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Autor: Biström, O.
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Legs: Pale ferrugineous to ferrugineous. Pro- and mesotarsus slightly enlarged.

Male: Vide GUIGNOT (1955c, 1959a). Mis-combination of sexes cannot be excluded!

Distribution: Zaire (Fig. 1081).

Biology: Practically unknown. The holotype was captured at light collection.

6.5.12. Species group 12 (sp.gr. *villiersi*)

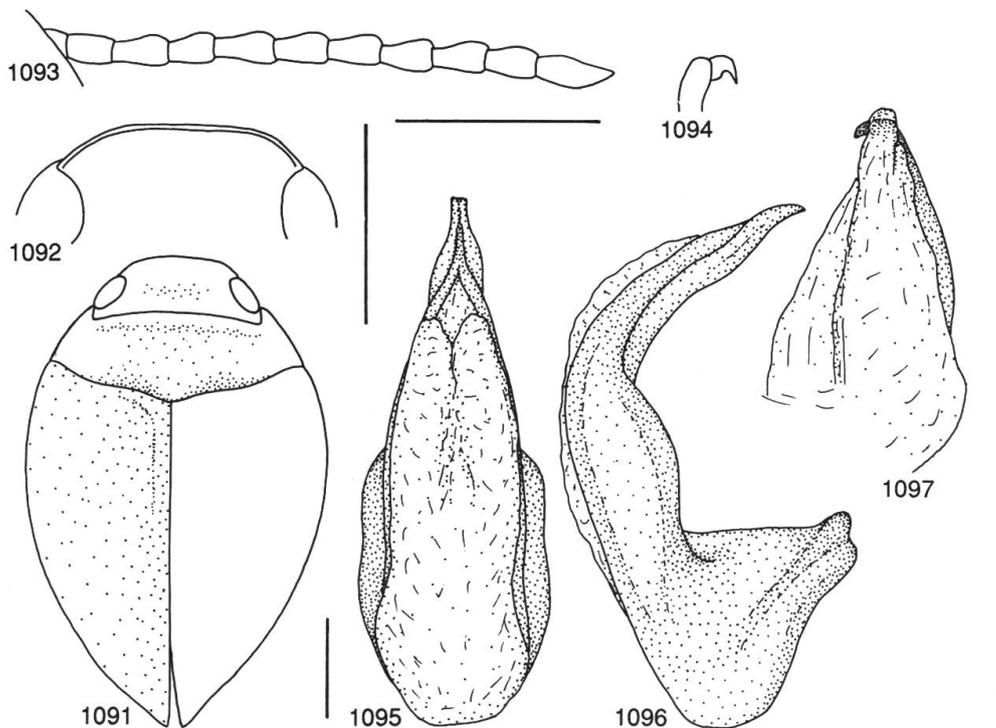
***Hydrovatus vulpinus* n.sp.**

Figs 1091–1097, 1112.

Type locality: Majinji Pan, Nuanetsi River, Zimbabwe.

Type material: Holotype, m: Type/S. Rhodesia Nuanetsi River, Majinji Pan IV–V.1961/M–V light trap/Rhodesian Schoolboys Expedition B.M. 1961–707/*Hydrovatus pyrrius* Type! J. Balfour-Browne det. XI. 1961 (BMNH). – Paratypes: Same as holotype (2 exx. BMNH, 1 ex. MZH). In all, 4 exx.

Derivation of name: The manuscript-name *H. pyrrius*, proposed by J. Balfour-Browne, is already occupied. The species is thus named *H. vulpinus*.



Figs 1091–1097: *Hydrovatus vulpinus*. – 1091, habitus. – 1092, head, frontal aspect. – 1093, antenna. – 1094, male protarsal claw. – 1095, penis, dorsal aspect. – 1096, penis, lateral aspect. – 1097, apical part of paramere. Horizontal scale 0.5 mm, antenna and claw; left top scale 1 mm, head; left bottom scale 1 mm, habitus; right scale 1 mm, genitalia.

Diagnosis: A distinct species, which is separated from the other species in the same species group by examination of the male genitalia: The apex of the penis is moderately expanded in *H. vulpinus* (dorsal aspect), and in lateral view is slightly undulate. The new species also resembles in many respects of *H. guignotianus*, treated in the preceding species group (p. 425).

Description: only distinguishing features recognized, cf. other species in same species group and *H. guignotianus* (p. 425).

Length of body: 4.12–4.32 mm, **breadth:** 2.60–2.90 mm. **Habitus** (Fig. 1091), body comparatively broad (in this respect closest to *H. villiersi*).

Head: Frontally as in Fig. 1092. **Antenna** (Fig. 1093).

Elytra: Punctuation fairly dense, apically and at epipleura distinctly sparser.

Legs: Protarsal claws distinctly thickened (Fig. 1094).

Male genitalia: Figs 1095–1097.

Female: Protarsal claws simple. Lacks stridulatory apparatus.

Distribution: Zimbabwe (Fig. 1112).

Biology: Unknown.

Hydrovatus unguiculatus n.sp.

Figs 1098–1104, 1112.

Type locality: Busua, Western Region, Ghana.

Type material: Holotype, m: Ghana: Western region Busua 15 m, N4.48–W1.56 Dr. S. Endrödy-Younga/Nr. 169 at light 6.I.1966 (TMB). – **Paratypes:** Ghana: Ashanti region Kumasi, Nhasu 330 m, N6.43–W1.36 Dr. S. Endrödy-Younga/Nr. 229 at light 24.I.1967 (1 ex. MZH, 1 ex. TMB). In all, 3 exx.

Diagnosis: Easy to distinguish from other species by the combination of almost unmodified male protarsal claws (slightly elongated and somewhat extended) and a penis with the apical half narrow and, in part, almost straight. Probably most closely related to *H. mucronatus* below.

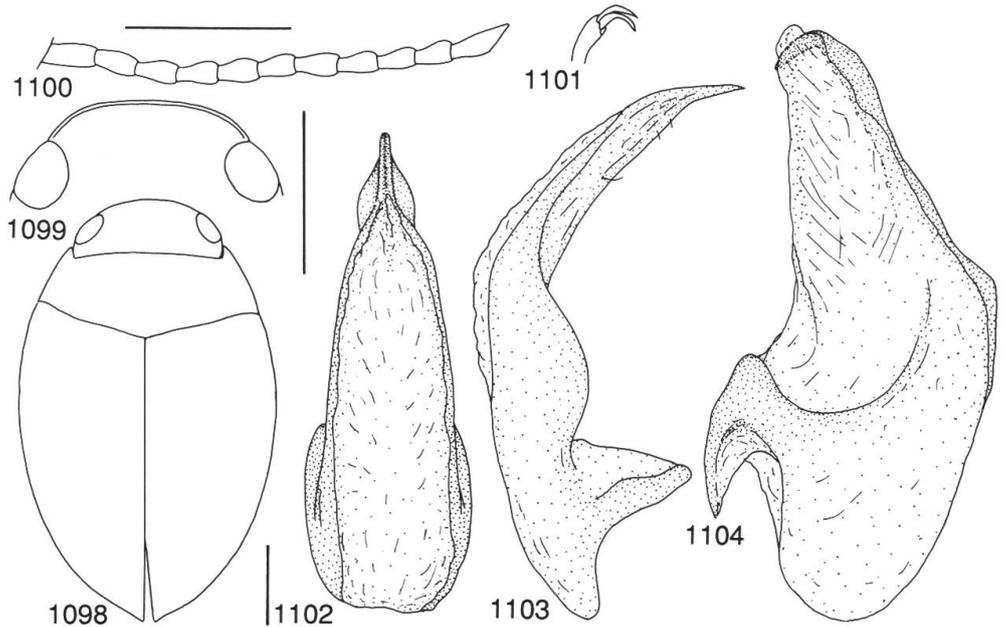
Description: only distinguishing features recognized; cf. *H. mucronatus*, below.

Length of body: 4.56–4.72 mm, **breadth:** 2.76–2.84 mm. **Habitus** (Fig. 1098), body somewhat elongated.

Head: Frontal aspect (Fig. 1099), and male antenna (Fig. 1100).

Pronotum: Lateral outline almost straight.

Elytra: Rows of punctures generally quite indistinct, but still discernible.



Figs 1098–1104: *Hydrovatus unguiculatus*. – 1098, habitus. – 1099, head, frontal aspect. – 1100, antenna. – 1101, male protarsal claws. – 1102, penis, dorsal aspect. – 1103, penis, lateral aspect. – 1104, paramere. Horizontal scale 0.5 mm, antenna and claws; left top scale 1 mm, head; left bottom scale 1 mm, habitus; right scale 1 mm, genitalia.

Legs: Protarsal claws almost unmodified, somewhat extended and only weakly asymmetric (Fig. 1101).

Male genitalia: Figs 1102–1104.

Female: Lacks stridulatory apparatus.

Distribution: Ghana (Fig. 1112).

Biology: Type material sampled at light collection.

Hydrovatus mucronatus Régimbart

Figs 1105–1112.

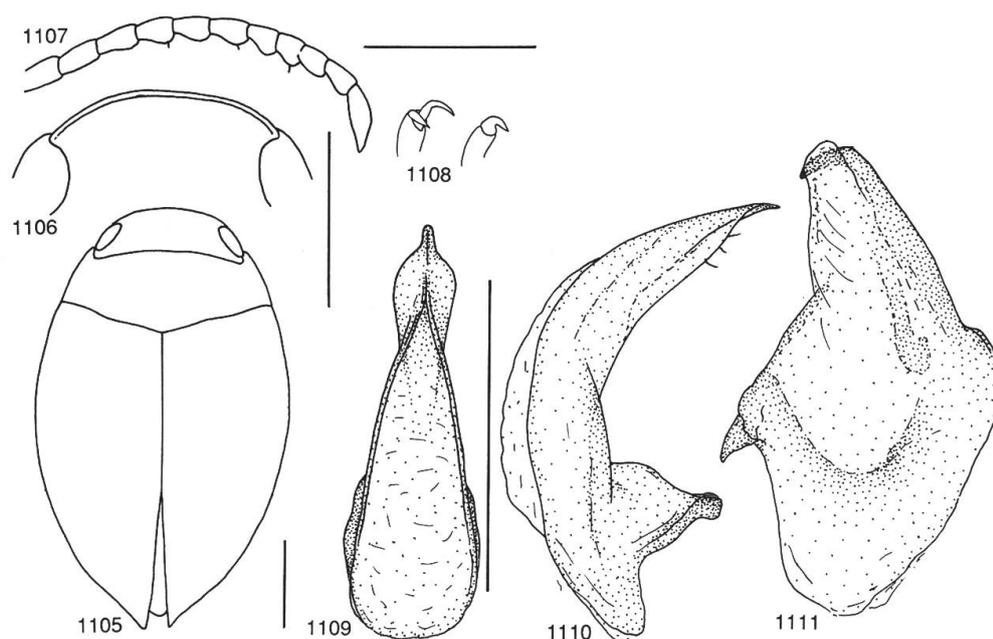
Hydrovatus mucronatus RÉGIMBART, 1910:4 (1908?) (orig. descr., faun.; in part = *H. oblongipennis* cf. GUIGNOT 1959a:169); ZIMMERMANN, 1920a:34 (faun.); PESCHET, 1925:32 (descr., faun.; syn. *H. rohani* = *H. contumax* cf. GUIGNOT, 1959a:179); ZIMMERMANN, 1926:25, 26 (descr., disc., faun.); GSCHWENDTNER, 1932b:12 (faun.); BALFOUR-BROWNE, 1939:483 (faun.); GUIGNOT, 1945a:306, 311 (descr., faun.); 1948c:9 (descr., faun.); 1950a:261 (faun.); 1954b:14 (disc.); 1959a:161, 168 (descr., faun.); BRUNEAU DE MIRÉ & LEGROS, 1963:848 (disc.); OMER-COOPER, 1963:180, 182, 184 (descr., faun.); 1965:200 (in part = *H. oblongipennis*).

Hydrovatus turgidus GUIGNOT, 1954a:4, 5 (orig. descr., disc., faun.); 1954b:13 (descr., faun.); 1959a:173, 177 (descr., faun.); OMER-COOPER, 1963:182 (syn. *H. mucronatus*).

Type locality: Kibonoto, Kilimandjaro, Tanzania.

Type material studied: *H. mucronatus*: Male specimen in very bad condition; only abdomen, right elytron, hind legs and genitalia preserved: Type/Kilimandj. Sjöstedt/Kibonoto Nieder/*Hydrovatus mucronatus* Rég. n.sp. type/dissected 10.III.1937 J. Balfour-Browne/118 89/Riksmuseum Stockholm (1 ex. RMS); same data as preceding (1 ex. f RMS). – *H. turgidus*: Holotype, m: Holotypus Congo belge P.N.U. (1.810 m) 20.XII.1948 Mis. G.F. de Witte 2290a/Coll. Mus. Congo (ex coll. I.P.N.C.B.)/Guignot det. 1953 *Hydrovatus turgidus* Guign./*Hydrovatus mucronatus* Rég. J. Balfour-Browne det. IX.1954 (MAC). – Paratypes: P.N.U. R. Dipwa (1.900 m) 17.I.1948, 1242a (1 ex. MAC); PNU Mabwe (585 m) 2.II.1949, 2305a (1 ex. MAC).

Additional material studied: Kenya: Kibwezi (1 ex. MNB); Env. Nairobi 1912 (1 ex. MNHN). – Malawi: Dedza Dam, Lilongwe rd 30.IX.1948/*H. mucronatus* Régb. det. J. Balfour-Browne 1960 (7 exx. AMS). – Zimbabwe: Inyanga 28.XII.1963 (4 exx. AMS); Stream at Salisbury 17.IX.1948 (2 exx. AMS); Melsetter arboretum 3.I. 1963 (1 ex. AMS); Stream Rusapi 13.XI.1948 (1 ex. AMS); Stream with lilies, betw. Salisbury and Bromley 12.XI.1948 (2 exx. AMS). – Namibia: Maria Bron. Grootfontein distr. SE 1918Ca, 5.IX. 1988 (1 ex. SMW, 1 ex. MZH). In all, 26 exx.



Figs 1105–1111: *Hydrovatus mucronatus*. – 1105, habitus. – 1106, head, frontal aspect. – 1107, antenna. – 1108, male protarsal claws (different positions). – 1109, penis, dorsal aspect. – 1110, penis, lateral aspect. – 1111, paramere. Horizontal scale 0.5 mm, antenna and claws; left top scale 1 mm, head; left bottom scale 1 mm, habitus; right scale 1 mm, genitalia.

Diagnosis: *H. mucronatus* belongs to a difficult group of species, which has caused a lot of confusion among different authors. In my opinion the species is characterized by the somewhat elongated body, by the broad penis apex (dorsal aspect), by the long and moderately

curved penis narrowing almost evenly towards the apex (lateral aspect) and by the difference in appearance of the elytral punctures (cf. *H. niger*). The closest relatives are probably *H. unguiculatus*, above and *H. niger*, below. This species group is in great need of further taxonomic study.

Length of body: 4.32–4.72 mm, breadth: 2.56–2.88. Habitus (Fig. 1105), body somewhat elongated.

Head: Dark ferrugineous, often with vague paler frontal area. Punctuation very fine, sparse, and indistinct. In quite distinct frontal depressions and narrowly at eyes with slightly coarser and denser punctures. Rather shiny, microsculptured (meshes quite distinct). Head frontally rounded, between eyes finely margined (Fig. 1106). Antenna pale ferrugineous, rather slender (Fig. 1107).

Pronotum: Dark ferrugineous, laterally slightly paler. Punctuation fine, quite dense, laterally distinctly finer and sparser. At pronotal margins slightly coarser punctures form an irregular row. Rather shiny, microsculptured (meshes medially almost obliterated). Lateral outline of pronotum rounded.

Elytra: Blackish ferrugineous to dark ferrugineous. Laterally elytra become gradually paler, but without distinct colour pattern. Punctuation very fine, laterally still finer and sparser (in part, hardly visible or absent). Discal row of punctures quite distinct. Dorsolateral row of punctures more irregular but still quite distinct. Lateral row of punctures somewhat irregular but clearly visible. Rather shiny, microsculptured (meshes partly very indistinct). Epipleura brownish to ferrugineous, microsculpture and punctures indistinct.

Ventral side: Dark ferrugineous to brownish. Punctuation rather fine. Abdomen almost impunctate except basally; with clearly discernible punctures. Rather shiny. Abdomen with very fine, partly indistinct microsculpture. Rather narrow stridulatory apparatus consists of numerous minute ridges. Prosternal process laterally finely margined, medial surface almost flat, rather finely punctate.

Legs: Pale ferrugineous to pale brownish. Pro- and mesotarsus quite broad. Protarsal claws distinctly modified (Fig. 1108).

Male genitalia: Figs 1109–1111.

Female: Protarsal claws simple and without stridulatory apparatus. Dimorphous; dorsally as male or submat, distinctly microsculptured.

Distribution: Zaire, Kenya, Tanzania, Malawi, Namibia, Zimbabwe (Fig. 1112). Additional literature records are Angola, South

Africa, Sudan, and Niger. Because they at least in part, are still unverified these records should be regarded at present as uncertain.

Biology: In Zimbabwe sampled in a stream with lilies.

Synonymy: The synonymy of *H. mucronatus* and *H. turgidus* follows OMER-COOPER (1963). The older name *H. mucronatus* is the valid name of the species.

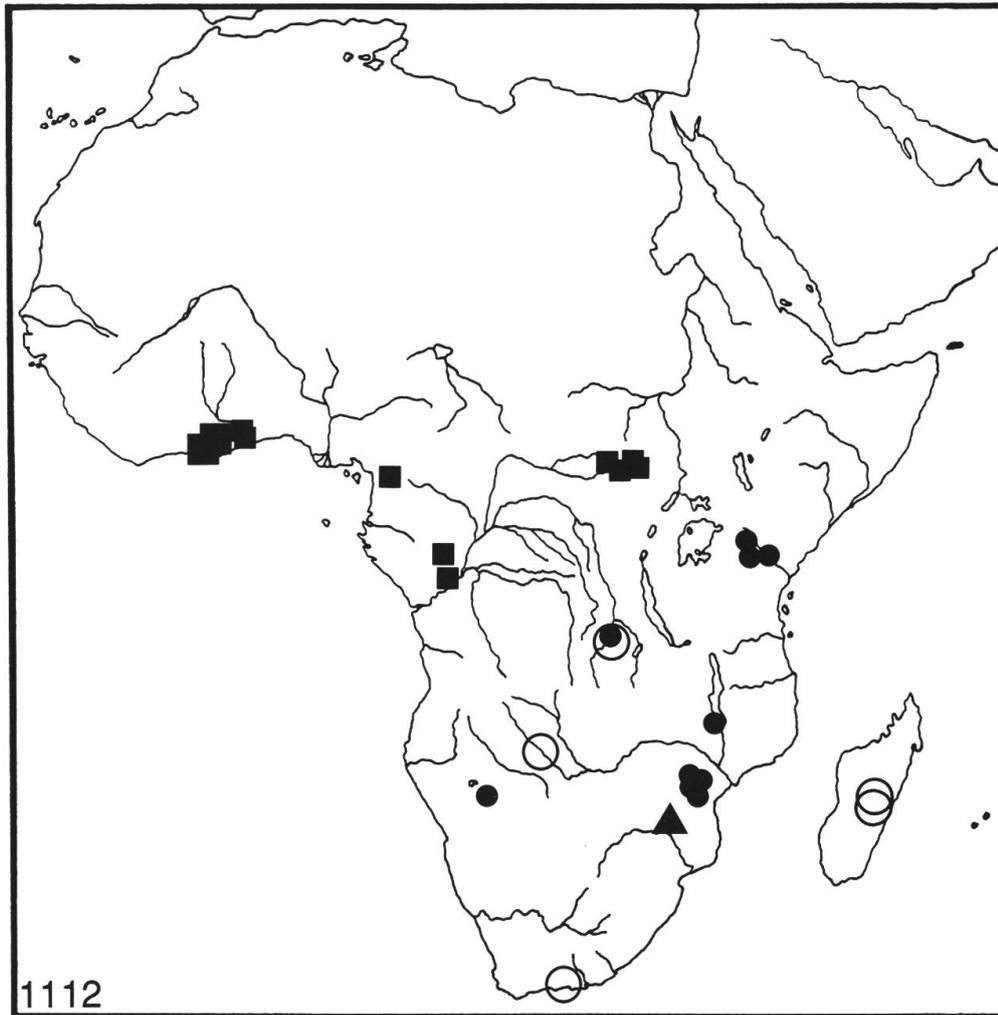


Fig. 1112: Distribution of *Hydrovatus vulpinus* (triangle), *H. unguiculatus* (large square), *H. mucronatus* (dot), *H. niger* (small square) and *H. contumax* (circle).

Hydrovatus niger Gschwendtner

Figs 1112–1121.

Hydrovatus niger GSCHWENDTNER, 1938:337 (orig. descr., faun.); BERTRAND, 1948:11 (juv. descr., det. uncertain, faun.); GUIGNOT, 1948c:8 (faun.); 1950c:5 (disc.); 1959a:173, 178 (descr., faun.); OMER-COOPER, 1963:182 (? = *H. uncus* = *H. villiersi*); PEDERZANI & ROCCHI, 1982:71 (faun.); BILARDO & ROCCHI, 1990:161, 170 (faun., biol.).

Type locality: Monga, Uelé, Parc National d'Albert, Zaire.

Type material studied: Holotype, m: Holotypus/Musée du Congo Uelé: Monga 18.IV–8.V.1935 G.F. de Vitte Parc Nat. Albert 1349/R Det. J. 4500/*Hydrovatus niger* Gsch. det. Gschwendt. (MAC). – Paratypes: Principally with same data as holotype (2 exx. OLL).

Additional material studied: Ghana: Ashanti Reg. Kwadaso 259 m/UV light trap on field 26.V.1969/*H. contumax* Guign. det. Wewalka, 1989 (1 ex. coll. Wewalka); Ashanti Kumasi 339 m/light trap 12., 18.V., 3., 16. VI.1967 (6 exx. TMB). – Cameroon: Ebolowa (4 exx. MNHN, 2 exx. MZH). – Congo: Plat. Koukouya Lekana m. 850 IV.1980/*H. niger* Gschw. det. Rocchi 1982 (1 ex. coll. Rocchi); same as preceding, but: *H. mucronatus* Reg. det. Pederzani 1980/*H. contumax* Guign. det. Wewalka 1989 (1 ex. coll. Wewalk a); Kindamba, Méya Settl./30.X., 12., 13.XI. 1963 by lamplight (2 exx. TMB, 1 ex. MZH). – Zaire: PNG (2 exx. MAC); Ht Zaire Umg. Doruma 18.IV.–10.V.1986/*H. contumax* Guign. det. Wewalka, 1989 (2 exx. coll. Wewalka). – Sudan: Equatoria Nzara 22.IV. 1986/*H. contumax* Guign. det. Wewalka, 1989 (1 ex. coll. Wewalka). In all, 26 exx.

Diagnosis: Very close to *H. mucronatus*, above, and *H. contumax*, below. From these two species *H. niger* is distinguished by differences in the shape of the penis (narrows quite evenly to the apex; is quite strongly curved and comparatively short), and in the appearance of the elytral punctures (between the suture and discal row with very fine punctures).

Length of body: 4.08–4.48 mm, breadth: 2.20–2.64 mm. Habitus (Fig. 1113), body somewhat elongated.

Head: Pale ferrugineous, with vague, ferrugineous interocular area. Sometimes darkened; dark ferrugineous to blackish. Very finely and sparsely punctate. Posteriorly punctures absent. At eyes and in shallow frontal depressions with slightly coarser and denser punctation. Rather shiny, distinctly microsculptured. Head frontally rounded, medially somewhat straightened. Between eyes very finely and narrowly margined (Fig. 1114). Antenna pale ferrugineous, rather slender, not distinctly modified (Fig. 1115).

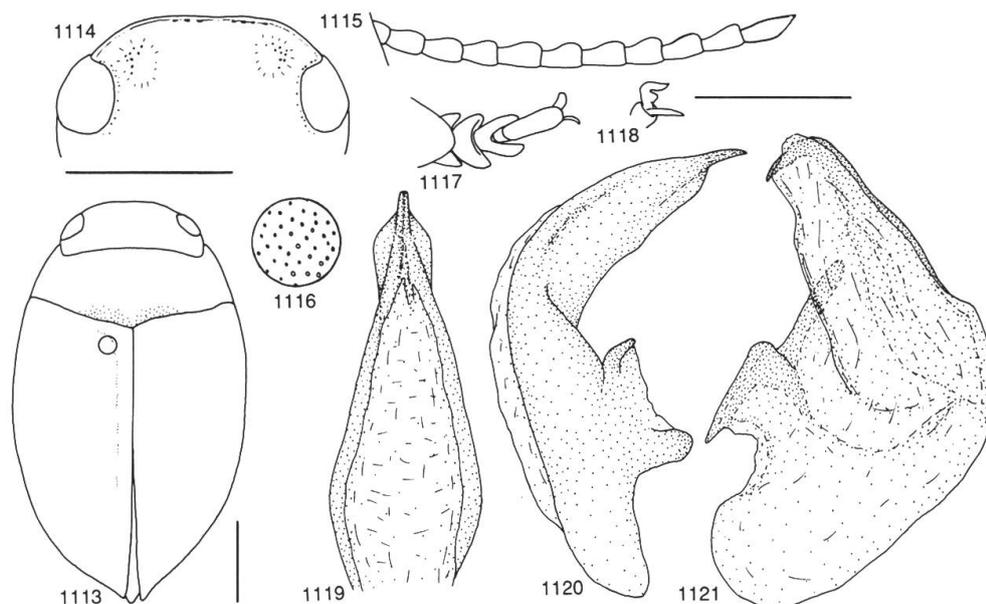
Pronotum: Dark ferrugineous to blackish. Laterally with quite narrow and vague pale ferrugineous to ferrugineous areas. Finely, sparsely and indistinctly punctate. Near pronotal margins with coarser punctures. Fine punctures laterally almost absent. Rather shiny, microsculptured (meshes quite distinct). Lateral outline of pronotum almost straight to slightly rounded.

Elytra: Dark ferrugineous to blackish. Laterally elytra become gradually paler; at epipleura pale ferrugineous to pale brownish. Without distinct colour pattern. Punctation fine to very fine (Fig. 1116), sparse, and somewhat irregularly distributed. Laterally punctures almost absent. Discal row of punctures distinct. Dorsolateral

row of punctures somewhat irregular and rather indistinct. Lateral row irregular but still distinct. Between discal and lateral rows of punctures with a few scattered, slightly coarser punctures. Shiny, very finely microsculptured (laterally in particular). Epipleura pale ferruginous to pale brownish, punctation and reticulation indistinct.

Ventral side: Ferruginous to pale ferruginous. Rather finely and sparsely punctate. Abdomen almost impunctate. Shiny to rather shiny, almost without reticulation. Abdomen finely microsculptured. Stridulatory apparatus narrow, consists of numerous fine striae. Prosternal process laterally distinctly margined, medial surface almost flat.

Legs: Pale ferruginous to pale brown. Pro- and mesotarsus somewhat enlarged (Fig. 1117). Protarsal claws asymmetric (Fig. 1118).



Figs 1113–1121: *Hydrovatus niger*. – 1113, habitus (location of illustration of punctures marked). – 1114, head, frontal aspect. – 1115, antenna. – 1116, elytral punctures (for location, see Fig. 1113). – 1117, male protarsus. – 1118, male protarsal claws. – 1119, penis, dorsal aspect. – 1120, penis, lateral aspect. – 1121, paramere. Left horizontal scale 1 mm, head; right horizontal scale 0.5 mm, antenna, punctures, protarsus and claws; left scale 1 mm, habitus; right scale 1 mm, genitalia.

Male genitalia: Figs 1119–1121.

Female: Protarsal claws not modified. Lacks stridulatory apparatus. Dimorphous; dorsal aspect rarely submat, with well developed reticulation.

Distribution: Ghana, Cameroon, Congo, Zaire, Sudan (Fig. 1112). Additional unverified records are Uganda (GUIGNOT, 1959a) and Gabon (BILARDO & ROCCHI, 1990).

Biology: In Congo sampled at an altitude of about 850 m a.s.l. In Ghana sampled with UV light trap in field. See also BILARDO & ROCCHI (1990).

Synonymy: OMER-COOPER (1963) listed *H. niger* as a possible synonym of *H. uncus*, but in this work it is synonymized with *H. villiersi*. Examination of type material of the two taxa (*H. niger* and *H. uncus*) shows they are not conspecific!

Hydrovatus contumax Guignot

Figs 1112, 1122–1129.

Hydrovatus contumax GUIGNOT, 1954a:4 (orig. descr., faun.); 1954b:12 (descr., faun.); 1959a:173, 180 (faun.); 1959c:140 (disc.); OMER-COOPER, 1965:201 (? syn. *H. rohani*).

Hydrovatus rohani GUIGNOT, 1954b:13 (disc., no descr.); 1955f:861 (disc., no descr.); 1959a:173, 179 (orig. descr., faun.; given as *H. rohani* Balfour-Browne in press); OMER-COOPER, 1965:201 (disc., faun.). **New synonym.**

Type locality: Mabwe, Upemba National Park, Zaire.

Type material studied: *H. contumax*: Holotype, m: Holotypus/Congo belge: PNU Mabwe (585 m) 31.I. 3.II. 1949 Mis. G.F. de Witte, 2299a/Coll. Mus. Tervuren/Type/Guignot det. 1953 *Hydrovatus contumax* Guign. Type m (MAC). – Paratypes: Same sampling data as holotype (2 exx. MAC). – *H. rohani*: Durban, Natal, South Africa (not located; according to original description in MNHN).

Additional material studied: Zaire: PNU Mabwe 25–28.I.1949/*H. uncus* B.-Br. det. Guignot, 1953 (1 ex. MAC). – Zambia: Rhod. Owest Riv. Cuando, Rohan-Cabot 1914/*H. rohani* Type J. Balfour-Browne det. (4 exx. MNHN, 2 BMNH; not real type material). – South Africa: Concordia nr Knysna 17.III.1954 *Scirpus* fringed vlei/*H. rohani* Pesch. det. J. B.-Br. 1955 (6 exx. BMNH, 2 exx. MZH). – Madagascar: Pr. Tananarive, env. Arivonimano 22.VII. 1970 (1 ex. coll. Wewalka); Env. Antsirabe, rte Ambositra 15.VII.1970/*H. contumax* Guign. det. Wewalka (1 ex. coll. Wewalka). In all, 20 exx.

Diagnosis: Very close to the two preceding species, *H. contumax* is characterized by the shape of the penis, which narrows quite abruptly to the apex, in combination with the elongated body. From *H. niger* it is also distinguished by coarser elytral punctation.

Description: only important distinguishing characters from description of *H. niger* recognized.

Length of body: 4.04–4.64 mm, breadth: 2.36–2.72 mm. Habitus (Fig. 1122).

Head: Frontal aspect in Fig. 1123. Antenna in Fig. 1124.

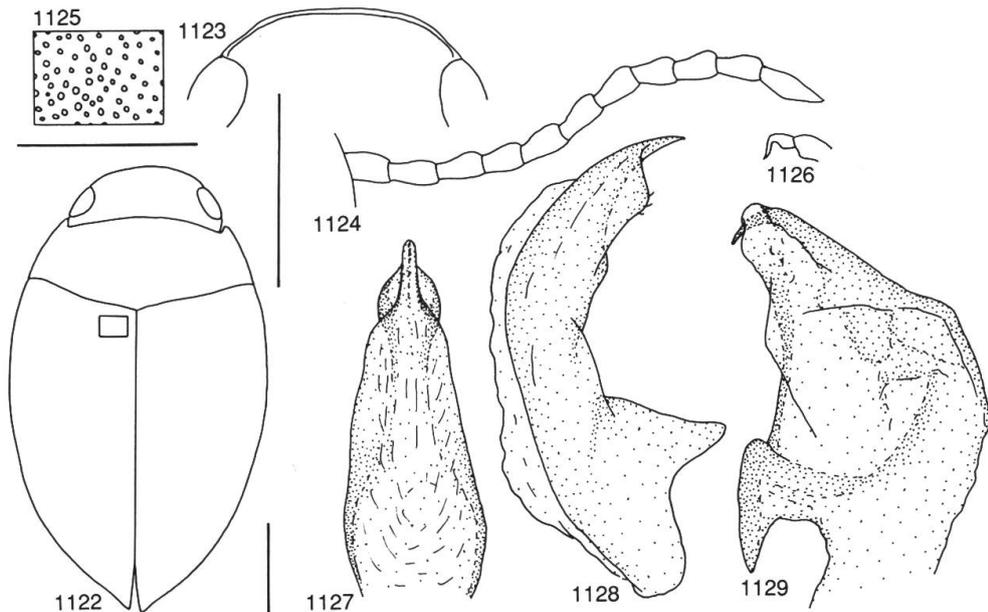
Pronotum and elytra: Punctation somewhat coarser (Fig. 1125).

Legs: Protarsal claws asymmetric (Fig. 1126)

Male genitalia: Figs 1127–1129.

Distribution: Zaire, Zambia, South Africa, Madagascar (Fig. 1112).

Biology: In South Africa sampled in a water-body “vlei” fringed with *Scirpus*.



Figs 1122–1129: *Hydrovatus contumax*. – 1122, habitus (location of illustration of punctures marked). – 1123, head, frontal aspect. – 1124, antenna. – 1125, elytral punctures (for location, see Fig. 1122). – 1126, male protarsal claw. – 1127, penis, dorsal aspect. – 1128, penis, lateral aspect. – 1129, paramere. Horizontal scale 0.5 mm, antenna, punctures and claw; left top scale 1 mm, head; left bottom scale 1 mm, habitus; right scale 1 mm, genitalia.

Synonymy: The real type material of *H. rohani* I could not examine. However, I assume that Guignot interpreted the species in accordance with material determined by J. Balfour-Browne as *H. rohani*. This is supported by the presence of material determined by J. Balfour-Browne in Paris. Comparison of such material with type of *H. contumax* shows that they are conspecific (with some doubt already suggested by OMER-COOPER, 1965). The older name, *H. contumax*, is the valid name of this species.

Hydrovatus villiersi Guignot

Figs 3, 7, 1130–1140.

Hydrovatus mundus OMER-COOPER, BALFOUR-BROWNE, 1939:482 (descr., faun.; in part *H. mundus*).

Hydrovatus obsoletus PESCHET, GUIGNOT, 1945a:305, 306, 311 (descr., faun.; in part *H. obsoletus*).

Hydrovatus villiersi GUIGNOT, 1955f:860 (orig. descr., faun.); 1956b:213 (faun.); OMER-COOPER, 1963:182 (? syn. *H. uncus*).

Hydrovatus albertianus GUIGNOT, 1954b:14 (faun., no descr.); 1959a:160, 165 (orig. descr., faun.; given as *H. albertianus* Balfour-Browne in press); OMER-COOPER, 1963:182 (? syn. *H. uncus*). **New synonym.**

Hydrovatus uncus GUIGNOT, 1953a:234 (faun., no descr.); 1954b:14 (faun., no descr.); 1958b:102 (disc., no descr.); 1959a:160, 164 (orig. descr., faun.; given as *H. uncus* Balfour-Browne in press); 1959c:139 (faun.); OMER-COOPER, 1963:182, 184 (descr., faun.); LEGROS, 1972:460 (disc., faun.); BILARDO, 1982b:250 (faun.); BILARDO & ROCCHI, 1987:96 (faun., biol.). **New synonym.**

Hydrovatus browneanus GUIGNOT, 1959c:140 (orig. descr., faun.). **New synonym.**

Type locality: Bafrechie, Mauritania.

Type material studied: *H. villiersi*: Holotype, m: IFAN 1953 Bafrechie (Mauritanie) 15. IX–10. X A. Villiers/Type/Det. Dr. Guignot, 1954 *Hydrovatus (Vathydrus) villiersi* Guignot Type m (MNHN). – Paratypes: Principally with same data as holotype (5 exx. IFAN, 2 exx. MNHN). – *H. albertianus*: Lectotype, m, by present designation: Congo belge PNA Kative 912 m, 10. VI. 1935 Mission H. Damas: (A)232/F. Guignot det., 1948: *Hydrovatus compactus* Sharp/R. Det. 7869 I (MAC). – Paralectotypes: Same data as lectotype (46 exx. MAC); same data as lectotype but Rwindi 1000 m 15. I. 1936, 467 (4 exx. MAC); same data as lectotype but Kamande (Lula) 8. II. 1935, 19 (1 ex. MAC); same data as lectotype but Kamande 4. V. 1935, 116 (7 exx. MAC); same data as lectotype but Kamande 18. XI. 1935, 441 (1 ex. MAC); same data as lectotype but Kasinga 11. VI. 1935, 240 (4 exx. MAC). Possible type material of *H. albertianus*: Congo belge, PNA Kamande Kianga 9. V. 1935, 146 (8 exx. MAC). – *H. browneanus*: Holotype, m: Congo Belge, Lac Albert Kasenyi UV 15. XII. 1953 J. Verbeke – KEA 4058/Type/F. Guignot det. 1956 *Hydrovatus (Vathydrus) browneanus* n.sp. Type m (ISN). – Paratypes: Same data as holotype but 23. VI. 1953, 4015 (1 ex. MNHN); same data as holotype but 26. VI. 1953, 4025 (1 ex. MNHN). – *H. uncus*: Lectotype, m, by present designation: Coll. Mus. Congo Lualaba: Maka 27. VI. 1947 Dr. M. Poll m/R. Dét. Z. 5583/Dr. F. Guignot det., 1950 *Hydrovatus uncus* Balf.-Br. (MAC). – Paralectotypes: Same data as lectotype (6 exx. MAC); Coll. Mus. Congo Elisabethville, la lum. XI. 50/VI. 51 Ch. Seydel/Guignot det. 1953 *Hydrovatus uncus* B-Br. (1 ex. MAC); Congo Belge Lac Albert: Kasenyi 4. V. 25. VI. 1953/Coll. Mus. Congo don Dr. Guignot/F. Guignot det., 1956 *Hydrovatus (Vathydrus) uncus* Balf.-Br. (1 ex. MAC). Possible type material of *H. uncus*: Ethiop. merid. Nanoropus Bords du Rodolphe/Museum Paris Miss. Omo 1932–1933/m/Allotype (1 ex. MNHN). No association to any name is given. Text of original description indicates association with *H. uncus*.

Additional material studied: Senegal: Forêt de Bandia VIII. 1971 (1 ex. MNHN); Bambey 31. VIII. 1949 R. Toll, on rice twigs (1 ex. BMNH); Senegal (1 ex. MNHN). – Chad: Baguirmi Tcheckna VIII. 1904 (1 ex. MNHN); Rives Moyen Chari Gory-Damarou VI. 1904 (5 exx. MNHN, 4 exx. MZH); Ft. Archambault Bakaré ou Bounghoul IV. 1904 (1 ex. MNHN). – Sudan: Roseires (1 ex. MNHN); Malakal 5–20. I. 1963/ad lucem (22 exx. MZH); Malakal (1 ex. ZSM); Bl. Nile Wad es Zaki 10. V. 1963 (2 exx. MZH); Kordof./H. spec. det. Gschwendtner (1 ex. OLL); Sudan gut. Wau 18. X. 1930 at light (1 ex. BMNH); Shambe B. el Jebel 28. V.–19. VI. 1954 (10 exx. BMNH); River Post 21, appr. 105 km S L. No/28. V.–19. VI. 1954 (6 exx. BMNH);

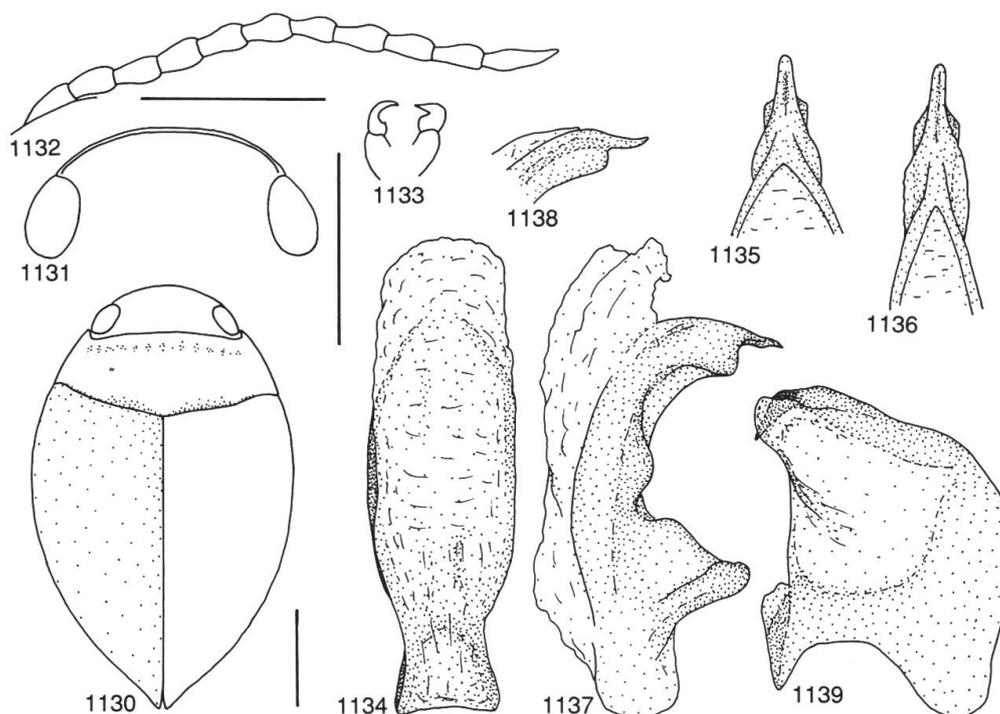
Sobat R. Zaphirol/*H. mundus* O.-C. det. J. Balfour-Browne (1 ex. BMNH). – Ethiopia: Env. Addis Abeba 20.VIII.1969 lum. UV/*H. uncus* B-Br. det. Brancucci (3 exx. MZH, 5 exx. coll. Nilsson, 1 ex. coll. Rocchi); Nanoropus Bords du Rodolphe 565 m (8 exx. MNHN, 5 exx. MZH); Bourié Bord Riv. Omo 600 m (6 exx. MNHN, 1 ex. MZH); Abyss. Centr. (10 exx. MNHN, 2 exx. MZH). – Kenya Col. L. Baringo 1931/Type/*H. mundus* O.-C. det. J. Balfour-Browne/*H. uncus* Type! J. Balfour-Browne det. 1957 (1 ex. BMNH; not real type material); same but no type labels (6 exx. BMNH). – Uganda: L. Edward/*H. mundus* O.-C. det. J. Balfour-Browne (3 exx. BMNH); L. Kijanebalola/*H. mundus* O.-C. det. J. Balfour-Browne (2 exx. BMNH); Ankole distr. L. Nakavali/*H. mundus* O.-C. det. J. Balfour-Browne (1 ex. BMNH). – Zaire: PNU Mabwe, lac Upemba 585 m, 1–12. VIII.1947/Guignot det. 1952 *H. albertianus* B-Br. (1 ex. MAC); Congo Belge/1983 (2 exx. MNHN). – Malawi: Dally's hotel nr Ft Johnstone 23.VIII.1948 (4 exx. AMS); Livingstonia 21.X.1948/*H. uncus* J. B-Br. det. Balfour-Browne (4 exx. AMS). – Zimbabwe: Muzdi VII.1986 (1 ex. coll. Smith); N. Zimb. Zambesi Valley, 7 km SE Angwa Br. 18.VI.–9.IX.1988 (2 exx. coll. Weyrich). – South Africa: Zululd Empangeni 25.XII.1976 (1 ex. TMP). In all, 222 exx.

Diagnosis: A widely distributed species, which exhibits slight variation in genital features, and still is easily identified by examination of the penis: The strongly curved and ventral outline of the penis apex is truncate. It is closely related to the three preceding species, but with a more globular body-shape. Further studies will show whether this is a question of a species-complex or a single species that exhibits some variation in certain features. At least at present, I find the latter alternative more probable.

Length of body: 3.68–4.40 mm, breadth: 2.38–2.72 mm. Habitus (Fig. 1130), body shape quite globular.

Head: Pale ferrugineous to dark ferrugineous. Frontally often darker than posteriorly on head. Punctuation very fine, sparse, partly absent. Narrowly at eyes and in rather shallow frontal depressions punctures somewhat denser. Submat, microsculptured (meshes posteriorly discernible but weakly developed). Head frontally rounded, medially often straightened. Between eyes narrowly margined (Fig. 1131). Margin sometimes reduced close to eyes. Antenna pale ferrugineous, slender and not modified (Fig. 1132).

Pronotum: Pale ferrugineous to blackish ferrugineous. Laterally pronotum becomes gradually slightly paler. Anteriorly and posteriorly often with vague darkened areas. Punctuation rather fine to fine, fairly dense. Laterally punctures sparser, finer and more irregularly distributed. Laterally on disc with a comparatively wide impunctate area. Shiny, microsculpture weakly developed, partly absent. Laterally, very fine, often scattered reticulation may be discerned. Lateral outline of pronotum almost straight to rounded.



Figs 1130–1139: *Hydrovatus villiersi*. – 1130, habitus. – 1131, head, frontal aspect. – 1132, antenna. – 1133, male protarsal claws. – 1134, penis, dorsal aspect. – 1135, penis apex (Mauretania). – 1136, penis apex (Sudan). – 1137, penis, lateral aspect. – 1138, penis apex (variation). – 1139, paramere. Horizontal scale 0.5 mm, antenna and claws; left top scale 1 mm, head; left bottom scale 1 mm, habitus; right scale 1 mm, genitalia.

Elytra: Pale ferruginous to blackish ferruginous. Darkest frontally at suture and palest laterally. Without distinct colour pattern. Punctuation fine to rather fine, quite dense. Laterally and apically punctures finer and distinctly sparser. Discal row of punctures basally discernible but indistinct. Dorsolateral row of punctures absent. Lateral row of punctures discernible, but quite irregular. Shiny, almost without microsculpture. Apically reticulation clearly visible. Epipleura pale ferruginous to dark ferruginous, indistinctly punctate, almost without reticulation.

Ventral side: Pale ferruginous to dark ferruginous. Finely to rather finely and fairly densely punctate. Abdomen, except basally, almost impunctate. Shiny, almost without microsculpture. Abdomen very finely reticulated. Stridulatory apparatus consists of numerous minute ridges (Fig. 3). Prosternal process laterally finely margined, medial surface somewhat uneven, quite coarsely punctate. Metacoxal process–metatrochanter–metafemur as in Fig. 7.

Legs: Pale ferrugineous to ferrugineous. Pro- and mesotarsus fairly broad. Protarsal claws asymmetric (Fig. 1133).

Male genitalia: Figs 1134–1139. Minor differences are seen in configuration of penis apex (geographical variation).

Female: Dimorphous, body as male or duller, distinctly microsculptured. Protarsal claws simple. Without stridulatory apparatus.

Distribution: Mauretania, Senegal, Chad, Sudan, Ethiopia, Kenya, Uganda, Zaire, Malawi, Zimbabwe, South Africa (Fig. 1140). Additional, unverified records are Ghana (GUIGNOT, 1959a) and Botswana (BILARDO & ROCCHI, 1987).

Biology: Insufficiently documented. Often sampled at light collection. Also captured at quite high altitudes (500–600 m a.s.l.). See also BILARDO & ROCCHI (1987).

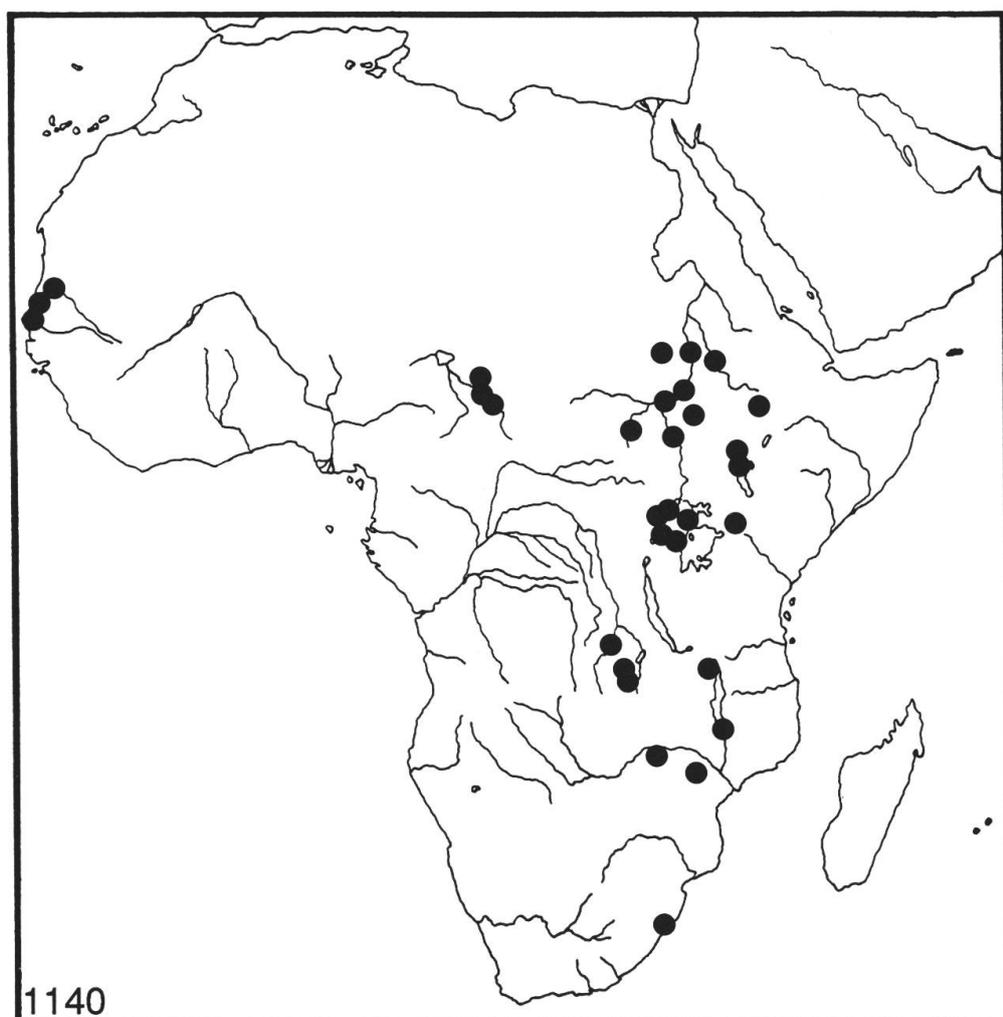


Fig. 1140: Distribution of *Hydrovatus villiersi*.

Synonymy: Despite minor morphological differences I think that the four species involved: *H. villiersi*, *H. albertianus*, *H. browneanus* and *H. uncus*, belong to one somewhat variable species. The oldest name, *H. villiersi*, is the valid name of the species.

6.5.13. Species group 13 (sp.gr. *pulcher*)

Hydrovatus balneator Guignot

Figs 1141–1146, 1153.

Hydrovatus balneator GUIGNOT, 1954e:196 (orig. descr., faun.); 1959a:185, 188 (descr., faun.); LEGROS, 1972:461 (faun.); BILARDO & PEDERZANI, 1978:104, 107 (descr., disc., faun.); BILARDO & ROCCHI, 1990:170 (faun.).

Type locality: **Bambey, Senegal.**

Type material studied: Holotype, f: Bambey Senegal S. Risbec/f/Type/Museum Paris collection Guignot (MNHN).

Additional material studied: Senegal: 11 km S Ziguinchor at light 19.00–21.00 8.XI.1977 UTM 28 PCJ6479 Loc 28/? *H. balneator* Guig. det. Nilsson 1989 (2 exx. coll. Nilsson); Parc National du Niokolo-Koba Badi (1 ex. IFAN). – Guinea Bissau: Cacheu: 5 km W Bula 19.VII.1992 (1 ex. coll. Persson). – Burkina: Ouagadougou 3–5.XI.1973 (1 ex. MZH). – Ghana: N reg. Damongo, Mole game res. 220 m/on light 12.VIII.1971/*H. balneator* Guign. det. Wewalka, 1989 (1 ex. coll. Wewalka). – Nigeria: Bauchi swimming bath 9.IV.1968 (2 exx. AMS); SE St. Obudu Cattle Ranch 16–18.VIII.1973 (1 ex. MZH). – Chad: Ft. Archambault Bakare ou Bounoul V. 1904 (1 ex. MNHN). – Sudan: Bahr el Abiad (3 exx. MNB). – Incorrect labelling: Australia: Capyork (5 exx. MNB). In all, 19 exx.

Diagnosis: A distinct species, which is closely related to *H. sitistus* and also to *H. bullatus*. *H. balneator* is characterized by the combination of a distinct dorsal colour pattern and peculiar male genitalia (cf. *H. sitistus*). The penis becomes broader towards the abruptly narrowing apex (dorsal aspect); the parameral hook is slightly undulate. Externally *H. balneator* is similar to *H. sitistcus*, but is separated from *H. bullatus* by its more slender body shape.

Length of body: 3.76–4.12 mm, breadth: 2.42–2.76 mm. Habitus (Fig. 1141), body somewhat elongated.

Head: Pale ferrugineous to ferrugineous. Punctuation fine, sparse, slightly irregularly distributed. Narrowly at eyes and in rather shallow frontal depressions punctures somewhat denser. Rather shiny, although microsculptured (meshes distinct). Minute tubercles above base of antennae without reticulation. Head frontally rounded, medially almost straight. Between eyes finely margined (Fig. 1142). Antenna pale ferrugineous, rather slender (Fig. 1143).

Pronotum: Ferrugineous to pale ferrugineous. Frontally and mediobasally with somewhat vague blackish areas. Punctuation rather fine, quite dense. Laterally punctures slightly finer, sparser and more