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NOTES ON THE HELOCHARES AFRICAINS.  
(Notes sur des Helochares africains).

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NOTES ON THE HELOCHARES AFRICAINS

By

A. D'Orchymont

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ANNALES DE LA SOCIETE ENTOMOLOGIQUE DE BELGIQUE., in French,  
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(Article by D'Orchymont, A.)

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The following notes concern the African Hydrobaticus and  
a new subgenus which is close to it, Batochares.

Nov. Subg. Batochares.

This name applies to small, short and broad Helochares,  
which have a very particular facies, resembling Spercheus, with  
10 elytral series of big dots and a short juxtascutellum, with  
a slightly horizontally spread elytral limb. These Helochares  
differ from the subgenus Hydrobaticus because of this limb and  
the rounded and very convex shape, and the hood (prefront)  
capping the eyes on the sides. However, there is no canthus, no  
small half circular ciliated notch at the end of the 5th  
abdominal segment, and the knees are more glabrous. The front  
labrum is more indented and almost in semi-circle. The

mesosternum, which has on its posterior end, in front of the posterior femora and before the metasternellum, on each side, a transversal, smooth and glabrous space, with a bowed anterior edge (with a backward - directed concavity) and finally because of the much simple elongated trilobial shaped aedeagus. The organ includes two free parameters - welded on a large surface in the Hydrobaticus a median lobe and a long narrow basal lobe; the characteristic teeth and bristles accompanying the median lobe in the Hydrobaticus are missing. [ For the rest, it is indeed Helochares, 9 articulated antennae (6 + 3) ; very long maxillary palps, with the last article smaller to the penult and articulated towards the mouth; roughly carved chin, principally on the sides, excavated in front, highly developed and very long prosternum in front of the front hips, glabrous front ventral edge of the mesothorax streamlined lengthwise in the middle, no processus and no projection on the pubescent part in front of the intermediary hips, all femora, except the knees, are densely pubescent and water proofed below; tarsi are all 5 - articulated with the short basal articles; etc.

Because of the absence of ciliated notches at the 5th abdominal segment, and by the very simple aedeagus these Coleopterae are more primitive than the Hydrobaticus; this is why they must precede the latter ones. Regarding other details of their organization, we cannot deny their very specialized forms.

H. (Batochaes) Burgeoni n. sp.

The head is finely dotted in front; at the back, bigger dots are noticeable, black brown in color on the disc and between the eyes, largely testaceous on the lateral edges and closely along the front edge of the prefront; so are the labri and the maxillary palps, the latter ones being evenly testaceous,

Transversal pronotum, low shaped in front, with very rounded lateral edges as well as anterior and posterior angles, dark disc, quite broadly edged, with testaceans in front, and more so on the sides covered with a doubled punctuation: very fine dots being mixed with much bigger ones irregularly distributed on a shiny background.

Very broad elytra, considering their small size, with 10 series and a short juxtascutellum of big dots not very regularly lined up strip-shaped at places, particularly at the back, with slightly convex, shiny and smooth interstriae, almost without any punctuation; they narrow at the back. Dark brown is their color with lighter yellow testaceous spots, like a chess board; these spots are small, round towards the suture in their second half.

Type. Belgian Congo, Haut Uele, Moto, 1923, L. Burgeon, ♂, 3.2 x 1.7 mm. Tervueren. Paratypes 2 ♀♀ of same origin (same museum and my collection).

H. (Batochares) Byrrhus n. sp.

Species very close to the previous one but smaller with more accentuated, less rounded posterior angles of the pronotum; the big dots on the disc being more numerous and dense, showing smaller and less irregular intervals and with less apparent interspersed fine dots, the elytra having series of bigger dots and narrower as well as convex and narrower interstriae, the seventh one being even slightly costal-shaped in front. Real epipleura on each side of the pleuritic metasternal pieces, more heavily carved, more distinctly pubescent; The elytral-coloring is more even without small round and light spots. The aedeagus can hardly be compared with the type of the previous species, because both these organs are immature; as they are. However, I cannot find any important differences.

Type Belgian, Congo; Mayumbe, Sanzulu, 4-IV-26, A Collart, leg., ♂, 2, 5 x 1, 5 mm, A paratype ♀ of same origin.

Subg. Hydrobaticus (W. Mac Leay, 1871).

Graphelochares Kuwert, 1890; Crapidelochares Ganglbauer, 1904.

Previous to my 1936 (1) dichotomic note, nine different names had been proposed for the African species; the oldest dated back to 1844, the latest to 1907. Unfortunately, the published diagnoses had not been made according to the

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1) Annals Transvaal Museum, XVII, 2. 1936, p. 110-113, figure 1 - 6, (pl. 1).

comparative method; the authors of the latest species had even partly ignored the work of their predecessors. Hence a classification according to types became necessary. It deals with little differentiated Coleoptera, characterized almost exclusively by the details of the above carving; it is very difficult to describe exactly these details due to their almost similar repetition in truly different species. Moreover, these insects have only the rare secondary sexual characters. Usually when the mesoscutum and the aedeagus are not projecting, only dissection can reveal the sex. The study of the male organ, however, was found indispensable. The aedeagus is indeed quite complicated and differentiated and this makes it a safe guide during the determination. It actually is the only means to separate properly the species. One must remember also that the penis appearance varies greatly whether it is in a resting position, as it usually happens for the collection samples or in an erected position. It would have been useful to study the aedeagus in the two positions in all the identified species. But it is very difficult, if not impossible, to obtain artificially this erection on dry-kept samples even by means of appropriate baths because the small teeth, the claspers or thorns, lining the median lobe get almost always damaged. Sometimes, fortunately a sample is to be found when the evagination occurred after or at death time. The situation was kept during the setting up. Figure 7 illustrating this work could be produced owing to one of these exceptional samples. The females - some still carrying

their ovum bags, like our Helochares s. str. - can be identified only by careful comparison with correctly identified males and coming from the same areas or hunting places, if possible. In this comparison, the slightest differences shown in the detail of the top carving, must be studied, particularly in the relative density, the vigor and the marking of the basal punctuation of the head of the pronotum and of the elytra. The density and the strength of the series of dots on the elytra which are more or less striated as well as analiculate on all or part of the distance or not, etc. Conclusion for a specific identity must be drawn only when one is convinced that the noticed small differences cannot be due to individual variability.

In spite of the superficial and incomplete study of the species at the time of their identification, only one of these nine published names falls into synonymy. It can be explained by the fact that the number of worthwhile species is much bigger than suspected. It is proved by the aedeagus comparison. SHARP only felt it intuitively in 1903. On the other hand, REGIMBART, in 1900, thought that one might see in the many specimens from the various African areas he possessed, as many species as one wished to find, after he had noticed a great variability and inconsistency in the size, form, punctuation, intensity of striae and coloring. Consequently he would admit only one highly variable species. That was a mistake. These variations of sizes, forms, punctuations etc, are characteristic

of the specific order with which corresponds very different shapes of aedeagus.

In the following enumeration, the old species brought up to data are categorized by seniority.

1. H. (Hydrobaticus) melanophthalmus (MULSANT, 1844).

This species was explained, in 1936 (1) following the only type in the Lyon Museum and following two samples ♂♂ of Shendi (Anglo-Egyptian Sudan) from the Imperial Institute of Entomology of London and from my collection.

2. H. (Hydrobaticus) striatus (BOHEMAN, 1851).

Hydrolius striatus BOHEMAN, 1851, ex. p.

The type of this species (Museum of Stockholm) is ♀. But ♂♂ were obtained from Transvaal, Uganda (Unyoro) and Belgian Congo (Haut - Uele) 1 ♂, Museum of Congo at Tervueren; Faradja, Gadin, 15. 11. 1930, A. COLLART leg., 4 ♂♂) and helped knowing the aedeagus<sup>(1)</sup>.

3. H. (Hydrobaticus) mentinotus (KUWERT, 1888).

H. melanophthalmus (KUWERT, 1840);

non - MULSANT, 1844. H. squalidus (SHARP, 1903)

Species from Egypt explained with melanophthalmus in the

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- 1) A. D. ORCHYMONT, Bull. Mus. roy. Hist. nat. Belg., XII, 23, 1936, pp. 1, 4, 8 and figure 1.  
2) A. D. ORCHYMONT, Annals Transvaal Museum, XVII, 2, 1936, p. 112, pl. 1 figure 4.

same publication<sup>1)</sup>. I saw a series with the aedeagus identical to the Belgian Congo (Kinshasa, WAELEBROECK leg., Museum of Brussels).

4. H. (Hydrobaticus) nigrifrons (BRANCSIK, 1903).

H. nigrifrons BRANCSIK, 1903.

H. melanophthalmus (REGIMBART, 1903);

H. SCOTT, 1913) non

MULSANT, 1844.

Wrongly interpreted form by REGIMBART the type of which I saw, a ♀ of NOSI GEE. But ♂ ♂ from Madagascar (my collection) and from Aldabra (British Museum)<sup>2)</sup> helped to make out the aedeagus in a note which will be soon published in the Italian periodical REDIA. This Hydrobaticus seems particular to these insular areas and unknown to the Continental Africa.

5. H. (Hydrobaticus) sechellensis (REGIMBART, 1903)

H. (Graphelochares) melanophthalmus var. sechellen-sechellensis REGIMBART, 1903.

This Hydrobaticus is not a variety but, as proved by the aedeagus examination (figure 1), a distinct species particular to the Seychelles (Felicity Island, pond in a plantation; Mahe Island marsh on the coastal plain at ANSE aux PINS and at ROYAL ANSE). The elytra amongst the ♂ ♂ seem in all, less broad and longer than those of the ♀ ♀.

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1) A. d'ORCHIMONT, 1, C. pp. 8, 9 and figure 2 to 4.

2) Informed in Trans. Linn. Soc. London, 2nd Ser., Zool., Vol. XVI 1913, p. 203, as melanophthalmus by H. SCOTT.

Figure 1. *H. (Hydrobaticus) sechellensis*  
(REGIMBART).

Aedeagus latero-dorsal view (right side up)  
x 50.

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6. *H. (Hydrobaticus) crenatostriatus* (REGIMBART, 1903)  
non 1906).

*H. (Graphelochares) melanophthalmus* var.  
*crenatostriatus*. REGIMBART, 1903.

This *Hydrobaticus* is also a distinct species particular to the Belgian Congo (Monts de Cristal) and to the Belgian Congo (Bas-Uele; Buta, NOBELS leg., 1928, ex STAUDINGER). I saw three "cotypes" from the Paris museum (Coll. REGIMBART, 1908), Monts de Cristal, 1 ♂ (5.9 x 3 mm), 2 ♀♀ (6.3 x 3.2 mm). The aedeagus (fig. 2) is identical amongst all the subjects of Buta.

The author's description is not very accurate. Indeed, though the punctuation is quite dense on the pronotum and the

elytra, it is not very accentuated and the dots series of the latter ones are slightly canaliculate and not at all the back and dots are more spaced than in front.

7. H. (Hydrobaticus) notaticollis (REGIMBART, 1906).  
H. melanophthalmus var. notaticollis REGIMBART, 1906.

It is also a distinct Hydrobaticus from East Africa, the variety curtus of which (REGIMBART, 1906) seems to be only a female form<sup>1)</sup> more potbellied, which is often the case amongst the Hydrobaticus ♀♀.

Figure 2. H. (Hydrobaticus) crenatostriatus  
(REGIMBART).

Aedeagus latero - dorsal view. x 40.

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Aedeagus of notaticollis : figure 3.

1) A. d'ORCHYMONT. Annals transvaal Museum, XVII 2, 1936,  
p. 111 and note 2, same page.

Figure 3. H. (Hydrobaticus) notaticollis  
(REGIMBART). Aedeagus seen dorsally x 40.

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Seen in Nairobi (Kenya), it is also found in Kampala (Uganda) and in the Ukerewe Island in the Victoria Nyanza lake.

8. H. (Hydrobaticus) densepunctus REGIMBART, 1907.

H. densepunctatus KNISCH, 1924, in catal.

I saw the type, a ♂ Portuguese Guinea, Bolama, VI - XII - 1899, L. FEA), (4.6 x 2.4 mm) in "cotypus", a ♀ (same label 5.1 x 2.7 mm) the Genoa Museum.

The ♂ was compared with samples of both sexes from East Africa, particularly from the Ukerewe Island in the Victoria - Nyanza lake. In the ♂-type, the elytra include less clearly printed dots almost wiped off even around the shield. These primary dots being less bigger at basis of internal series. The aedeagus (figure 4) is very similar, except for the type whose

Figure 4. H. (Hydrobaticus) densepunctus  
(REGIMBART). Aedeagus : Dorsal view.  
Samples from the Ukerewe Island. x 50.

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ventral and free terminal part of the parameres, seen dorsally, is slightly longer and the external edge of this part slightly less sinewy in the external side of the middle. The setting of the visible teeth is the same, the internal upper ones are almost as long as the external ones, the latter ones being sharp towards the outside.

I am convinced of a specific identity, but the samples from East Africa and Kivu (Luvingi, XII - 1932, L. BURGEON, 1 ♂ whose aedeagus was compared, Tervueren museum) seem to have the elytra series more accentuated, composed of bigger primary dots.

Compared with the ♂ -striatus BOHEMAN, the 3rd and 4th elytra internal series are finer in the densepunctus type, but the interstriae punctuation is more compact in this latter one, as it is also in the Ukerewe subjects.

The REGIMNART description does not apply very well to the 'Cotype' ♀, though authentically, the dotted elytra series are very fine along the suture, gradually more accentuated towards the sides and behind, where they are composed of bigger and better printed dots. Though nowhere they are canaliculate, they are however, composed of bigger dots than those appearing at the base. They keep enlarging when going to sides and the extremity. The bigger dots are alternatively separated lengthwise, by a dot as fine as those of the interstriae which belongs to their punctuation. The juxtascutellum series is identical in accentuation, and composition to that of the ♀ strictus (see further on) and of the nigrifons species BRANCSIK. Considering these observations, we wonder, if the 'cotype' ♀ belongs to the same species as the 'type' ♂ and if the author did not name from Madagascar (Antongil Bay) as densepunctus, true nigrifons from this island. The ♀ of the latter one seems slightly bigger and wider and the four external elytra series are slightly weaker, more interspersed behind the shoulder than in the ♀ densepunctus of REGIMNART. In any case, new samples ♂ ♂ and ♀ ♀ from the Portuguese Guinea are needed for further determination of the species.

9. H. (Hydroboticus) Bohemani -A.d'ORCHYMONT 1936<sup>1)</sup>

Hydrobius striatus Boheman, 1851, exp.

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1) L. c. (Ann. Transvaal Museum, 1936, p. 111 and note (1) pl.1, figure 1. The type is labelled 'enfelsbach and not Anfelsbach as written in the periodical.

Species from South West African, Natal, Transvaal Caffrerie mixed up by BOHSMAN with its true striatus, also from Caffrerie.

- 10.-13. H. (Hydrobaticus) blaseus, phallicus, structus, subtilus A.d' ORCHYMONT, 1936<sup>1)</sup>

Species brought by the "Vernay - Lang Kalahari expedition" and discerned from the neighboring species by the comparison of aedeagus.

14. H. (Hydrobaticus) Andreinii A. d'ORCHYMONT, 1939.

H. melanophthalmus REGIMBART, 1905.  
(nec MULSANT, non REICHE).

Very special species (because of the aedeagus from the Erythrea described in Redia (under print).

15. H. (Hydrobaticus) depactus n. sp.

From its carving, it looks like a densepunctus REGIMBART. The punctuation of the elytra interstriae is light and very compact, slightly more accentuated. The superficial and not canaliculate series are composed of slightly bigger dots, which each are separated lengthwise by as light a dot as those of the interstriae. The aedeagus (figure 5) also looks like that of the densepunctus, but the edge of the parameres in the depactus dorsal view is not doubly sinuate in the attenuated terminal part

1) Ibid, p. 111-112, pl. figure 2, figure 3, figure 5, figure 6.

Figure 5. H. (Hydrobaticus) depactus n.sp.  
Aedeagus, dorsal extremity x 50.

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as is the case in the compared species. What immediately separates the two forms is that the latter is rather broad with, widely rounded elytra as the extremity, whereas the depactus is narrower with, for both sexes, clearly attenuated and tapered elytra in their extremity with a perfectly rounded, turned-in sutural angle (angulous but not turned-in in the densepunctus). For the outline, the ♀ remains of that of the didymus (as described later), but in the depactus the elytra are less convex and more elongated, more attenuated and less declivous behind. The interstria punctuation is more compact though more accentuated, whereas the elytra series are much more superficial contrasting much less on the basic carving than is the case in the didymus. Moreover, the aedeagus is quite different.

Type Kenya : Monts Aberdare, west slope, Kigangop, 2600m,  
♂, 5.4 x 2.5 mm (head spread) museum Paris. Several paratypes of both sexes from various areas in Kenya will be enumerated elsewhere. Altitude : 1600 to 2600 m.

16. H. Hydrobaticus camerunensis n. sp.

It also reminds of the densepunctus REGIMBART, with no stria-shaped series composed of alternatively fine and bigger dots, as is the case for this species, the bigger dots being however, bigger in the new form as well as the basic compact punctuation of the head, the pronotum and the elytra interstriae. The short juxtascutellum series includes also much bigger dots. The top is very shining despite the heavy carving prefront testaceous, as the rest of the top with no dark spot. The aedeagus (figure 6) is different, the thinned terminal part of the paramere being not doubly sinuated at its external edge; the dorso-terminal cavity is cluttered, behind two dorsal lobes, partly membranous, with dark thorns and appendixes which must be evaginated and spread during erection. In the densepunctus, these thorns and appendixes are not so developed and less protruding.

Type Cameroon: Daula (ex STAULINGER) ♂ 5.1x 2.7 mm, my collection Paratypes. Cameroon : Fiko 1 x - 1935, 1 ♂, Missellele, IX - 1935, 2 ♂♂ (DR. F. ZUMPT leg. Museum of Hamburg). These three ♂♂ have a very immature aedeagus, yet recognizable. Moreover 2 ♀♀ of the last locality (Missellele).

17. H. (Hydrobaticus) congoensis n. sp.

Species reminding of the camerunensis due to the aedeagus,

Figure 6. H. (Hydrobaticus) camerunensis.n.sp.  
Dorsal aedeagus x 50.

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still shorter, but alike in outline with a dorsal-terminal cavity which is also cluttered with denticles though to a lesser degree. The size, however, is smaller and the head and pronotum are less densely punctuated. The elytra interstriae, slightly convex, are scattered with extremely light and spaced dots whereas the series include bigger and deeper dots of a same size without alternate finer dots as was the case with the camerunensis. Behind, these series are set closer and the interstriae are narrower; the external interstriae, close to the edge, has some average and scattered dots on an almost unpunctuated background (in reality microscopically and sparsely dotted).

Type. Belgian Congo: Boma, M. TSCHOFFEN leg; ♂, 3.9x1.9 mm (Museum Brussels). A ♂ paratype from same origin. The ♀ was captured by J. BEUAERT, in Boma, the 9th IX. 1910 (Museum Leuven).

18. H. (Hydrobaticus) congruens n. sp.

Close to the congoensis for the form and the testaceous and light coloring but with less short a size and the external elytral interstriae endowed with a dense finer though well noticeable punctuation independent of scattered average dots. The punctuation of the head and pronotum is more or less alike, perhaps slightly more accentuated and the elytral series, more or less striae-shaped in their first half include also dots of one size very close lengthwise even touching each other, but slightly less big and less deep. Whereas the interstriae seem broader and more even. The anterior edge of the labrum is less deeply sinuated in the middle. The aedeagus (figure 7) is longer, less broad, with internal thorns which are visible at the right dorsal extremity whereas they are pointed towards the exterior at the apex in the congoensis. The median lobe is also more sclerotized in its visible part in the organ at rest. This one seems to be slightly variable according to the origin of the subjects, sometimes more attenuated at the extremity with the two ventral terminal points of the 'parameres' and slightly longer in some samples.

The H. congruens differs from the mentinotus by the deeper elytral series, including bigger and deeper dots of one size.

Type. Senegal; Thies, 1883, ♂, 4 x 2.4 mm (my collection)  
Paratypes - High Senegal : Badoumbe, Nodier leg., 1 - V - 1882,  
1 ♂ Belgian Congo; Kawa forest, 1 - IV - 29, A Collart leg.

Figure 7. H. (Hydrobaticus) congruens n.sp.

Aedeagus dorsal extremity.

On the left: Organ at rest, turned-in thorns;

On the right: Erected organ, with spread thorns

x 50.

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2 ♂♂; Matadi, Tschoffen, leg., 1 ♂ (Brussels Museum);  
Zanguebar, 1 ♂; Zanzibar, 1 ♂; Central Uganda; Kizungu and  
Inyoro Province, several ♂♂, some with aedeagus in resting  
position others with the inside of the organ completely  
evaginated (Museum Paris). Some ♀♀ were seen from the main  
quoted origins.

19. H. (Hydrobaticus) conjectus n. sp.

I could discern this species of congruens only by the  
aedeagus particularities. The characteristics of carving,  
coloring, and so on, are the same. First, the median lobe is  
broader at the base, its terminal half is not flattened and  
membraneous on the back as for the congruens, but round and  
sclerotized on its top, which, seen from the side, is protruding  
and dentiform just before the basal enlargement. Then, on each

Figure 8. H. (Hydrobaticus) conjectus n. sp.

Half erected aedeagus dorsal view x 58 on the right end of the median lobe seen from side (dorsal on the right).

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side of the median lobe, there is in the organ at rest a very long, very thin thorn which is not traced in the congruens. Finally, the terminal ends of the parameres are longer.

Type: 1 Ukerewe (Victoria - Naynza), VII, R.P. CONARDS, ♂, 4.75 x 2.4 mm, my collection. Paratypes. East Africa: Ugogo, 2 ♂♂ ex STAUDINGER (my collection); Taveta, 1 ♂, Voc, 2 ♂♂ (Museum Paris). Ethiopia: ARUSSI GALLA, A. GANALE GUDDA, III, V =93. BOTEGO, 3 ♂♂ (Geneo Museum). One ♂ from Taveta and one from Arussi Galla which I cannot separate from those of the congruens.

20. H. (Hydrobaticus) strictus n. sp.

This new species shows the following particularities. The four internal elytra series are not caniculate; their punctuation is fine or very fine in the first half, but not as fine as for the subtilus A. d' ORCHYMONT, the bigger serial (primary) dots

Figure 9. H. (Hydrobaticus) strictus n.sp.

Aedeagus dorsal view x 50. On the right dorso-terminal cavity of the aedeagus in the H.(Hydrobaticus) mersus n. sp.

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are always slightly less fine anteriorly than those set around (meaning that the fine dots alternately interspersed in that series and than the interstriae dots); They also are more spaced lengthwise so that the serial punctuation (the primary more accentuated than the fine dots alternately interspersed) is more apparent size varying from 4.6 x 2.4 to 5.8 x 3.1,mm.

Aedeagus : dorsal view (figure 9 on the left) is longer, narrower than for the subtilis; the parameres are ventrally solded as usual and have a much shorter free terminal part than for the striatus, whereas the basal part of these lobes and the median lobe is longer; the upper thorns of the median lobe are narrow and very pointed at the apex; the two other thorns are visible and blunt at the top as for the subtilis. The ventral

notch of the sordid parameres is broader than for the striatus and the subtilis.

Type: 1 Ukerewe in the Victoria Nyanza, VII, R.P.CONRADS, ♂, 4, 6, x 2.5 mm. Paratypes of the two sexes were seen in the same locality, from Uganda: Kampala (sent by the Imperial Institute of Entomology London), from Unyoro (Paris Museum) and from Belgian Congo; Kisantu, Dima, Ituri (Museum of Tervueren); Kinshasa, WAELBROECK leg., 3 Nov. 1896, 1 ♂ (Brussels Museum).

I saw more than one hundred samples of this species. It is distinct from almost all other African species, except for the subtilis because of the fine elytral series which are not printed, and the fine and dense interstriae punctuation. The strength of the serial punctuation slightly varies in its subtlety particularly around the shield. But the dots are always lengthwise at a certain distance from one another. The aedeagus was examined in all the ♂♂. Its form is always constant and different from the one observed in the nigrifons, whose serial elytral punctuation is slightly more accentuated.

21. H. (Hydrobaticus) mersus n. sp.

This species, which will be still further discussed after examination of materials from Abyssinia, Kalahari, and Central Uganda, is represented in the tervueren museum by a ♂ from Ruanda; Gabiru, 18 - x - 1932, L. BURGEON leg. The type comes

from Abyssinia (Brit.mus).

The aedeagus (figure 9, on the right) looks very much like that of the strictus, but the two thorns noticeable in the dorso-terminal cavity are strongly outwardly crooked (organ at rest), whereas, for the strictus they are almost straight. The two species are recognizable due to the more accentuated punctuation on the top, mainly the elytral series composed of bigger, deeper dots in the mersus. In the strictus these series are much finer, almost wiped out.

I saw another ♂ from the Ukerewe Island, but of a smaller size, with identical aedeagus in its resting position.

22. H. (Hydrobaticus) niobelus, n. sp.

The carving above, though reminding that of the strictus, looks more like that of the nigrifons BRANCSIK, but the size is bigger and the aedeagus shape completely different. On the pronotum, the punctuation, though varying with individuals, is less dense and less fine than for the nigrifons, on the elytra, the very superficial series including the short juxtascutellum, include dots which are alternatively fine like those of interstriae and bigger. So, a fine dot is succeeded by a bigger one as for the nigrifons, and the distance separating the serial dots is just as small as the one of this species. These dots hardly become bigger towards the end. The elytral interstriae are

Figure 10. H. (Hydrobaticus) niobelus. n.sp.

Aedeagus; dorsal view x 40.

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dotted almost the same way perhaps a little more densely in the  
niobelus.

The aedeagus (figure 10) shows strong, sharp thorns at the extremity (protruding in the sample selected for the figure) and a median lobe quite broadened before the end.

Type : Belgian Congo; High Uele, WATSA . 1922, L. BURGEON leg., ♂ , 6.1 x 3.3 mm (Tervueren museum) Paratypes of both sexes from following origins : High Uele, Moto; Ituri, La Moto, Madyu, L. BURGEON leg. (same museum), also Low Uele; Buta, Nobels 1928 sample STAUDINGER (my collection); Uganda Kampala, G. H. G. HOPKINS leg., Some samples given by the Imperial Institute of Entomology London.

23. H. (Hydrobaticus) aethiopicus. n. sp.

This species which will be mentioned again after examining the materials from Abyssinia, is represented in the Genoa Museum by some samples of both sexes from Ethiopia. (Arussi Galla, A. GANALE GUDDA, III -V- 93, V. TOTTEGO). The type comes from Abyssinia (British Museum).

Figure 11. H. (Hydrobaticus) aethiopicus n.sp.

Aedeagus - dorsal view. x 50.

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This species includes two extreme forms linked by many transitions but having the same aedeagus. For some the serial punctuation of the elytra is very accentuated, and, rather, large and the interstriae carving is fine and not very dense. For the other, the latter is more accentuated and denser as the regular series become much finer. The aedeagus is enough to characterize the species and it appears very different whether at rest position (figure 11), or erected with internal spread thorns. When the

organ is at rest, the big dimensions of the two brownish colored thorns located on both sides of the median lobe, are very obvious.

24. H. (Hydrobaticus) mecarus n. sp.

It is of average size; the elytral series including the short juxtascutellum, which is not at all superficial, are composed of bigger dots than for the striatus, mentinotus, nigrifrons and densepunctus, with alternate dots which are finer, hardly visible, sometimes absent at places. The interstriae punctuation is less dense, less noticeable less accentuated than in the compared species whose new shape can also be typified by the aedeagus. This one (figure 12) is strong, not so lengthy tapering at the end as for the striatus; with a median lobe different from that of the mentinotus and with a non-bisinated free terminal part of the parameres as for the densepunctus. It

Figure 12. H. (Hydrobaticus) mecarus n.sp.  
Aedeagus - dorsal view. x 50.

differs from the nigrifons aedeagus by the terminal parts of the short parameres, by a median lobe not so widely membranous on the sides and by dorsal membranous appendages of long parameres and less visible internal thorns.

Type, Ethiopia; Arussi Galla, A. GANALE GUDDA, III-V-93, V. BOTTEGO, ♂, 4.9 x 2.5 mm (Museum of Genoa). Four paratypes ♂♂ and three ♀♀ of same origin.

25. H. (Hydrobaticus)mediastinus n. sp.

Extremely close to the mecarus and collected at the same time. The form of the aedeagus is not the same (figure 13). Moreover, samples of both the sexes are easily discernable from the mecarus due to striated, deeper, more accentuated elytral series, and the interstitial carving composed of small, more accentuated dots which are more densely set. It has a less strong aedeagus

Figure 13. H. (Hydrobaticus)mediastinus n.sp.

Aedeagus - dorsal view . x 50.

than that of the mecarus, in spite of a rather bigger size. The terminal tapering part, seen dorsally, shorter with no-turned-up edges; the internal thorns seem also differently set. For a comparative study, the arrival of ♂♂ of the two species kept with completely evaginated organs must be awaited for. In all the cases that I saw, the organ was at rest.

Type : Ethiopia, Arussi Galla, A. GENALE GUDDA, III-V-93, V. BOTTEGO, ♂ 5.25 x 2.8 mm. (Genoa Museum). A paratype ♂ and 2 ♀♀ from the same origin.

26. H.(Hydrobaticus) crispus n. sp.

This species is represented by 3 ♂♂, none of them being intact, marked Zanzibar, sent by JANSON. Their aedeagus (figure 74), identical in the three subjects is characterized by the extremity of the whole of the parameres forming a dorsal cavity in the middle of which is the narrow median lobe. This one is ended by a long membranous ribbon-shaped appendage. The extremity of each paramere internally projects out in the shape of a blunt tooth touching ventrally the projection of the opposite paramere.

The carving on top of the head and on the pronotum is very dense and quite fine. On the elytra, the series include only very big dots and become gradually finer and narrower towards the suture. The interstriae are quite shiny though covered with very dense but very fine punctuation, much finer than that of the pronotum. The third and ninth interstriae have a few big pores,

Figure 14. H. (Hydrobaticus) crispus n. sp.

Aedeagus - dorsal view x 50.

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though less big than those of the series; on the fifth one, these pores are more numerous forming a supplementary series which is almost regular.

Type. Zanzibar, ♂ 5.9 x 3.1 mm (my collection). Two ♀♀ from Zanzibar seem to belong to this species. They are neither as short nor as round at the back, smaller than the curtus REGIMBART.

I am convinced that the melano-phthalmus var. crenatostratus REGIMBART, 1906 is not the crenatostratus REGIMBART 1903, front crystal mounts (West Africa). It could be crispus or perhaps resphontes described further on. It is of no consequence.

27. H. (Hydrobaticus) crespulus n. sp.

It differs from crispus due to less accentuated elytral

Figure 15. H. (Hydrobaticus) crespulus. n.sp.

Dorsal extremity of the aedeagus x 50.

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series, including less bigger dots, due to less shiny interstriae with a slightly less fine punctuation and above all by the aedeagus (figure 15) dorso-terminal cavity of which is not closed at the apex; on each side of the median lobe, there is long thorn, whose extremity is slightly outwardly curved.

Type. Belgian Congo: High Uele, Watsa, 1922. C.BURGEON leg (Tervueren Museum) ♂, 5.6 x 3 mm. A ♂ identical paratype. High Uele, Moto II-III, 1923, same collector.

28. H. (Hydrobaticus) cresphontes n. sp.

It is very much like the crespulus as to the carving. The elytra, however, seem slightly broader and more shortly rounded at the rear. It cannot be discerned with certainty from it except for the aedeagus (figure 16). The ventral indent at the apex of the whole of the parameres is not as deep, the external sides of the indent are not bisinuated and angular in the middle and the long thorn on each side of the median lobe is missing, etc.

Type : Uganda, Kampala, 28 - XI - 1929, G.H.G.HOPKINS leg.,

Figure 16. H. (Hydrobaticus) cresphontes n.sp.  
Dorsal extremity of the aedeagus x 50.

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♂ 6.2 x 3.2 mm, communicated by the Imperial Institute of Entomology, London, also several ♂♂ paratypes in the Unyoro (Paris museum).

The ♀♀ can hardly be separated from those of the *notaticollis*, a species living in the same places.

29. H. (Hydrobaticus) difficilis n. sp.

It is of the same size as the previous one, with the same well printed elytral series, with the same dense punctuation on the interstriae. As for the compared species, the mentioned elytral series include only dots of a same size. The labrum, as well as the middle of the prefront and the back of the post front are black. The aedeagus characterizes this species (figure 17). It is short, thick, completely different from that of the cresphontes. There is a larger median lobe with, a small wing obliquely placed on each side, and half its length.

Type. Central Uganda, Kizoungou River, CH. ALLUAUD 1909, ♂, 6.1 x 3.2 mm (Paris Museum). Three ♂♂ paratypes from same

Figure 17. H. (Hydrobaticus) difficilis n. sp.

Aedeagus - dorsal view - x 50.

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origin, the smallest of them measuring 5.25 x 2.7 mm, but with same aedeagus; and two others of the same sex with immature organ but well recognizable, from Ukerewe Island in lake Victoria - Nyanza, R. P. CONRADS leg.

30. H. (Hydrobaticus) collarti n. sp.

It is a small species which I saw in large number only in Blukwa in the Belgian Congo where it was caught in January and February 1929 by M. A. COLLART. It is characterized by the density of the punctuation on top. This punctuation is quite accentuated and more accentuated than in the mentinotus KUWERT. The elytral series are weak with a variable print as well as the short juxtascutellum which is no more visible along the suture. Outwardly and backwardly they include sensibly bigger dots but they

Figure 18. H. (Hydrobaticus) collarti n.sp.

Aedeagus - dorsal view . x 50.

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do not groove into striae. The coloring is darker than usual in many specimens; the labrum is black and there is, on the prefront a longitudinal triangular-shaped striae, broad in front and narrower at the rear and of the same black color. The back part of the postfront is also black.

Aedeagus (figure 18): the parameres, seen dorsally are enlarged, bow-shaped, before the extremity and the median lobe ends by a short and very tiny lash like appendage sticking out of the end of the organ. A strong tooth, the end of which points towards the outside, just out into the ventral indent of the parameres (aedeagus at rest).

It looks a little like the densepunctus, but the punctuation is more dense, the elytral series more shaded and the aedeagus differently built.

Type: Belgian Congo; Blukwa, 28-1-1929, ♂, 4.75 x 2.4 mm.

A. COLLART leg. Many paratypes of both sexes.

31. H. (Hydrobaticus) minax n. sp.

This name is applied to a small form as densely punctuated as the collarti on the head, the pronotum and the elytra (interstriae); the elytral series, even the sutural one, and the short juxtascutellum are composed of big dots as broad as one third of the width of 3rd interstria, half of those of the other intervals or even more at places. It also slightly reminds of the minor A. d'ORCHYMONT from Indo-China. The coloring of the labrum, of the middle of the prefront.

Figure 19. H. (Hydrobaticus) minax. n.sp.

Aedeagus - dorsal view x 50.

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The median lobe of the aedeagus (figure 19) clearly stretches out the organ but in the shape of a fine and long stem and not of a microscopic silk thread as for the collarti. On back side of this lobe, there is a long internal thorn and

another much shorter one. Further on, there is another one, also inside and, more or less, visible by transparency.

Type: Uganda, Kampala, 27- IX- 1929, G.L.R.H., communicated by the Imperial Institute of Entomology, London, ♂, 3.1 x 1.4mm. Several paratypes of both the sexes (the ♀ ♀ in larger number in the batch) from the same locality and others from Unyoro (Paris Museum) and from lake Victoria - Nyanza, Ukerawe Island (R. P. CONRADS leg.). The ♀ ♀ seem slightly bigger than the ♂ ♂.

The two ♂ ♂ from Matadi and three ♀ ♀ from Boma (M. TSCHOFFEN leg) have all the characteristics of carving, size etc. of the minax; but the aedeagus is slightly immature and do not look identical; The median lobe, in particular, does not jut out and is hardly visible. We must expect more and better developed ♂ ♂ to establish a judgement.

32. H. (Hydrobaticus) livianus n. sp.

When compared with the crenatostratus REGIMBART, 1903, from Congo, this species presents a slightly denser and finer punctuation, elytral almost straited series particularly on the sides, including, even at the rear, bigger and more accentuated dots - same for the short juxtascutellum - without alternating fine points. The interstriae are more superficially though just as densely dotted.

The prefront is not spotted with black in the middle. The

Figure 20. *H. (Hydrobaticus) livlanus* n.sp.  
Aedeagus - dorsal. x 50.

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aedeagus (figure 20) is rounded and truncated at the end with a slightly jutting out median lobe ending into a ventrally lowered appendage. On each side, one notices a long thorn slightly protruding inside or below the dorsal lobes of the parameres; as for the other species there are other bristles inside the organ; they spread only during erection.

Type : Uganda: Kampala Hoima Rd, 16 - IV - 1929,

G. L. R. HANCOCK, ♂, 5.1 x 2.5 mm, Imperial Institute of Entomology London; a ♂ paratype also from Kampala, 25- IX - 1929,

G. H. G. HOPKINS (my collections). Three ♀ ♀, also from Kampala seem to belong to the same species.

33. *H. (Hydrobaticus) diductus* n. sp.

This small species differs at once from other African forms

by the carving of the pronotum which includes dots of two different sizes; many fine dots are scattered amongst dots twice as big and densely set. The aedeagus, seen dorsally, ends into a ventral spatula, tapering from front to rear, bowed on the sides and truncated straight at the end. It takes almost onethird of the terminal. All of the elytra are short and convex, enlarged after the middle and almost round in a semi-circle form at the rear. Each of them includes 10 series and a short slightly straited juxtascutellum of big dots with no alternative fine dots. The interstriae are finely punctuated (slightly bigger dots than the dots of the pronotum) and the external interstria has many big dots, so that the carving is evidently doubled. The maxillary palps are strongly fastened.

Type: Cape Lopez, ♂, 3.7 x 2.2 mm (my collection), ex. STAUDINGER. Unique.

34. H. (Hydrobaticus) didymus n. sp.

It has a dense, and ordinarily accentuated, punctuation of the head and of the pronotum. The non-canaliculate elytral series include one size dots which are quite fine toward the suture and gradually become slightly bigger towards the sides, principally towards the shoulder where the external series forms a slight groove. The interstriae are densely but very finely dotted, with very fine and superficial dots. The labrum and the middle of the prefront are often darkened. The ♀ has slightly

Figure 21. H. (Hydrobaticus) didymus n.sp.

Aedeagus - dorsal view x 50.

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longer elytra than the ♂, though not similar to those of the dimorphus (see further on). Seen from side, their edge is not regularly curved like that of the ♂, but slightly sinuated towards the body before the extremity. Moreover, in this sex (♀) the 5th ventral segment is deeply indented at the bottom of this indent and in the middle is to be found the small semi-circular, ordinary ciliated notch.

The aedeagus (figure 21) definitely sets this species apart, from the rear, it ends into an overlapping broad spatula. The very small median lobe hardly shows beyond the base of this spatula.

Type : Uganda, Kampala, 10 - IX - 1929, G.H.G.KOPKINS,

♂, 5.1 x 2.5 mm Imperial Institute of Entomology, London. A good series of paratypes of both the sexes from same area, but

caught at different dates. So are Unyoro, 1 ♂ ♀ (Paris Museum) and in Belgian Congo (high Vele Watsa 1922, 1 ♂ and Moto, 1920, 1 ♀, L. Surgeon (Tervueren Museum). Finally, 1 ♀ marked "Cape Lopez" another "Gabon" and a last one "Umgebung Kamerunberg, Tiko, 25-30-IX-1935 ZUMPT leg" in Hamburg Museum.

35. H. (Hydrobaticus) dolus n. sp.

It looks very much, though in a reduced pattern, like the camerunensis. It has the same intensity, depth and density of the general punctuation and of elytral series. The form however, is slightly less broad after the middle of the elytra, longer, less round and more ogival at the rear, more convex. The aedeagus (figure 22) is different; its ventral extremity is not divided into two blunt points as for the camerunensis, but into a spatula with sides converging towards the rear, truncated - indented at the apex.

Figure 22: H. (Hydrobaticus) dolus n. sp.  
Aedeagus - dorsal view x 50.

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Type. High Senegal: Khayes (NODIER leg.), 11. 12. 1881,

, 4.6 x 2.5 mm; my collection. Paratype High Senegal.  
Badoumbe (NODIER leg) 1 to V - 1882, 1 ♂ .

36. H. (Hydrobaticus) knischi n. sp.

H. melanophthalmus KNISCH, in collection (non MULSANT)

It looks very much like the dolus, even for the testaceous reddish coloring of the top but still smaller, more convex, more declivous at the rear, more round here with less densely punctuated elytral interstriae. Otherwise, the top carving is very much alike.

Figure 23. H. (Hydrobaticus) knischi n. sp.

Aedeagus - dorsal view x 50.

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The aedeagus (figure 23) is also ventrally ending in a spatula. Instead of being truncated at the apex as for the dolus, this spatula is ogival, 4 pointed and not indented at the end.

Type: Belgian Congo, melanophthalmus KNISCH det. ♂ ,

4.25 x 2 mm, KNISCH collection, n<sup>o</sup> 492 - 860 - Two slightly smaller ♂♂ from Stanleyville, 13 - II- 28, A. (COLLART leg., and a ♀ of the same size as the types, also from Stanleyville, seem to belong to this species; but the aedeaguses are so immature, that it cannot be ascertained.

37. H. (Hydrobaticus) lollius n. sp.

For the outline and the top carving, it looks like the didymus though it is smaller with a denser pronotum punctuation, though the elytral series are alike in intensity and depth; they are closer particularly on the sides and their dots are slightly closer at the rear and lengthwise. The punctuation of the interstriae is as fine and dense. The middle of the labrum and the prefront are more or less darkened.

Figure 24. H. (Hydrobaticus) lollius n. sp.  
Aedeagus - dorsal view. x 50.

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The aedeagus (figure 24) greatly differs from that of the didymus. It is not truncated at the end, but round, slightly ogival, and there is spatula-shaped extension. In the dorso-terminal cavity, some hooks and cylindrical appendages are visible which must spread during erection.

Type : Uganda; Kampala, 6 - VIII- 1929. G.H.G. HOPKINS, ♂, 4.4 x 2.2 mm. Imperial Institute of Entomology, London. Two ♂♂, paratypes, one of them being mutilated, comes also from Kampala and five ♀♀ which I include in this new species.

38. H. (Hydrobaticus) dimorphus n. sp.

This species shows a remarkable sexual dimorphism. The ♂ is regularly elliptical and ogival at the rear. The ♀ has prolonged, tapered and truncated round elytra at the apex, not at all ogive - shaped. The truncature reaches almost half the width of the elytron; the external edge, seen from side, is not regular as for the ♂, but describes a sunk-in weak but distinct bow where the elytron starts rounding out towards the sutural angle.

The labrum, the middle of the prefront, the rear of the postfront are usually darkened as well as an inversely triangle - shaped spot on the disc of the pronotum. The punctuation is well printed and dense, average on the head and pronotum. The elytral series are fine not striated. The dots, which are not very big against the suture, become more accentuated towards the sides and alternate, particularly in internal series, with a dot as fine as

Figure 25. H. (Hydrobaticus) dimorphus n. sp.  
Aedeagus - dorsal view. x 50.

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that of the interstriae, the dense punctuation of which is finer than that of the pronotum. The alternating nature of the series punctuation can be seen only when greatly enlarged.

Apex of the aedeagus, dorsal view, (figure 25) blade-shaped slightly jutting out and truncated into a circum-flex shaped accent at the extremity.

The fifth ventral segment, with the usual ciliated notch, has no deep indent at the extremity as for the didymus.

Type : Belgian Congo; fow Uele, Buta NOBELS 1928, a. STAUDINGER, my collection, ♂ 3.7 x 1.85 mm. Many paratypes of both sexes from Uganda (Kampala) communicated by the Imperial Institute of Entomology, London. Also from Blukwa in Belgian Congo, 1 ♂ longer than others, 28-1-1929 and Mahagi, Abok. (edges of Albert lake), 9- III- 1929. 1 ♀. A. COLLART leg; Ituri;

La Moto, Madyu, 1 ♀ , High Uele; Moto, end of 1922, 1 ♀ L.  
L. BURGEON (Tervueren Museum); Uganda; Unyoro, several paratypes  
of both the sexes and Ruwenzori mounts, east-side, Wimi-river  
1 ♀ (Paris Museum).

Subg. Crephelochares KUWERT.

H. (crephelochares) rutilus A. D'.ORCHYMONT, 1925.

Erratum. Dimensions given on p. 163 of this volume for the  
type of this species, are two small "2,8 x 1,5" mm should be  
replaced by "3.2 x 1.7" mm.

H. (Crephelochares) rutiloides n. sp.

In Gabon and Cameroon exists an ill-known, species, very  
close to the rutilus, slightly smaller in dimensions with also  
posterior angles of the pronotum closely rounded and angle-shaped  
The coloration is the same, though darker, blackish on the  
postfront and the elytra, dark red on the prefront and the elytra.  
But the punctuation on top is slightly more superficial, meaning  
less accentuated, finer and less dense, the species is  
characterized particularly by the aedeagus, the median lobe of  
which ends into a blunt point instead of being broadly truncated  
in a straight line as for the rutilus. For the rest, this organ  
is identical including the extremity of the parameres which  
curve-like beaks towards the median lobe.

Type : Gabon', ♂ , Helochares rutilus KNISCH det. ex,

STAUDINGER, 2.7 x 1.35 mm. my collection. Paratypes ; 1 ♂  
labelled after the type; 3 ♂♂, Gabon', two of which marked  
mollis, KNISCH det. and collection; 1 ♂.w. Africa "Gabon  
MOCQUERYS: 1 ♂ Umgebung Kamerunberg ' TIKO, 25-30, IX. 1935,  
F. ZUMPT, Hamburg Museum. Moreover, fine ♀♀ from Gabon,  
determined by KNISCH mollis and rutilus and a last ♀ from the  
same country caught like the corresponding ♂ by MOCQUERYS.

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