7.XI.1933, 58 specimens; Kalinga, 1.082 m, X.1933, 1 specimen; riv. Fuku, Rutshuru, 25.XI-15.XII.1933, 11 specimens; Rutshuru, 1.285 m, 26.XI-26.XII.1933, 19 specimens; Bulengo, near Lake Mugunga, 1.560 m, 29.I-3.II.1933, 161 specimens; Sake, Lake Kivu, 1.560 m, 19-22.II.1934, 2 specimens; Ngesho, W. of Rutshuru, 2.000 m, 3.IV.1934, 2 specimens; Ruanda: Ruhengeri, Kirii Springs, 1.800 m, 386 specimens; May-ya-Moto, warm sulphur springs, 950 m, 5-6.XI.1934, 1 specimen; Rwindi Camp, 1.000 m, 20-28.XI.1934, 126 specimens; Katanda, N. of Rutshuru, 950 m, 30.XI.1934, 36 specimens; Kitondo Marsh, N. of Gandjo, foot of W. slopes of Mt. Kamatembe, 2.000 m, 7-23.I.1935, 7 specimens; Mabenga, foot of Mt. Kasali, 1.000 m, II.1935, 2 specimens; Nyasheke Forest, E. of Volc. Nyamuragira, 1.820 m, 14-26.VI.1935, 1 specimen; Tshumba, Mushari district, 2.100 m, VI.1934, 1 specimen; Mushumangabo Crater, E. of Nyamuragira, 2.075 m, 14-26.VI.1935, 1 specimen; [Uele: Monga, 18.IV-8.V.1935, 73 specimens; Uele: Buta, 450 m, 11-13.V.1935, 28 specimens].

Mission H. Damas: Biuniu, pond in crater of Mt. N'Goma, 8-20.IV.1933, 2 specimens; Kisenyi, riv. Sebeya, 1.470 m, 15.IV.1935, 24 specimens; Lula river, near Kamande, 912 m, 4-8.V.1935, 4 specimens; Bugazia, 920 m, 21.V.1935, 5 specimens; Kibuga, Molindi riv., 27.VII.1935, 1 specimen; Lake Ndalaga, Mokoto, 1.725 m, 7.VII.1935, 2 specimens; Lake Lukulu, Mokoto, 1.725 m, 15.VII.1935, 331 specimens; Lake Bita, Mokoto, 1.610 m, 2.VIII.1935, 2 specimens; Vitshumbi, 925 m, 11.XII.1935-16.I.1936, 92 specimens; riv. Lunyasenge, Kimboho, 925 m, 28-30.XI.1935, 2 specimens; Ishango, Semliki riv., 1.000 m, 11-13.XII.1935, 2 specimens; [Tshegera Island, Lake Kivu, 18.II.1936, 1 specimen].

#### Hydrophilus (s. str.) senegalensis Percheron.

Hydrophilus senegalensis Percheron 1835, Gen. Ins., **3**, n° 5, pl. 9, fig. 1. Hydrophilus convexus Castelnau 1840, Hist. Nat. Ins., **2**, 50.

Hydrophilus paulinieri Guérin-Méneville 1842, Icon. Règne Anim., 7, Ins., (1834), 73.

Hydrophilus caffer Boheman 1851, Ins. Caffr., 1, 594.

Stethoxus senegalensis BEDEL 1892, Rev. d'Ent., 10, 317.

Hydrous piesbergeni Reitter 1906, Wien. Ent. Zeit., 25, 40.

Hydrous (s. str.) senegalensis D'ORCHYMONT 1919, Ann. Soc. ent. France, 88, 163.

Mission G. F. de Witte : Vitshumbi, 925 m, 12-22.X.1933, 4  $\sigma$ , 1  $\circ$ ; Ndeko, S.-E. of Rwindi, 1.083 m, 27.XI.1934, 1  $\sigma$ ; Rwindi Camp, 1.000 m, 20-28.XI.1934, 1  $\circ$ .

Mission H. Damas: Vitshumbi, 925 m, 13-16.I.1936, 2 of.

# Hydrophilus (Temnopterus) aculeatus (Solier).

Temnopterus aculeatus Solier 1834, Ann. Soc. ent. France, 3, 308.

Hydrophilus armatus Castelnau 1840, Hist. Nat. Ins., 2, 51.

Hydrophilus spinipennis Gory 1842, in Guérin-Méneville, Icon. Règne Anim., 7, (1834), 72, pl. 20, fig. 14.

Hydrophilus lugubris Motschulsky 1845, Bull Soc. Imp. nat. Moscou,

Hydrophilus aegyptiacus Peyron 1856, Ann. Soc. ent. France, (iii), 4, 723. Stethoxus aculeatus Bedel 1892, Rev. d'Ent., 10, 314.

Hydrous (Temnopterus) aculeatus D'ORCHYMONT 1912, Rev. Zool. Afr., 1, (fasc. iii), 329.

Mission G. F. de Witte : Vitshumbi, 5-22.X.1933. 3  $\sigma$ , 2  $\circ$  9; Tshambi, at foot of Kabasha Escarpment, 975 m, 2.XI.1933, 1  $\circ$ ; Nyarusambo, 2.000 m, 28.VI-2.VII.1934, 1 &; Rutshuru, 1.285 m, 16-30.X.1934, 2 & & ; Rwindi Camp, 1.000 m, 20-28.XI.1934, 2 & & , 5  $\,$  Q ; Tshanzerwa, N. of Rutshuru, 1.076 m, II.1935, 1 ♀.

Mission H. Damas : Kibuga, riv. Molindi, 27.VII.1935, 1  $\sigma$ ; Vitshumbi, 925 m, 13-16.I.1936, 1  $\sigma$ , 1  $\varphi$ ; Kimboho, N. of Kamande, 28.IX.1935, 1  $\varphi$ ; Riv. Sebeya, 1.470 m, 12.II.1936, 1  $\varphi$ ; [Busuku Island, Katwe, 912 m, 14.I.1935, 1  $\varphi$ ].

# Hydrochara elliptica (FABRICIUS).

Hydrophilus ellipticus Fabricius 1801, Syst. Eleuth., 1, 251. Hydrous fulvofemoratus Fairmaire 1869, Ann. Soc. ent. France, (iv), 9, 193. Hydrous uniformis Fairmaire 1869, Ann. Soc. ent. France, (iv), 9, 194. Hydrophilus fulvofemoratus d'Orchymont 1925, Bull. Ann. Soc. ent. Belg., 65, 74,

Hydrophilus ellipticus d'Orchymont 1933, Bull. Ann. Soc. ent. Belg., 73, 308. Mission G. F. de Witte: Vitshumbi, 925 m, 27.IX-22.X.1933, 7 specimens; Tshambi, foot of Kabasha Escarpment, 975 m, 26.X-7.XI.1933, 3 specimens; Byangugwe, S. of Kamande, 15-25.XI.1933, 1 specimen; Rwindi Camp, 1.000 m, 20-28.XI.1934, 8 specimens; Katanda, N. of Rutshuru, 950 m, 30.XI.1934, 31 specimens; Tshumba, Mushari district, 2.100 m, VI.1934, 1 specimen; [Uele: Buta, 450 m, 11-13.V.1935, 2 specimens].

Mission H. Damas: Vitshumbi, 925 m, 11.XII.1935-13.I.1936, 8 specimens; [Kisenyi, Lake Edward, 912 m, 17.VI.1935, 3 specimens].

#### Neohydrophilus deplanatus D'ORCHYMONT.

Neohydrophilus deplanatus D'ORCHYMONT 1911, Mém. Soc. ent. Belg., 19, 68, pl. 6, fig. 12, 17-19.

Mission G. F. DE WITTE: Lake Mugunga, near N'Zulu, 1.500 m, 25.I-3.II.1933, 47 of of, 31 QQ; Bulengo, near Lake Mugunga, 1.560 m, 29.I.1934, 2 of of; Rutshuru, 1.285 m, 15-30.X.1934, 2 QQ; Tshanzerwa, N. of Rutshuru, 1.076 m, II.1935, 1 of, 1 Q; Mabenga, Riv. Rutshuru, Kasali Mts., 1.000 m, II.1935, 6 ♂♂, 1 ♀.

Mission H. Damas : Kisenyi, Riv. Sebeya, 1.470 m, 15.IV.1935, 38 specimens; Kamande, 925 m, 4.XI-18.XII.1935, 4 ø, 6  $\heartsuit$ ; Riv. Mosenda, near Bugazia, 17.V.1935, 1  $\heartsuit$ ; Hangi, Riv. Ndua, 950 m, 28.V.1935, 2  $\heartsuit$   $\heartsuit$ ; Lake

Kibuga, Riv. Molindi (Ondo), 27.VII.1935, 3 ♂♂, 2 ♀♀; Ngesho, 3.VIII.1935, 1 ♂; Lake Ndalaga, Mokoto, 1.725 m, 7-12.VIII.1935, 3 ♂♂, 5 ♀♀; Lake Lukulu, Mokoto, 1.725 m, 15.VIII.1935, 25 specimens; Lake Bita, Mokoto, 1.610 m, 2.VIII.1935, 3 ♂♂, 3 ♀♀; Vitshumbi, 925 m, 18.XII.1935, 1 ♂; Riv. Lunyasenge, Kimboho, 925 m, 28-30.XI.1935, 2 ♀♀; Rutshuru, 1.285 m, 18.I.1936, 1 ♂; May-ya-Moto, warm sulphur springs, 950 m, 5.II.1936, 1 ♂, 1 ♀; Kisenyi, Lake Kivu, 1.470 m, 12.II.1936, 1 ♀; Ishango, Semliki Plain, 1.000 m, 13.IV.1936, 3 ♂♂; [Katana, W. shore of Lake Kivu, 1.460 m, 2.X.1935, 1 ♂; Ishungu, Lake Kivu, 1.500 m, 1 ♀; Ishara, Lake Kivu, 1.500 m, 15.X.1935, 1 ♂; Riv. Kinunu, Lake Kivu, 1.460 m, 24.X.1935, 1 ♂; Riv. Kinunu, Lake Kivu, 1.460 m, 24.X.1935, 1 ♂; Riv. Kinunu, Lake Kivu, 1.460 m, 24.X.1935, 1 ♂].

# Neohydrophilus distinctus (HOPE).

Hydrous distinctus Hope 1843, Ann. Mag. Nat. Hist., 11, 364.

Hydrous rufofemoratus Hope 1843, Ann. Mag. Nat. Hist., 11, 364.

Hydrophilus laticollis Régimbart 1907, Ann. Mus. Civ. Stor. nat. Genova, (iii), 3, [43], 46.

Neohydrophilus distinctus d'Orchymont 1911, Mém. Soc. ent. Belg., 19, 64, 65, pl. 6, fig. 13, 14.

Mission G. F. DE WITTE : Riv. Fuku, near Rutshuru, 1.300 m, 25.XI-5.XII.1935, 3 & 5, 7  $\mbox{$>$}$  [Uele : Monga, 8.IV-8.V.1935, 25 & 5, 29  $\mbox{$>$}$  Q  $\mbox{$>$}$  Uele : Buta, 450 m, 11-13.V.1935, 2  $\mbox{$>$$}$  Q  $\mbox{$>$}$  ].

# Neohydrophilus wehnckei (D'OLIVEIRA) ZAITZEV emend.

Hydrochares wehncki d'Oliveira 1890, Jorn. Sc. Lisboa, (27), 156. Hydrophilus wehnckei Zaitzev 1908, Horae Soc. ent. Ross., 38, 369. Neohydrophilus wehncki d'Orchymont 1912, Rev. Zool. afr., 1, 333. Neohydrophilus wehnckei d'Orchymont 1919, Ann. Soc. ent. France, 88, 162. ? Hydrophilus loanei Camerano 1907, Boll. Mus. zool. anat. Torino, 22, 4.

Mission G. F. DE WITTE: Ruanda: Ruhengeri, Kirii Springs, 1.800 m, 31.VIII-30.XI.1934, 56  $\sigma$   $\sigma$ , 48 Q Q; Katanda, 30.XI.1934, 1  $\sigma$ , 3 Q Q.

#### Neohydrophilus straeleni sp. nov.

Ovate, moderately convex, black, slightly micant; prosternal process produced into a strong acute spine posteriorly; metasternal process short, not attaining the apex of the first ventrite.

Head black, slightly micant, the anterior and posterior series of punctures very distinct and deeply impressed; surface very densely finely punctulate, the punctures of two sizes, the smaller about the same size as an eye facet, the larger about twice the size of the smaller and separated by about their own diameter; interstices extremely finely microreticulate, shining; antennae, except the club, and palpi rufo-testaceous. Pronotum black, with a slight greenish micant sheen, sculptured as on the head, the antero-lateral systematic punctures widely divided into an outer sparse and scattered group and an inner, dense and compact group. Scutellum sculptured as on the pronotum. Elytra sculptured as on the pronotum, but with the

very fine general punctation here extremely fine and very difficult to discern except under certain light and inclination; with four longitudinal series of larger distinct punctures, the two external series very irregular and rather widely spaced, the two internal series regular and rather close. Venter black, the prosternal process with the middle of the posterior edge prolonged into a stout strong spine; metasternal process short, not attaining the apex of the first ventrite; fifth ventrite with a large glabrous apical

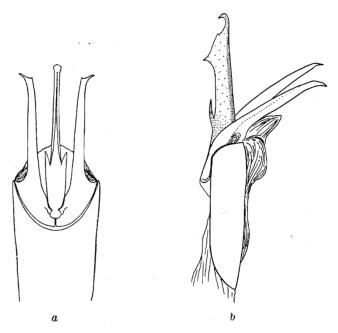


FIG. 19. — Neohydrophilus straeleni sp. nov. Holotype! Ædeagus: a. Dorsal; b. Lateral aspect. ×16.

spot. *Ædeagus* with the accessory lobes of the lateral lobes simple, the apex barely bifurcate; median lobe with a narrowly explanate portion at the base on the dorsal side, the distal angles of the explanate portion acutely produced; beyond the explanate portion the dorsal edge lamellate, produced at about two thirds of its length into a fairly prominent acute tooth; the extreme apex acutely hooked towards the dorsal side; basal piece smaller and narrower than that of *wehnckei* (D'OLIVEIRA).

Holotype of. Belgian Congo: Albert National Park.

Mission H. Damas : Vitshumbi, 925 m, 13.I.1936;  $19.6 \times 10.0$  mm.

Paratypes: Mission G. F. DE WITTE: Vitshumbi, 925 m, 27.IX-22.X.1933, 44 specimens; Tshambi, foot of Kabasha Escarpment, 975 m, 26.X-7.XI.1933, 232 specimens; Kamande, riv. Byangugwe, 925 m, 15-25.XI.1933, 2 speci-

mens; Rwindi Camp, 1.000 m, 20-28.XI.1934, 98 specimens; Katanda, N. of Rutshuru, 950 m, 30.XI.1934, 13 specimens; Mission H. Damas: Vitshumbi, 11.XII.1935-16.I.1936, 9 specimens.

This new species must, apparently, belong to a small group of species surrounding *deplanatus* d'Orchymont, characterised by the possession of a glabrous median patch on the fifth ventrite and by the prosternum bearing a stout median backward-pointing spine. The *deplanatus*-group may be subdivided artificially on the comparative length of the metasternal spine, the first section containing *deplanatus* and *occidentalis* J. Balfour-Browne, the second section *wehnckei* (d'Oliveira), *straeleni* and a further new species, *zethus* (d'Orchymont i. litt.), from West Africa. The African species of the genus may be separated by the subjoined key, but the members of the *deplanatus*-group can only be satisfactorily determined in the male sex.

# KEY TO THE AFRICAN SPECIES OF NEOHYDROPHILUS D'ORCHYMONT.

- 7. Median lobe of ædeagus on dorsal side with a distinct basal explanation beyond the sub-basal dorsal bifurcation ......... wehnckei (D'OLIVEIRA).
- 8. Median lobe of ædeagus acutely and strongly hooked at the apex; the laminate dorsal edge produced into a moderately prominent tooth; accessory lobe of the lateral lobes not distinctly bifurcate at the apex ......... straeleni sp. nov.

#### [Neohydrophilus zethus (D'ORCHYMONT i. litt.) sp. nov.]

This new species has been known to me by this name for about ten years. Specimens were sent to D'ORCHYMONT for identification and returned labelled « Neohydrophilus zethus m. » but the name does not appear to have been published at any time. This new species is extremely closely related to the preceding new species and can only be distinguished by the structure of the ædeagus in which the dorsal edge of the laminate median lobe is produced, shortly before the apex, into a strong and prominent projecting spine, the sub-basal bifurcation is here almost at the middle of the length and the spines are more elongate and slender than in the compared species; the apex of the slender accessory lobes of the parameres are distinctly but not very deeply bifurcate; the basal piece is distinctly larger than in the compared species, almost twice as long and nearly twice as wide.

Holotype  $\sigma$ . [West Africa : Gold Coast; Takoradi, 2.I.1931];  $21 \times 11$  mm. (In the British Museum.)

Paratypes: 1 &, 1 & [same particulars as holotype; 1 &, 2 & 2, French West Africa: Upper Sénégal; Casamanca (Bocandé leg.)].

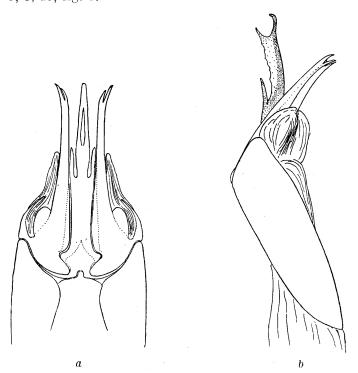
#### Amphiops phallicus D'ORCHYMONT.

Amphiops phallicus d'Orchymont 1936, Ann. Transvaal Mus., 17, 114.

Amphiops lasioides Régimbart 1903, Ann. Soc. ent. France, 72, 44, ex parte. Amphiops lasioides J. Balfour-Browne 1939, Bull. Soc. Fouad 1 d'Ent., (1938), 35.

Amphiops phallicus J. Balfour-Browne 1939, Ann. Mag. Nat. Hist., (x1), 4, 301.

Amphiops phallicus d'Orchymont 1941, Bull. Mus. Roy. Hist. nat. Belg., 17, n° 5, 3, 10, fig. 5.



F16. 20. — Neohydrophilus zethus sp. nov. Paratype! Ædeagus: a. Dorsal, b. Lateral aspect. ×16.

Mission H. Damas: Hangi, Riv. Ndua, 950 m, 28.V.1935, 3 specimens; Riv. Ondo (Molindi), 1.200 m, 29.VII.1935 4 specimens; Lake Lukulu, Mokoto, 1.725 m, 15.VIII.1935, 1 specimen.

# Amphiops wittei D'ORCHYMONT.

Amphiops wittei d'Orchymont 1941, Bull. Mus. Roy. Hist. nat. Belg., 17,  $n^{\circ}$  5, 2, 2, 3, fig. 1.

Mission G. F. DE WITTE: [Uele: Buta, 450 m., 11-13.V.1935, 11 specimens]. (This series is the type series.)

# Amphiops senegalensis (Castelnau).

Coelostoma senegalense Castelnau 1840, Hist. Nat. Ins., 2, 59.

Amphiops lucidus Erichson 1843, Arch. Naturg., 9, 231. ex parte.

Cyprimorphus compressus Fairmaire 1873, Rev. Zool., (iii), 3, 334.

Amphiops abeillei Guillebeau 1896, Bull. Soc. ent. France, 229.

Amphiops lucidus Régimbart 1903, Ann. Soc. ent. France, 72, 43.

Amphiops abeillei Sharp 1903, Res. Swed. zool. Exp. Egypt 1901, n° 10, 9.

Amphiops lasioides Régimbart, 1903, Ann. Soc. ent. France, 72, 44. ex parte.

Amphiops senegalensis d'Orchymont 1941, Bull. Mus. Roy. Hist. nat. Belg.,

17, n° 5, 2, 5, fig. 2.

Mission G. F. DE WITTE: Vitshumbi, 925 m, 27.IX-22.X.1933, 160 specimens; Tshambi, Kabasha Escarpment, 975 m, 2.XI.1933, 1 specimen; Riv. Byangugwe, near Kamande, 950 m, 15-25.X.1933, 3 specimens; May-ya-Moto, Riv. Rutshuru, 950 m, 5-6.X.1934, 3 specimens; Rwindi Camp, 1.000 m, 20-28.XI.1934, 41 specimens; Ndeko, S.-E. of Rwindi Camp, 1.083 m, 27.XI.1934, 66 specimens; Katanda, 950 m, 30.XI.1934, 8 specimens; Riv. Bishakishaki, S. of Ngesho, 2.100 m, 7-23.I.1935, 1 specimen; Ruanda: Lake Gando, S. of Karisimbi, IV-V.1935, 10 specimens; Mayumbu Forest, near Nyamuragira, 2.100 m, 14-26.VI.1935, 2 specimens; Mushumangabo, E. of Volc. Nyamuragira, 2.075 m, 14-26.VI.1935, 4 specimens; [Uele: Monga, 18.IV-8.V.1935, 534 specimens; Uele: Buta, 450 m, 11-13.V.1935, 152 specimens].

Mission H. Damas: Kamande, 925 m, 4.V.1935, 3 specimens; idem, 18.XI.1935, 3 specimens; Riv. Mosenda, Bugazia, 17.V.1935, 1 specimen; Hangi, Riv. Ndua, 950 m, 28.V.1935, 4 specimens; Riv. Ondo (Molindi), 1.200 m, 29.VII.1935, 2 specimens; Lake Ndalaga, Mokoto, 1.725 m, 8-13.VIII.1935; 3 specimens; Lake Bita, Mokoto, 1.610 m, 2.VIII.1935, 4 specimens; Vitshumbi, 925 m, 11.XII.1935-16.I.1936, 22 specimens; Riv. Lunyasenge, Kimboho, 925 m, 28-30.XI.1935, 27 specimens; Rwindi Camp, 1.000 m, 15.I.1936, 11 specimens; Ishango, Semliki River, 1.000 m, 9-12.XII.1935, 6 specimens; [Uganda: Kayanza, N.-E. shore of Lake Edward, 920 m, 6.VI.1935, 1 specimen; Kisenyi, Lake Edward, 925 m, 17.VI.1935, 1 specimen].

### Amphiops globus Erichson.

Amphiops globus Erichson 1843, Arch. Naturg., **9**, 230.

Amphiops globus Régimbart 1903, Ann. Soc. ent. France, **72**, 42.

Amphiops lateritius Fairmaire 1903, Ann. Soc. ent. France, **72**, 185? ex parte.

Amphiops globus J. Balfour-Browne 1939, Ann. Mag. Nat. Hist., (xi), **4**, 302.

Amphiops globus d'Orchymont 1941, Bull. Mus. Roy. Hist. nat. Belg., **17**, n° 5, 2, 11.

Mission G. F. DE WITTE: Riv. Fuku, W. of Rutshuru, 1.300 m, 1 specimen: Bulengo, near Lake Mugunga, 1.560 m, 29.I.1934, 61 specimens; Ruanda: Lake Gando, 2.400 m, S. of Karisimbi, IV-V.1935, 1 specimen; [Uele: Monga, 18.IV-8.V.1935, 266 specimens; Uele: Buta, 450 m, 11-13.V.1935, 10 specimens].

Mission H. Damas: Kisenyi, Riv. Sebeya, 1.470 m, 15.IV.1935, 3 specimens; idem, 12.II.1936, 2 specimens; Lake Ndalaga, Mokoto, 1.725 m, 7.VIII.1935, 1 specimen; Lake Lukułu, Mokoto, 1.725 m, 15.VIII.1935, 3 specimens; Lake Bita, Mokoto, 1.610 m, 2.VIII.1935, 1 specimen; [Kinunu River, E. shore of Lake Kivu, 1.460 m, 24.X.1935, 1 specimen].

#### Allocotocerus seriatus (Régimbart).

Globaria seriata Régimbart 1906, Ann. Soc. ent. France, 75, 269. Globaria seriata d'Orchymont 1939, Bull. Ann. Soc. ent. Belg, 79, 103, fig. 5. Allocotocerus seriatus J. Balfour-Browne, in Press.

I have recently discussed the name of this genus and shewn that it is necessary that it should be changed owing to a prior use by Scopoli 1777 (Mollusca).

It is interesting that out of a total of forty stations in which the present species and subæneus (ERICHSON) were taken the two species only occurred together in a single station. In the Albert Park area (i.e., excluding the records for Uele), seriatus occurred at all elevations between 1.300 m up to 2.150 m, the only exception being the single occasion on which this species was taken in company with subæneus. All the records for subæneus are for elevations between 900 and 1.100 m without exception. The reasons for this apparent altitudinal segregation are not clear since, outside the Albert Park, seriatus occurs at all elevations from sea-level up to over 2.000 m though, so far as material at my disposal goes subæneus does not appear to reach into the higher ranges over 1.250 m.

The occurrences of seriatus are as follow:

Mission G. F. de Witte: Riv. Fuku, near Rutshuru, 1.300 m, 25.XI-5.XII.1933, 1  $\sigma$ ; Lake Mugunga, near N'Zulu, Lake Kivu, 1.500 m, 25.I.1934, 1  $\sigma$ , 4  $\circ$   $\circ$ ; Bulengo, Lake Mugunga, 1.560 m, 29.I.1934, 122 specimens; Ruanda: Ruhengeri, Kirii Springs, 1.800 m, 31.VIII-3.X.1934, 230 specimens; Ruanda: Ninda, 2.150 m, 21-22.IX.1934, 1  $\sigma$ ; Rwindi Camp, 1.000 m, 20-28.XI.1934, 3  $\circ$   $\circ$ ; [Uele: Monga, 18.IV-8.V.1935, 63 specimens; Uele: Buta, 450 m, 11-13.V.1935, 5 specimens].

Mission H. Damas: Kisenyi, Riv. Sebeya, 1.470 m, 12.II.1936, 1 specimen; Lake Ndalaga, Mokoto, 1.725 m, 28 specimens; Lake Lukulu, Mokoto, 1.700 m, 15.VIII.1935, 31 specimens; Lake Bita. Mokoto, 1.600 m, 2.VIII.1935, 4 specimens.

#### Allocotocerus semirotundus (D'ORCHYMONT).

Globaria semirotunda d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 97, 107.

# Allocotocerus subæneus (Erichson).

Globaria subænea Erichson 1843, Arch. Naturg., 9, 228. Globaria subænea d'Orchymont 1939, Bull. Ann. Soc. ent. Belg., 79, 98, 108, fig. 6.

As has already been stated above [under A. seriatus (RÉGIMBART)] all the specimens of this series are from elevations below 1.100 m. D'ORCHYMONT, in his revision of the genus, states that only the form of the apices of the parameres enables this species to be distinguished from simplex (RÉGIMBART),

and he suggested that perhaps the latter was not specifically distinct from subæneus. There is, however, a very distinct character to distinguish between these two species in the presence on the lower face of the intermediate and posterior femora of the male in subæneus of a well-defined tuft of moderately long reddish-golden pubescence at about two-thirds of the length of the femur from the base which is entirely absent in simplex (RÉGIMBART); it is remarkable that this character has been overlooked.

KNISCH (1924, Coleopt. Cat., Junk, Pars, 79, 277) includes Boheman (1851, Ins. Caffr., 1, 588) among the references to subæneus (Erichson). Although I have not seen the material on which Boheman based his record of the species from Natal, I feel convinced that the subænea of Boheman is not ERICHSON'S species, but is the species later named simplex by RÉGIMBART. This view is based, in part, on three specimens from Port Natal (1 of, 2 Q Q) in the British Mesum, the male bearing a label « Globaria subænea BOHEM. (? Er.) » which contrasts with a male of the true subæneus of Erichson from West Africa so labelled in the same hand as the label on the male simplex. Absolute certainty will depend on a re-examination of Wahlberg's Natal specimens.

Mission G. F. DE WITTE: Vitshumbi, 925 m, 27.IX-22.X.1933, 55  $\sigma'\sigma'$ , 54  $\circ$   $\circ$ ; Tshambi, foot of Kabasha Escarpment, 975 m, 31.X-4.XI.1933, 53  $\sigma'\sigma'$ , 33  $\circ$   $\circ$ ; Riv. Byangugwe, S. of Kamande, 925 m, 15-25.XI.1933, 2  $\sigma'\sigma'$ , 5  $\circ$   $\circ$ ; Rwindi Camp, 1.000 m, 20-28.XI.1934, 14  $\sigma'\sigma'$ , 24  $\circ$   $\circ$ ; Ndeko, near Rwindi, 1.083 m, 27.XI.1934, 1  $\sigma'$ : Katanda, N. of Rutshuru,  $30.XI.1934, 4 \, \sigma \, \sigma, 3 \, \circ \circ$ .

Mission H. Damas : Vitshumbi, 925 m, 13-16.I.1936, 31 specimens; Kimboho, 925 m, 28.XI.1935, 1  $\sigma$ , 1  $\varphi$ ; [Uganda : Kasinga, 925 m, 11.VI.1935, 1  $\sigma$ ].

#### Berosus (Enoplurus) cuspidatus Erichson.

Berosus cuspidatus Erichson 1843, Arch. Naturg., 9, 228.

Berosus bispinosus Boheman 1851, Ins. Caffr., 1, 591. non Knisch 1924.

Berosus cuspidatus Boheman 1851, Ins. Caffr., 1, 592. Berosus acutispina Fairmaire 1869, Ann. Soc. ent. France, (iv), 9, 196. non FAIRMAIRE 1888.

Berosus acutispina Régimbart 1903, Ann. Soc. ent. France, 72, 36. Berosus gracilispina Régimbart 1906, Ann. Soc. ent. France, 75, 264.

Berosus acutispina Scott 1913, Trans. Linn. Soc. Lond., 16, 198.

Berosus (Enoplurus) cuspidatus d'Orchymont 1936, Bull. Mus. Roy. Hist. nat. Belg., 12, n° 23, 27.

Berosus (Enoplurus) cuspidatus d'Orchymont 1948, Proc. Zool. Soc. Lond.,

Mission G. F. de Witte: Vitshumbi, 925 m, 27.IX-22.X.1933, 19 specimens; Riv. Fuku, W. of Rutshuru, 1.300 m, 25.XI-5.XII.1933, 1 specimen; Ruanda: Ruhengeri, Kirii Springs, 1.800 m, 31.VIII-3.X.1934, 164 specimens; Ruanda: Ninda, 2.150 m, 21-22.IX.1934, 1 specimen; Lake Gando, S. of Karisimbi, IV-V.1935, 4 specimens; [Uele : Monga, 18.IV.1935, 12 specimens; Uele : Buta, 450 m, 11-13.V.1935, 1 specimen].

Mission H. Damas : Kamande, 925 m, 7.V.1935, 1 specimen; Bugazia, 925 m, 17.V.1935, 5 specimens; Vitshumbi, 925 m, 11.XII.1935, 2 specimens.

#### Berosus (Enoplurus) furcatus BOHEMAN.

Berosus furcatus Boheman 1851, Ins. Caffr., 1, 590.

Berosus furçatus Gerstaecker 1867, Beitr. Ins.-Fauna Zanzibar, 26.

Berosus (Acanthoberosus) ægyptiacus Kuwert 1888, Deutsche Ent. Zeit., 32, 130, 139.

Berosus (Acanthoberosus) ægyptiacus Kuwert 1890, Verh. Nat. Ver. Brünn, **28**, 108

Berosus (Enoplurus) furcatus d'Orchymont 1943, Bull. Mus. Roy. Hist. nat.

Belg., 19, n° 42, 10.
Berosus (Enoplurus) furcatus d'Orchymont 1948, Proc. Zool. Soc. Lond., 117, (iv), 740.

Mission G. F. DE WITTE: Vitshumbi, 925 m, 5-22.X.1933, 23 ♂♂, 23 ♀♀. Mission H. Damas : Biuniu, Mt. Goma (Ngoma), 1.500 m, 3-20.IV.1935, 5  $\sigma$  , 8  $\varsigma$   $\varsigma$  ; idem, 16.XI.1935, 1  $\varsigma$  ; Kamande, 925 m, 4-9.V.1935, 2  $\sigma$  , 7  $\varsigma$   $\varsigma$  ; idem, 18-19.XI.1935, 1  $\sigma$  , 2  $\varsigma$   $\varsigma$  ; Bugazia, 925 m, 15.V.1935, 1  $\varsigma$  ; Vitshumbi, 13-14.I.1936, 10  $\sigma$  , 5  $\varsigma$   $\varsigma$ 

#### Berosus (s. str.) nigriceps (Fabricius).

Hydrophilus nigriceps Fabricius 1801, Syst. Eleuth., 1, 254.

Berosus æneiceps Motschulsky 1861, Bull. Soc. Imp. nat. Mosc., 34, (i), 110. Berosus (Paraberosus) melanocephalus Kuwert 1890, Verh. Nat. Ver. Brünn, **28**, (1889), 113, 319.

Berosus (Paraberosus) nigriceps Kuwert 1890, Verh. Nat. Ver. Brünn, 28, (1889), 114, 319.

Berosus immaculicollis Fairmaire 1892, Rev. d'Ent., 11, 88. Berosus (s. str.) æneiceps d'Orchymont 1923, Mem. Dept. Agric. India, 8, 12. Berosus (s. str.) nigriceps d'Orchymont 1933, Bull. Ann. Soc. ent. Belg., **73**, 310.

Berosus (s. str.) nigriceps d'Orchymont 1948, Proc. Zool. Soc. Lond., 117, (iv), 734, 738, fig. 6-9.

Berosus (s. str.) nigriceps J. Balfour-Browne, in Press.

Mission G. F. DE WITTE: Vitshumbi, 925 m, 6-7.X.1933, 17 ♂♂, 29 ♀♀; Rwindi Camp, 1.000 m, 20-28.XI.1934, 1 d.

Mission H. Damas: Vitshumbi, 925 m, 16.I.1936, 1 o.

### Berosus (s. str.) vitticollis Boheman.

Berosus vitticollis Boheman 1851, Ins. Caffr., 1, 593. Berosus vitticollis Régimbart 1903, Ann. Soc. ent. France, 72, 40.

Berosus vitticollis Régimbart 1906, Ann. Soc. ent. France, 75, 266. ex parte, villosulus.

Berosus (s. str.) vitticollis d'Orchymont 1948, Proc. Zool. Soc. Lond., 117, (iv), 738, fig. 11.

Mission G. F. De Witte: Vitshumbi, 925 m, 27.IX-9.X.1935, 2 of of, 7 ♀♀; Rwindi Camp, 1.000 m, 20-23.XI.1934, 1 ♂.

# [Berosus (s. str.) nigropunctatus sp. nov.]

Short oval, strongly convex, apically widely rounded; head and pronotum coarsely rugulose punctate; elytra glabrous, finely striate, strongly and deeply punctured in the striæ, the punctures extending externally well beyond the confines of the striæ; interstriæ moderately convex, very finely unilinearly punctulate; punctures of pronotum and elytra black, general surface griseo-testaceous.

Head black, strongly coppery-metallic, on the frons densely rugulose punctate, the punctures of two sizes, the larger ones three to four times the size of the smaller; clypeus similarly sculptured at the base, anteriorly less closely and not rugulosely punctate, interstices shining in both sexes; eyes very prominent; frons anteriorly widely but shallowly impressed in the middle, posteriorly distinctly but quite finely carinate longitudinally up to

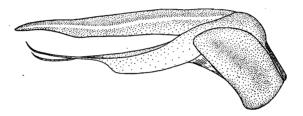


FIG. 21. — Berosus (s. str.) nigropunctatus sp. nov. Holotype!

Ædeagus, lateral aspect. ×75.

the transverse vertical carina. *Pronotum* slightly narrower than the head, testaceous, with a faintly blackish median geminate line in the anterior half; quite densely strongly punctured, the punctures anteriorly in the middle denser and somewhat rugose, posteriorly and laterally irregularly more distant, separated by at least half their diameter, the punctures twice as large as the larger punctures of the head and more deeply impressed, black or dark fuscous brown; the interstices entirely shining in both sexes; with much finer punctures quite sparsely and irregularly distributed over the whole surface; posterior angles quite effaced; anterior angles rounded but indicated; sides finely margined, the margin finely crenellated. Scutellum fuscous, elongate, in the middle very closely punctate but leaving a wide impunctate margin. Elytra at the base evidently wider than the base of the pronotum, the shoulders prominently rounded; somewhat elliptical, widest at two-thirds of the length from the base and with the greatest convexity at the same level, the apex relatively widely rounded; with ten longitudinal striæ and a supplementary juxtascutellar stria on each elytron, and with a marginal series of punctures impressed in a shallow line; the internal striæ moderately fine and moderately deeply impressed, the external ones less

fine and less impressed, each stria longitudinally very strongly catenate punctate, the punctures widely overlapping the striæ externally, the punctures larger and deeper about the middle, finer at the apex; internal interstriæ quite strongly, external interstriæ not very strongly convex, each with a slightly irregular unilinear series of very fine punctures; the larger punctures black, the colour not extending outside the impressed area, the very fine punctures quite widely aureoled with black; the conjoined elytra with an obscure pattern comprising a black humeral spot, an inverted V-shaped fuscous brown mark in the middle of the disc and a black spot in the middle of the eighth interstria. Venter black; mentum quite finely and moderately densely punctate, interstices shining; mesosternum with a very low longitudinal carina; metasternum in the middle with a posteriorly elevated rectangular process, shallowly excavated in the middle, forming a perpendicular abutment for the posterior femora; basal ventrite with a high median longitudinal carina; ventrites finely but densely punctate; first to fourth ventrites with the posterior (free) margin finely denticulate or serrate; fifth ventrite in both sexes with a deep terminal median emargination, twice as wide as deep, the sides at the apex produced, at the base in the middle of the emargination with two small teeth. Legs testaceous, the basal two-thirds of the femora rufo-fuscous: anterior tarsi of the male foursegmented, the basal segments not the least inflated, apical segment elongate, as long as the three basal segments taken together, claws elongate, half the length of the fourth segment; in the female five segmented, the basal segment very short. Ædeagus with the median lobe not particularly elongate, about twice as long as the basal piece, regularly attenuate to the acute apex; the parameres about half as long as the median lobe and with the external apical angle produced into an « arista » about as long as the paramere itself,

Holotype & . [Belgian Congo : Mission G. F. de Witte : Uele : Monga, 18.IV-8.V.1935];  $3.819 \times 1.824$  mm.

Paratypes : 1 Q, same particulars as holotype, 4,503  $\times$  2,394 mm; 1  $\sigma$  , 6 Q Q, same particulars as holotype.

This new species of the *neumanni*-group appears to be more nearly related to *nessus* d'Orchymont (1936, Mem. Est. Mus. Zool. Univ. Coimbra, (i), n° 96, 12) from Mozambique, than to *neumanni* Knisch. It resembles *nessus* in the less dense and smaller pronotal punctures, the much more coarsely punctured elytral striæ, the more convex internal interstriæ and even in the form of the lateral lobes of the ædeagus with the arista-like extension of the external apical angle to a length almost equal to the paramere itself; it differs from *nessus* in the distinctly black punctures, the even more convex internal interstriæ and the less convex external interstriæ, the finer and more copious punctation of the mentum and the narrower pronotum; the median lobe of the ædeagus is shorter than in the compared species, barely twice as long as the basal piece, but the form of the median lobe is substantially similar through the various species of the group.

# Regimbartia elliptica (Régimbart).

Volvulus ellipticus Régimbart 1906, Ann. Soc. ent. France, **75**, 268. Regimbartia elliptica d'Orchymont 1941, Bull. Mus. Roy. Hist. nat. Belg., **17**, n° 4, 3, 7.

This little known species, which was described from the French Congo, was known to D'ORCHYMONT only by a single female from the Belgian Congo: Watsa, and accordingly the form of the ædeagus was unknown to him. It has been possible to determine the series before me only by description but I do not think there can be the least doubt as to the identity of the specimens. The species agrees perfectly with D'ORCHYMONT'S key to the

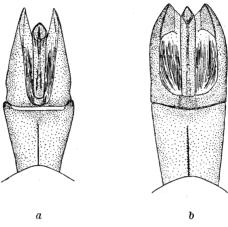


Fig. 22. — Ædeagus, ventral aspect of a. Regimbartia elliptica (Régimbarti); b. Regimbartia obsoleta (Régimbart).  $\times 75.$ 

genus in that the fourth ventrite has, at the middle of the posterior edge, a simple dentiform prominence which does not form a distinct carina or acute carinate protuberance as in all the African species of the genus. The ædeagus, as compared with that of *obsoleta*, has the median lobe rather more bluntly pointed at the apex, and distinctly shorter than the lateral lobes, the terminal gonopore being larger, the lateral lobes are regularly attenuate from the base to the apex, which is blunt but acute, whereas in *obsoleta*, the lateral lobes are almost parallel-sided in the basal two-thirds, then rounded attenuate to the very bluntly rounded apex; the ventral face of the parameres thus possesses, in *obsoleta*, a broader area of thin colourless chitin over the musculature.

Mission G. F. DE WITTE: Vitshumbi, 925 m, 12.X.1933, 4 specimens; Rwindi Camp, 1.000 m, 20-28.XI.1934, 9 specimens; [Uele: Monga, 18.IV-8.V.1935, 1 specimen].

Mission H. Damas: [Kisenyi, Lake Edward, 925 m, 17.VI.1935, 6 specimens].

#### Regimbartia nilotica (SHARP).

- Volvulus niloticus Sharp 1903, Res. Swed. Zool. Exp. Egypt 1901, n° 10, 5. White Nile.
- ? Volvulus cupreus Régimbart 1900, Bull. Soc. ent. France, 51. ex parte. Zanzibar; not Aldabra.
- ? Brachygaster denticulata Régimbart 1903, Ann. Soc. ent. France, 72, 41. ex parte. (non Mulsant 1853.) Zanzibar; not Madagascar, not Aldabra. Volvulus stagnicola Régimbart 1906, Ann. Soc. ent. France, 75, 267. ex parte. (non Mulsant 1853.) East Africa; not Aldabra, not Madagascar.

Volvulus compressus Régimbart 1906, Ann. Soc. ent. France, 75, 267. (non Boheman 1851). British East Africa.

Regimbartia nilotica d'Orchymont 1936, Ann. Transvaal Mus., 17, 116. Regimbartia nilotica d'Orchymont 1941, Bull. Mus. Roy. Hist. nat. Belg., 17, n° 4, 4, 11, fig. 3.

Mission G. F. de Witte: Vitshumbi, 925 m, 27.IX-22.X.1933, 90 specimens; Tshambi, foot of Kabasha Escarpment, 975 m, 31.X-1.XI.1933, 6 specimens; Rwindi Camp, 1.000 m, 20-28.XI.1934; 81 specimens; Ndeko, near Rwindi, 1.083 m, 27.XI.1934, 8 specimens; Katanda, N. of Rutshuru, 950 m, 30.XI.1934, 1 specimen; [Uele: Buta, 450 m, 11-13.V.1935, 1 specimen].

Mission H. Damas: Vitshumbi, 925 m, 13-16.I.1936, 20 specimens; [Kisenyi, Lake Edward, 925 m, 17.VI.1935, 13 specimens].

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