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 Boungoul 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. Punctation 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).

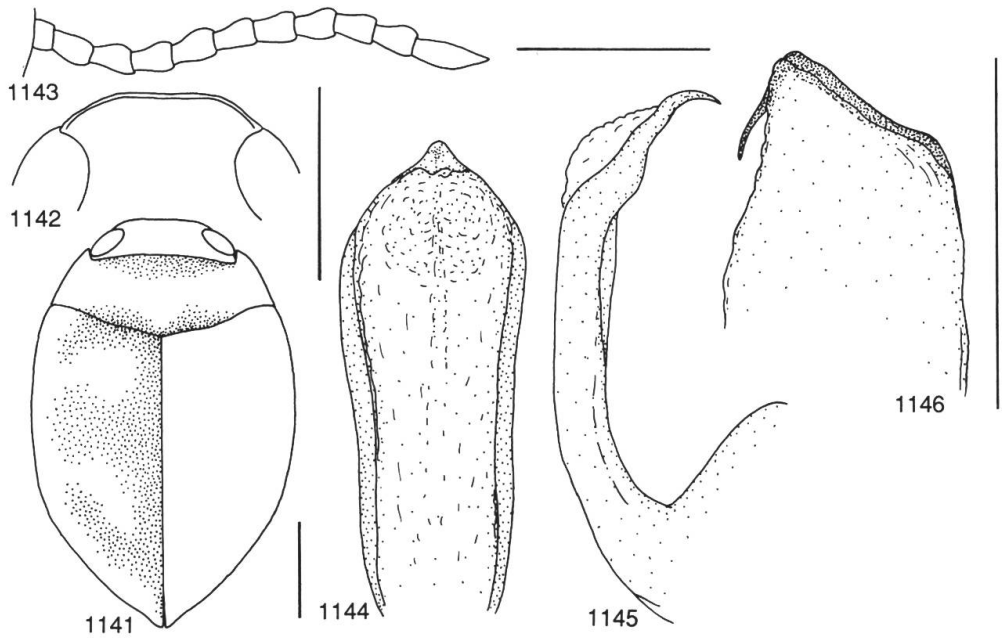
Pronotum: Ferrugineous to pale ferrugineous. Frontally and mediobasally with somewhat vague blackish areas. Punctation rather fine, quite dense. Laterally punctures slightly finer, sparser and more

irregularly distributed. Shiny, microsculpture hardly visible (laterally reticulation partly clearly discernible). Lateral outline of pronotum almost straight to slightly rounded.

Elytra: Ferrugineous to pale ferrugineous, with quite distinct blackish markings (Fig. 1141). Punctation rather fine, fairly dense. Apically and close to epipleura with distinctly finer punctures. Rows of punctures absent or indistinct (mixed with adjacent ordinary punctation). Shiny, almost without microsculpture. Apically with distinct reticulation. Epipleura pale ferrugineous to ferrugineous. Inner half of epipleuron with dense punctation. Finely and rather indistinctly microsculptured.

Ventral side: Dark ferrugineous to pale ferrugineous. Punctation rather fine to fine, fairly dense. Abdomen, except base, with distinctly finer and sparser punctures; partly almost impunctate. Almost without microsculpture, rather shiny. Abdomen, except laterally, with quite distinct reticulation. Stridulatory apparatus consists of numerous minute ridges. Prosternal process laterally finely margined, medial surface almost flat, distinctly punctate.

Legs: Pale ferrugineous to ferrugineous. Pro- and mesotarsus a little enlarged.



Figs 1141–1146: *Hydrovatus balneator*. – 1141, habitus. – 1142, head, frontal aspect. – 1143, antenna. – 1144, penis, dorsal aspect. – 1145, penis, lateral aspect. – 1146, apical part of paramere. Horizontal scale 0.5 mm, antenna; left top scale 1 mm, head; left bottom scale 1 mm, habitus; right scale 0.5 mm, genitalia.

Male genitalia: Figs 1144–1146.

Female: Externally as male, but without stridulatory apparatus.

Distribution: Senegal, Guinea Bissau, Burkina, Ghana, Nigeria, Chad, Sudan (Fig. 1153). An additional unverified record is Gabon (BILARDO & PEDERZANI, 1978).

Biology: Practically unknown. Sampled on light in Ghana.

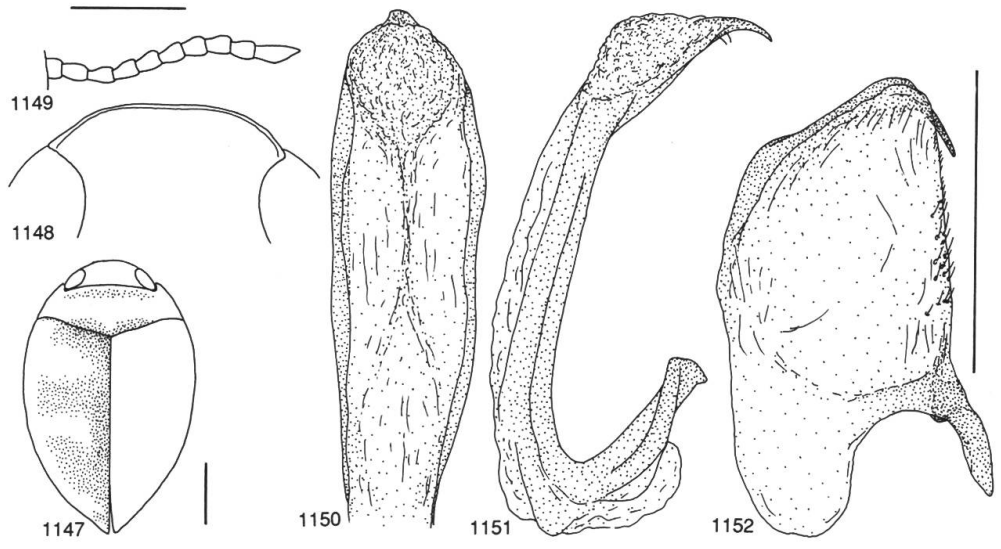
Hydrovatus sitistus Omer-Cooper Figs 1147–1153.

Hydrovatus sitistus OMER-COOPER, 1963:183, 184 (orig. descr., faun.); BILARDO & PEDERZANI, 1978:105 (disc., faun.); BILARDO & ROCCHI, 1987:98 (descr., faun., biol.).

Type locality: Wankie Game Reserve, Zimbabwe.

Type material studied: Holotype, m: Holotype/*H. sitistus* n.sp./S. Rhodesia Wankie Game Reserve 2.IX.1948 J. O–C./Brit. Mus. 1978–308/*Hydrovatus sitistus* J. O.-C., M.E. Bacchus det. 1978 Holotype (BMNH). – Paratypes: Principally with same data as holotype (4 exx. AMS).

Additional material studied: Tanzania: Pemba IX.1955 (2 exx. AMS). – Angola: Mongua 4.VI.1954, shallow reedy vlei/*H. huilanus* Type J. B.-Br. I.1957 (3 exx. BMNH); R. Giraul 10 mi. E Mocamedes 27–29.II.1972/at light (1 ex. BMNH). – Zimbabwe: N Zimb. Zambesi Vall. 7 km SE Angwa Br. 18.VI.–9.IX.1988 (1 ex. coll. Weyrich); Gwaai R. 1.IX.1948 (1 ex. AMS); Wankie N.P. nr main camp, pan 6.XI.1959/*H. pulcher* Gschw. det. J. Balfour-Browne 1963 (8 exx. BMNH, 2 exx. MZH); Nuanetsi R. Malipati, bush IV–V.1961/*H. pulcher* Gschw. det. J. Balfour-Browne 1962 (1 ex. BMNH). – Madagascar: Madagascar (1 ex. MNHN). In all, 25 exx.



Figs 1147–1152: *Hydrovatus sitistus*. – 1147, habitus. – 1148, head, frontal aspect. – 1149, antenna. – 1150, penis, dorsal aspect. – 1151, penis, lateral aspect. – 1152, paramere. Horizontal scale 0.5 mm, head and antenna; left scale 1 mm, habitus; right scale 0.5 mm, genitalia.

Diagnosis: Closely related to *H. balneator* above. Externally similar to this species. For separation of the two species the male genitalia must be examined: In *H. sitistus* the penis becomes only slightly broader towards a more gradually narrowing apex (dorsal aspect) and the apical hook of paramere is almost straight, not undulate. See also diagnosis of *H. balneator,* p. x.

Description: only diagnostically important features recognized; cf. *H. balneator* above.

Length of body: 3.88–4.52 mm, breadth: 2.52–2.88 mm. Habitus in Fig. 1147.

Head: Frontal aspect and antenna in Figs 1148–1149.

Elytra: Colour pattern as in Fig. 1147.

Male genitalia: Figs 1150–1152.

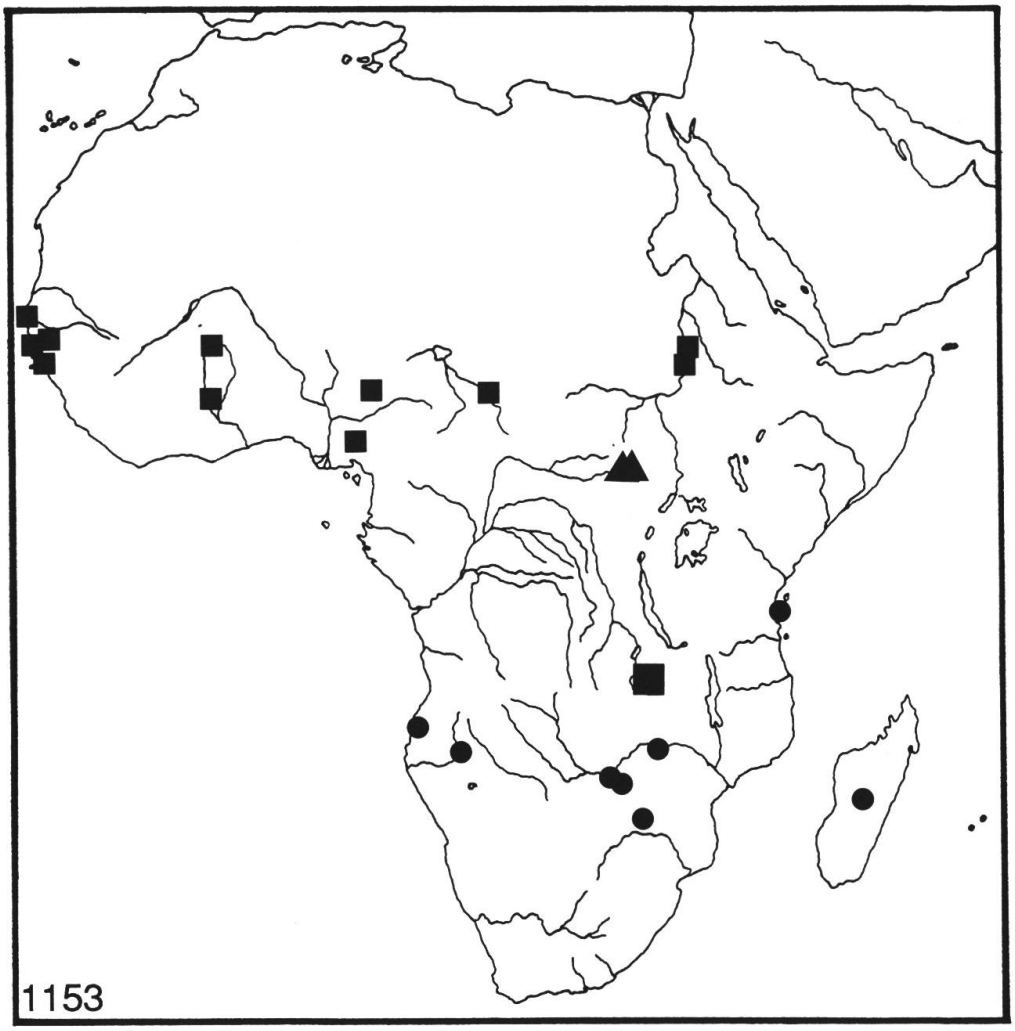
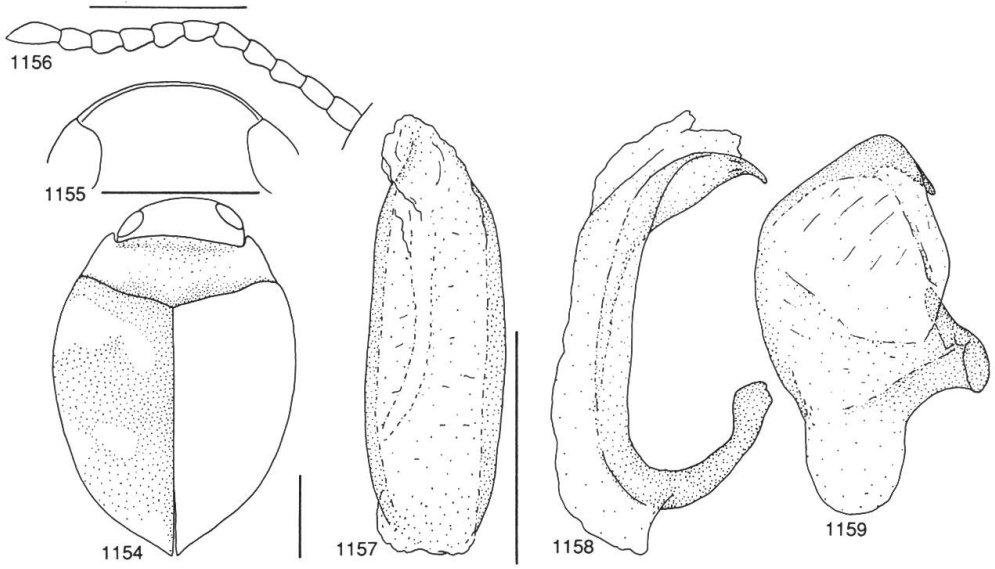


Fig. 1153: Distribution of *Hydrovatus balneator* (small square), *H. sitistus* (dot), *H. bullatus* (triangle) and *H. wittei* (large square).



Figs 1154–1159: *Hydrovatus bullatus*. – 1154, habitus. – 1155, head, frontal aspect.– 1156, antenna. – 1157, penis, dorsal aspect. – 1158, penis, lateral aspect. – 1159, paramere. Top horisontal scale 0.5 mm, antenna; bottom horisontal scale 1 mm, head; left scale 1 mm, habitus; right scale 0.5 mm, genitalia.

Elytra: Blackish to dark ferrugineous, with vague ferrugineous to pale ferrugineous areas (Fig. 1154). Rather finely and densely punctate. Apically and near epipleura punctures distinctly finer, partly hardly visible. Discal row of punctures basally sometimes discernible although mixed with adjacent punctures. Dorsolateral row of punctures not discernible. Lateral row of punctures indistinct but still discernible. Shiny, very finely and indistinctly microsculptured (meshes often reduced). Epipleura pale ferrugineous to ferrugineous, finely and quite densely punctate. Shiny and with very fine microsculpture.

Ventral side: Ferrugineous. Rather finely and quite densely punctate. Abdomen almost impunctate. Shiny, microsculpture lacking. Abdomen finely reticulated. Stridulatory apparatus consists of fine and dense ridges. Prosternal process laterally quite finely margined, medial surface almost flat and with irregular, rather indistinct punctation.

Legs: Pale ferrugineous to ferrugineous. Pro- and mesotarsus only slightly enlarged.

Male genitalia: Figs 1157–1159.

Female: Externally as male but lacks stridulatory files.

Distribution: Zaire (Fig. 1153).

Biology: Unknown.

Distribution: Tanzania, Zimbabwe, Madagascar (Fig. 1153). An additional unverified record is Botswana (BILARDO & ROCCHI, 1987).

Biology: Badly known. In Angola sampled in a reedy vlei–waterbody, and also at light collection. See also BILARDO & ROCCHI (1987).

Hydrovatus bullatus Guignot Figs 1153–1159.

Hydrovatus bullatus GUIGNOT, 1958b:5 (orig. descr., faun.; in part *H. pulcher* Gschwendtner).

Type locality: Garamba National Park, Zaire.

Type material studied: Holotype, m: Holotypus/Congo belge PNG Miss. H. De Saeger 1/c/2, 6.I.1950 Réc. H. Demoulin, 150/Coll. Mus. Congo (ex coll. I.P.N.C.B.)/ Dr. F. Guignot det., 1955 *Hydrovatus (Vathydrus) bullatus* n.sp. Type (MAC). – Paratypes: Principally same as holotype but 26.XII.1949, 143 (1 ex. MAC); 20.II.1950, 257 (1 ex. MAC); 4.V.1951,1656 (1 ex. ISN); 26.VI.1951, 1982 (1 ex. MAC); 18.VII.1951, 2106 (1 ex. ISN); 4.X.1951, 2511 (2 exx. ISN); 21.IV.1952, 3381 (1 ex. ISN). Incorrectly associated with *H. bullatus;* belongs to *H. pulcher:* PNG 20.V.1952, 3489 (1 ex. ISN, 4 exx. MAC).

Additional material studied: Zaire: Ht. Zaire Umg. Doruma 18.IV.–10.V.1986 (1 ex. coll. Wewalka). In all, 15 exx.

Diagnosis: A quite distinct species, which is probably most closely related to *H. balneator* and *H. sitistus* above. From these two species *H. bullatus* is distinguished by a broader body and by differences exhibited by the male genitalia: Penis does not become broader towards the apex, which narrows quite evenly to the extreme tip (dorsal aspect); the parameral hook is broader and shorter.

Length of body: 4.08–4.12 mm, breadth: 2.68–2.88 mm. Habitus (Fig. 1154), body quite broad.

Head: Pale ferrugineous to ferrugineous. Finely and rather sparsely punctate. Narrowly at eyes and in quite shallow frontal depressions with denser punctation. Slightly mat, microsculptured (meshes distinct). Head frontally rounded, narrowly margined (Fig. 1155). Antenna pale ferrugineous, slender (Fig. 1156).

Pronotum: Pale ferrugineous to ferrugineous. Anteriorly and basally with somewhat vague blackish areas. Rather finely and densely punctate. Punctures somewhat irregularly distributed. Laterally on disc with distinctly finer and sparser punctation. Rather shiny, microsculptured (meshes weakly developed, partly rather indistinct). Lateral outline of pronotum posteriorly almost straight, anteriorly distinctly curved.

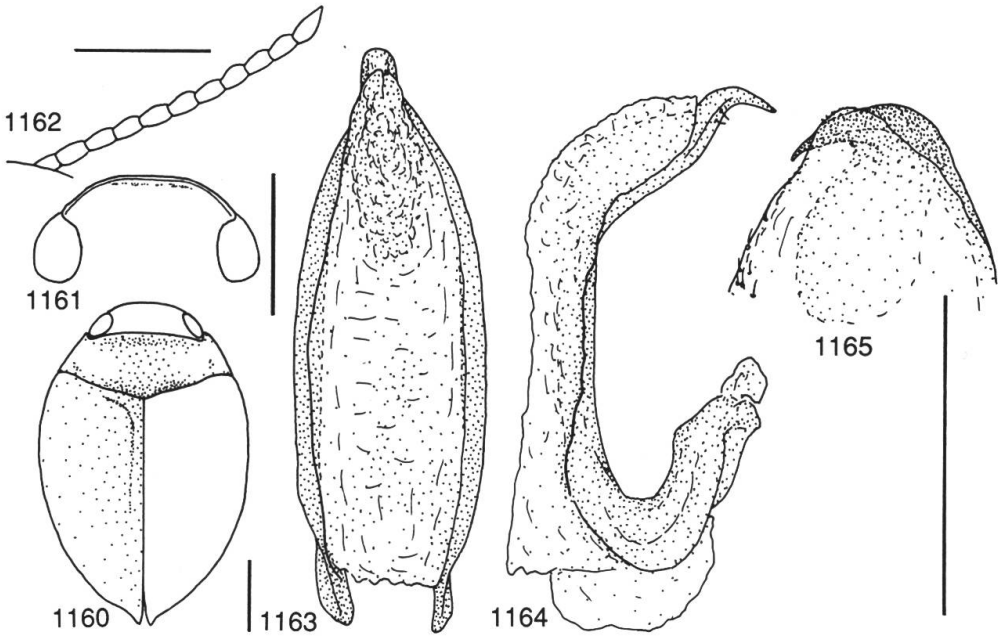
Hydrovatus wittei n.sp. Figs 1153, 1160–1165.

Type locality: Kakyelo, Katanga, Zaire.

Type material: Holotype, m: Holotypus/Musée du Congo Katanga: Kakyelo 1/ 9.XI.1930 G.F. de Witte/R. Dét. A 2166/*Hydrovatus wittei* Type! J. Balfour-Browne det. (MAC). – Paratypes: Principally with same data as holotype, but three specimens provided with determination label: *Hydrovatus mucronatus* Rég. det. Gschwendt. (3 exx. MAC, 1 ex. MZH). In all, 5 exx.

Diagnosis: A quite well-defined species characterized particularly by genital features: Penis broad, narrows quite gradually to the apex of the penis (dorsal aspect), which is somewhat undulate and strongly bent downwards (lateral aspect); the apical hook of the paramere is quite strongly built, robust with its apical outline quite evenly rounded. General colouration of head distinctly paler in comparison with colouration of pronotum and elytra.

Length of body: 4.04–4.32 mm, breadth: 2.60–2.80 mm. Habitus (Fig. 1160), body shape quite globular.



Figs 1160–1165: *Hydrovatus wittei*. – 1160, habitus. – 1161, head, frontal aspect. – 1162, antenna. – 1163, penis, dorsal aspect. – 1164, penis, lateral aspect. – 1165, apical part of paramere. Horizontal scale 0.5 mm, antenna; left top scale 1 mm, head; left bottom scale 1 mm, habitus; right scale 0.5 mm, genitalia.

Head: Pale ferrugineous to ferrugineous, centre of head sometimes slightly darkened. Punctation fine, rather sparse and slightly irregularly distributed. At eyes and in shallow frontal depressions with somewhat denser punctures. Rather shiny, finely microsculptured

(meshes clearly discernible). Head frontally rounded, medially somewhat straightened. Narrowly margined. Medially along foremargin with some coarser punctures (Fig. 1161). Antennae pale ferrugineous, slender, not distinctly modified (Fig. 1162).

Pronotum: Dark ferrugineous to blackish ferrugineous. Laterally pronotum becomes gradually paler; at sides pale ferrugineous. Punctation rather fine, quite dense. Laterally punctures still finer and laterodiscally with a narrow, sparsely punctate area. Rather shiny, finely microsculptured (meshes at least laterally discernible). Lateral outline of pronotum almost straight.

Elytra: Blackish ferrugineous to dark ferrugineous. Laterally elytra become gradually paler; at epipleura pale ferrugineous to pale brown. Without distinct colour pattern. Punctation rather fine and dense. Laterally and apically punctures finer and sparser, somewhat irregularly distributed. Discal and dorsolateral rows of punctures indistinct, often hardly visible. Lateral row of punctures irregular and rather indistinct but still discernible. Rather shiny, indistinctly microsculptured. Meshes apically clearly visible. Epipleura pale ferrugineous, inner part finely punctate. Rather shiny and finely microsculptured.

Ventral side: Medially ferrugineous, laterally and apically pale ferrugineous. Punctation rather fine to coarse and quite dense. Abdomen with distinctly finer and sparser punctures; partly almost impunctate. Shiny, with scattered microsculpture. Abdomen slightly mat, with fine microsculpture. Stridulatory apparatus consists of numerous, hardly distinguishable ridges. Prosternal process laterally quite broadly margined, medial surface slightly convex and with fine punctures.

Legs: Pale ferrugineous to ferrugineous. Pro- and mesotarsus somewhat enlarged, claws simple.

Male genitalia: Figs 1163–1165.

Female: Externally almost as male but lacks stridulatory apparatus.

Distribution: Zaire (Fig. 1153).

Biology: Unknown.

Hydrovatus cruentatus Kolbe Figs 1166–1171, 1184.

Hydrovatus cruentatus KOLBE, 1883:404, 405 (orig. descr., faun.); BRANDEN, 1885:26 (faun.); RÉGIMBART, 1895b:115 (faun.; syn. *H. confusus* Régimbart (Guignot 1959a)); 1903:12 (descr., faun.); ZIMMERMANN, 1920a:33 (cat., faun.); GUIGNOT, 1954f:281 (disc.; by mistake given as *H. cruentatus* Régimbart); 1959a:184, 186 (descr., faun.).

Type locality: Madagascar.

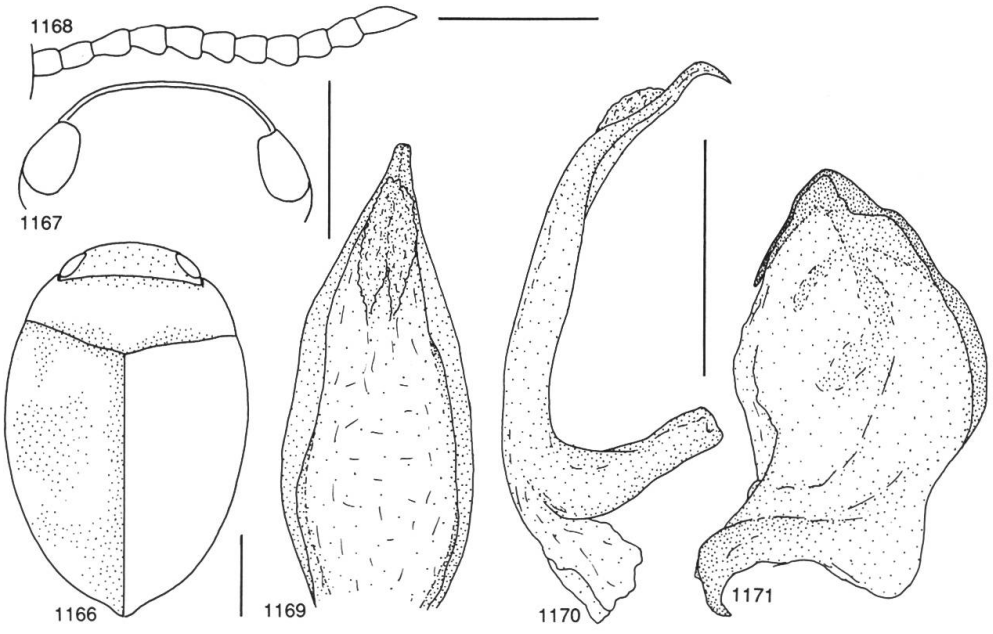
Type material studied: Holotype, f: 67045/Type/*Hydrovatus cruentatus* Kolbe/ Madagascar Goudot (MNB).

Additional material studied: Madagascar: Ambositra (1 ex. MNHN, 1 ex. MZH); Vatomandry VIII.1934 (2 exx. MNHN); B. Antongil (4 exx. MNHN); Maevatanana (1 ex. MNHN); Pays Androy (1 ex. MNHN); Riv. Ambarizanahany/Ambongo 1927 (1 ex. MNHN, 1 ex. MZH); Madag. (1 ex. MZH). In all, 14 exx.

Diagnosis: A quite distinct species which is characterized by features exhibited by the male genitalia: Broad penis narrows almost evenly towards the apex (dorsal aspect); the apex of the penis distinctly curved downwards (lateral aspect); the apical hook of the paramere long.

Length of body: 4.28–4.40 mm, breadth: 2.84–3.00 mm. Habitus (Fig. 1166), shape of body quite globular.

Head: Dark ferrugineous to ferrugineous. Finely and rather sparsely punctate. In shallow frontal depressions and narrowly at eyes with denser punctures. Slightly mat, microsculptured (meshes distinct). Head frontally rounded, medially straightened and between eyes narrowly margined (Fig. 1167). Antenna pale ferrugineous, rather slender (Fig. 1168).



Figs 1166–1171: *Hydrovatus cruentatus*. – 1166, habitus. – 1167, head, frontal aspect. – 1168, antenna. – 1169, penis, dorsal aspect. – 1170, penis, lateral aspect. – 1171, paramere. Horizontal scale 0.5 mm, antenna; left top scale 1 mm, head; left bottom scale 1 mm, habitus; right scale 0.5 mm, genitalia.

Pronotum: Dark ferrugineous to ferrugineous. Anteriorly and posteriorly with vague blackish areas. Rather finely and densely punctate. Laterally on disc with finer and somewaht sparser punctures. Rather shiny, although microsculptured (meshes distinct). Lateral outline of pronotum rounded.

Elytra: Ferrugineous, with vague dark ferrugineous to blackish areas (Fig. 1166). Rather finely and densely punctate. Apically and close to epipleura punctures distinctly finer and sparser. Discal and lateral rows of punctures generally discernible despite dense surrounding punctation. Dorsolateral row of punctures defined by few but a little coarser punctures. Slightly mat, rather finely microsculptured (meshes quite distinct). Epipleura pale ferrugineous, somewhat indistinctly punctate and finely microsculptured.

Ventral side: Dark ferrugineous to ferrugineous. Metathorax with fine to fairly coarse punctures (medially most fine). Metacoxal plates with coarse to fairly coarse and dense punctation. Abdomen basally with somewhat indistinct punctures, otherwise almost impunctate. Shiny, with scattered fine reticulation. Abdomen submat, distinctly microsculptured. Stridulatory apparatus consists of rather minute ridges. Prosternal process laterally rather finely margined, medial surface almost flat and distinctly punctate.

Legs: Ferrugineous to pale ferrugineous. Pro- and mesotarsus slightly enlarged.

Male genitalia: Figs 1169–1171.

Female: Externally as male but lacks stridulatory apparatus.

Distribution: Madagascar (Fig. 1184).

Biology: Unknown.

Hydrovatus pulcher Gschwendtner Figs 1172–1177, 1184.

Hydrovatus pulcher GSCHWENDTNER, 1934:93 (orig. descr., faun.); 1938a:6 (faun.); GUIGNOT, 1954e:196 (disc.); 1959a:184, 187 (descr., faun.); BILARDO & PEDERZANI, 1978:104 (descr., faun.).

Hydrovatus legrosi GUIGNOT, 1954f:281 (orig. descr., faun.); 1958b:5 (disc.); 1959a:185, 187 (descr., faun.). **New synonym.**

Hydrovatus bullatus GUIGNOT, 1958b:5 (in part *H. bullatus*).

Type locality: Ukerewe, Tanzania.

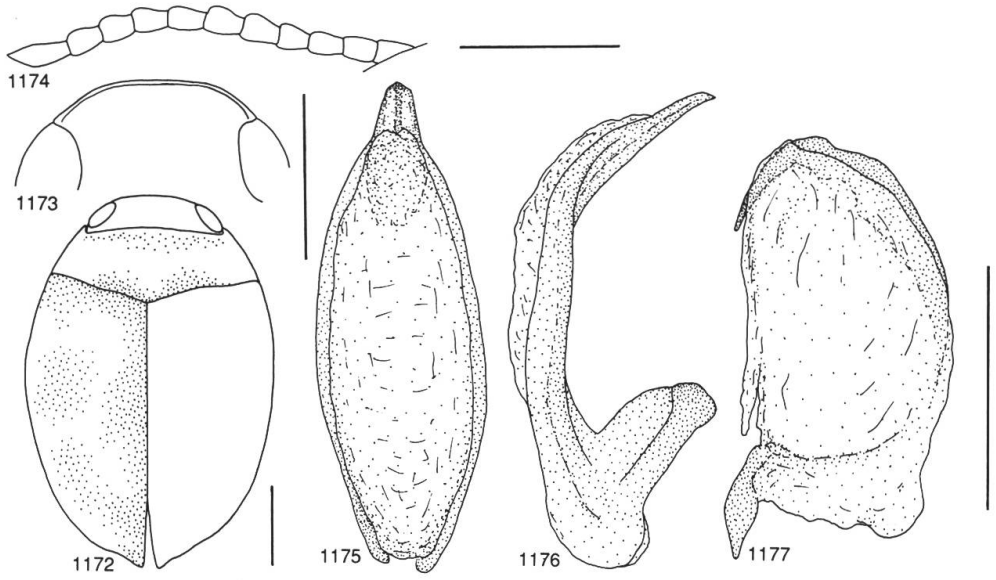
Type material: *H. pulcher:* Ukerewe Tang. Terr. Conrads leg. (not located). – *H. legrosi* (studied): Holotype, m: BG – 8 MT/IFAN Nimba (Guinée) Lamotte et Roy VII.XII. 51/m/Type/Guignot det. 1952 *Hydrovatus legrosi* Guign. Type m (MNHN). – Paratype: Serengbara/Mus. Paris Nimba (Guinée) M. Lamotte II. VI. 42/f/Allotype/*H. legrosi* Guign. Allotype f (1 ex. MNHN).

Additional material studied: Ghana: Ashanti Reg. Kwadaso 259 m/UV-light trap on field 26.V.1969 (1 ex. TMB); Gold Coast/*H. pulcher* Gschw. det. J. Balfour-Browne (2 exx. MNH). – Congo: Kindamba, Méya Settl./13.XI.1963 by lamplight (1 ex. TMB). – Zaire: Jadotville IX.1952 (1 ex. MNHN); PNG Inimvua 20.V. 1952/*H. bullatus* n.sp. det. Guignot 1957/Paratypus (4 exx. MAC); Ht. Zaire Umg. Doruma 18.IV.–10.V.1986 (1 ex. coll. Wewalka). – Uganda: Bussu 1909/*H. cruentatus* Kolbe det. Guignot 1951 (1 ex. MCG). – Tanzania: Ukerewe I. 1935 Conrads/*H. pulcher* Gschw. (1 ex. BMNH). – Angola: Rio Longo 4 mi S Lussusso, 8.III.1972/*H. pulcher* Gschw. det. Pederzani (1 ex. BMNH). – Zimbabwe: Salisbury Mashonaland 11.IX. 1893/*H. pulcher* Gschw. det. J. Balfour-Browne (1 ex. BMNH). In all, 16 exx.

Diagnosis: A quite well-defined species, distinguished by the almost straight penis apex in combination with a comparatively long parameral hook. Closely to with the preceding species, *H. cruentatus*.

Description: only diagnostically useful differences from description of *H. cruentatus* recognized.

Length of body: 4.24–4.72 mm, breadth: 2.88–3.16 mm. Habitus (Fig. 1172).



Figs 1172–1177: *Hydrovatus pulcher*. – 1172, habitus. – 1173, head, frontal aspect. – 1174, antenna. – 1175, penis, dorsal aspect. – 1176, penis, lateral aspect. – 1177, paramere. Horizontal scale 0.5 mm, antenna; left top scale 1 mm, head; left bottom scale 1 mm, habitus; right scale 0.5 mm, genitalia.

Head: Pale ferrugineous to ferrugineous. Frontal aspect of head in Fig. 1173. Antenna in Fig. 1174.

Pronotum: Pale ferrugineous to ferrugineous. Anteriorly and posteriorly with vague darkened areas. Rather shiny, very finely microsculptured (meshes indistinct, weakly developed and partly absent). Lateral outline of pronotum almost straight to somewhat rounded.

Elytra: Pale ferrugineous to ferrugineous to pale brown, with somewhat vague blackish to dark ferrugineous markings (Fig. 1172). Rows of punctures indistinct or absent (mixed with ordinary punctures). Rather shiny, very finely and indistinctly microsculptured (meshes of microsculpture clearly discernible at elytral apex). Epipleura almost without reticulation.

Ventral side: Stridulatory apparatus rather narrow, consists of numerous minute ridges.

Male genitalia: Figs 1175–1177.

Distribution: Guinea, Ghana, Congo, Zaire, Uganda, Tanzania, Angola, Zimbabwe (exact location of one record from Ghana and record from Uganda unknown) (Fig. 1184). Additional unverified record is the Ivory Coast (BILARDO & PEDERZANI, 1978).

Biology: Practically unknown. In Ghana sampled at UV-light collection in a field.

Synonymy: Type material of *H. pulcher* has not been examined. I have, however, examined a male from the same locality as the type material of *H. pulcher,* determined by Gschwendtner as belonging to this species. Association of the specimen with *H. pulcher* seems to be correct (it also fits the original description). This specimen is also conspecific with *H. legrosi* which means that *H. pulcher* and *H. legrosi* are synonymous. The older name, *H. pulcher,* is the valid name of this species.

Hydrovatus vulneratus n.sp. Figs 1178–1184.

Type locality: Jadotville, Zaire.

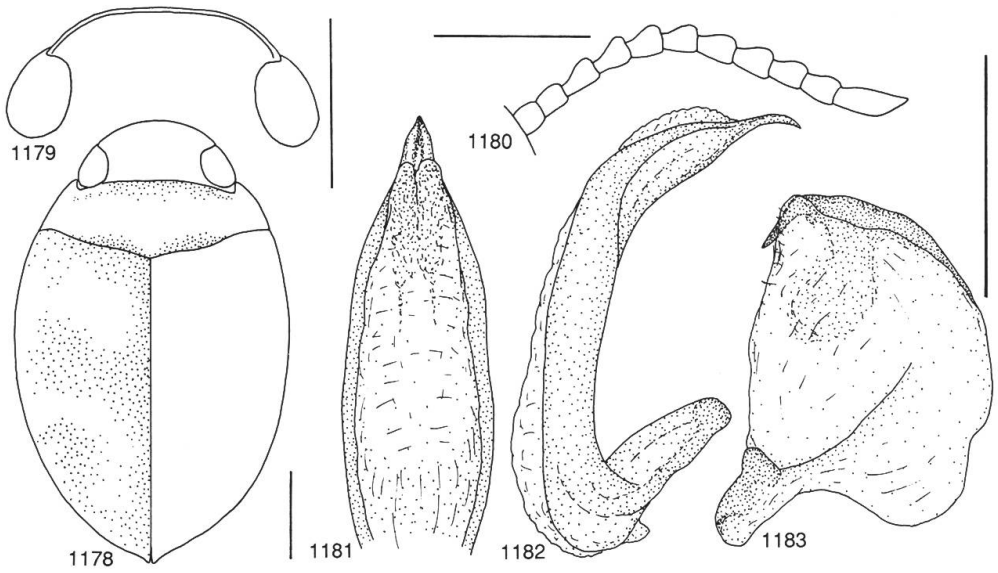
Type material: Holotype, m: Jadotville/IX–52/m/Type/F. Guignot det., 1953 *Hydrovatus vulneratus* Guign. Type m/R. Mus. Hist. Nat. Belg. Mouchamps (ISN). – Paratype: Africa Nigeria Zaria 1969 leg. M. Brancucci (1 ex. coll. Rocchi). Minor morphological differences exist which could mean existence of two different species. In all, 2 exx.

Diagnosis: Characterized by the moderately downwards curved penis apex in combination with the comparatively short parameral hook. Closest probably to *H. pulcher* above.

Description: only diagnostically important features recognized; cf. the two preceding species.

Length of body: 4.48–4.64 mm, breadth: 2.96–3.00 mm. Habitus in Fig. 1178.

Head: Frontal aspect (Fig. 1179). Antenna (Fig. 1180).



Figs 1178–1183: *Hydrovatus vulneratus*. – 1178, habitus. – 1179, head, frontal aspect. – 1180, antenna. – 1181, penis, dorsal aspect. – 1182, penis, lateral aspect. – 1183, paramere. Horizontal scale 0.5 mm, antenna; left top scale 1 mm, head; left bottom scale 1 mm, habitus; right scale 0.5 mm, genitalia.

Elytra: Dark ferrugineous, with very vague ferrugineous to pale ferrugineous areas (Fig. 1178). Rows of punctures almost absent; a few punctures may indicate discal and lateral rows. Rather shiny, although finely microsculptured (meshes distinct). In specimen from Nigeria elytral microsculpture more weakly developed, in part hardly visible.

Ventral side: Stridulatory apparatus consists of numerous minute striae.

Male genitalia: Figs 1181–1183.

Female: Unknown.

Distribution: Nigeria, Zaire (Fig. 1184).

Biology: Unknown.

Hydrovatus badeni Sharp Figs 1184–1190.

Hydrovatus badeni SHARP, 1882a:333 (orig. descr., faun.); BRANDEN, 1885:25 (faun.); RÉGIMBART 1895b:115 (descr., faun.); 1903:13 (descr., faun.); ZIMMERMANN, 1920a:31 (faun., cat.); 1926:26 (faun.); GUIGNOT, 1945a:306, 307, 310, 316 (descr., disc., faun.); 1954b:16 (disc.); 1959a:173, 180 (descr., faun.); OMER-COOPER, 1963:179, 181 (descr., faun.; in part *H. frater* Guignot); 1965:101 (descr., faun.); BILARDO & PEDERZANI, 1978:104 (faun.; syn. *H. frater*); MEDLER, 1980:155 (faun., cat.); ABDULA-KARIM & ALI, 1986:281, 282 (disc.); BILARDO & ROCCHI, 1987:96 (disc., faun., biol.); ALI & ABDULA-KARIM, 1990:10 (descr., faun.); ROCCHI, 1990:442 (faun.).

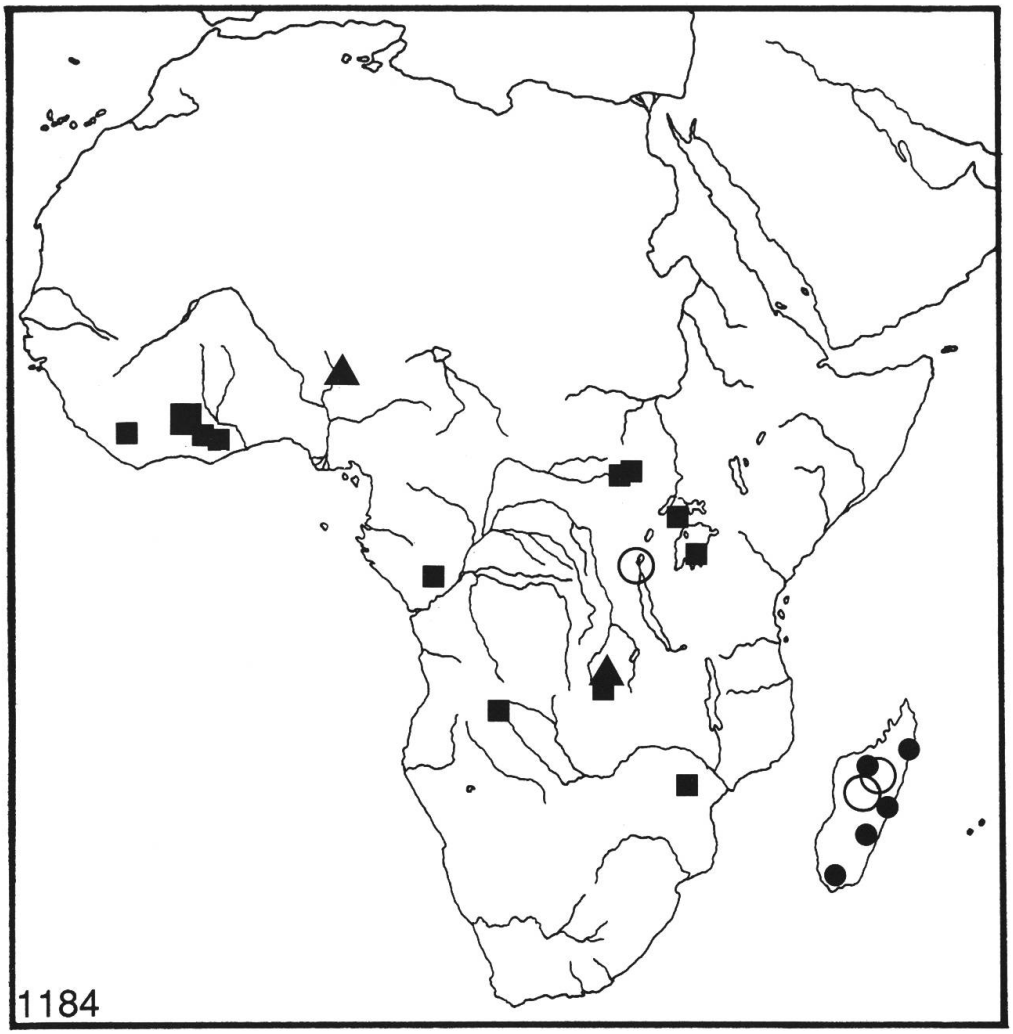


Fig. 1184: Distribution of *Hydrovatus cruentatus* (dot), *H. pulcher* (small square), *H. vulneratus* (triangle), *H. badeni* (circle) and *H. leonardii* (large square).

Hydrovatus subpunctatus KOLBE, 1883:405, 406 (orig. descr., faun.); BRANDEN, 1885:27 (faun.); RÉGIMBART, 1895b:116 (descr., faun.); 1903:13 (disc.); ZIMMERMANN, 1920a:31 (syn. *H. badeni*); GUIGNOT, 1959a:180 (syn. list.); OMER-COOPER, 1963:179 (syn. list.); 1965:101 (syn. list.).

Hydrovatus cicer GUIGNOT, 1942:13 (orig. descr., faun.); 1945a:310 (descr., faun.); 1955d:63 (f descr., faun.); 1956d:250 (disc., faun.); 1959a:174, 181 (descr., faun.). **New synonym.**

Hydrovatus kivuanus GUIGNOT, 1956d:250 (orig. descr., faun.); 1958c:102 (syn. *H. frater*); OMER-COOPER 1963:179 (? syn. *H. badeni*); 1965:102 (syn. *H. badeni*).

Type locality: Madagascar.

Type material studied: *H. badeni:* Lectotype, m, by present designation: Type/Madagascar/Sharp Coll. 1905–313/Type 151/*H. badeni* Wehncke m Type mihi Madagascar D.S. (BMNH). – Paralectotype: *H. badeni* Wehncke f Type mihi Madagascar D.S./Type/Madagascar/Sharp Coll. 1905–313 (1 ex. BMNH). Possible type material

of *H. badeni:* 67043/*badeni* Wehncke ex. typus! (1 ex. MNB). – *H. subpunctatus:* Lectotype, f, by present designation: 10079/Type/*subpunctatus* Kolbe/Madag. Goud. (MNB). – Paralectotype: Same a s lectotype (1 ex. MNB). – *H. cicer:* Holotype, m: Env. Tananarive VII. 1934 G. Olsouffief/Lac Tzimbazaza/m/Type/*Hydrovatus cicer* Type m/ Pénis cass – il tait très voisin de celui *de confusus* (MNHN). – *H. kivuanus:* Holotype, f: Holotypus f/I.R.S.A.C.–Mus. Congo Kivu: Kavimvira (Uvira) (à la lumıère) II/III.1955/ Guignot det., 1956 *Hydrovatus (Vathydrus) kivuanus* n.sp. f (MAC).

Additional material studied: Madagascar: Tananarive Tzimbazaza/XII 48 (1 ex. MNHN; labelled as allotype but does not belong to original type material); Tzimbazaza/10–11.II.1949 (1 ex. MNHN). In all, 9 exx.

Diagnosis: *H. badeni* is characterized by a combination of the following features: body size quite large; extreme tip of the penis distinctly curved downwards; the apical part of the penis moderately bent (lateral aspect); penis broad and narrowing anteriorly quite abruptly to an almost parallel-sided apex (dorsal aspect). The two consecutive species are probably the closest relatives of *H. badeni.*

Length of body: 4.36–4.84 mm, breadth: 2.96–3.20 mm. Habitus (Fig. 1185), body quite globular.

Head: Pale ferrugineous to dark ferrugineous (frontally palest and darkest at pronotum). Punctation fairly distinct and dense, slightly irregularly distributed (posteriorly sparser and finer). Rather shiny, microsculptured (meshes distinct). Head frontally rounded, finely and narrowly margined (Fig. 1186). Frontally at eyes with a shallow depression which continues posterior to foremargin as a shallow furrow. Antenna pale brown to pale ferrugineous, rather slender, not distinctly modified (Fig. 1187).

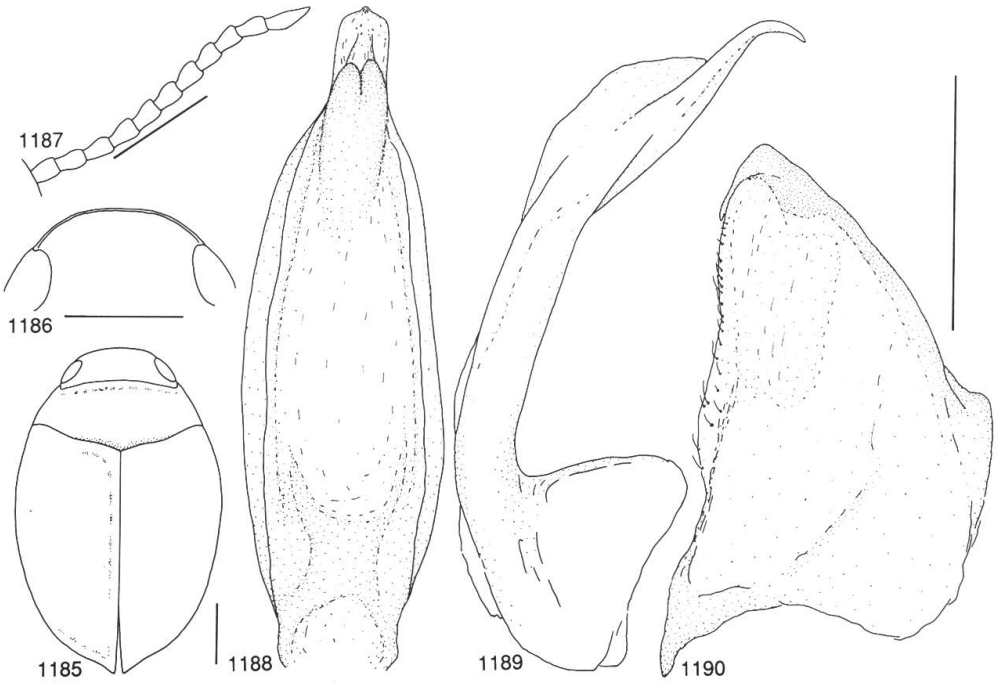
Pronotum: Dark ferrugineous. Laterally pronotum becomes gradually paler (at almost straight to rounded lateral outlines, pronotum pale ferrugineous). Distinctly and densely punctate. Laterally on disc punctures sparser and finer. Rather shiny, although microsculptured (meshes distinct).

Elytra: Dark ferrugineous. Laterally elytra become gradually paler; at epipleura ferrugineous. Without distinct colour pattern. Fairly distinctly and densely punctate. Apically and close to epipleura punctures finer and sparser. Rows of punctures absent or indistinct. An irregular lateral row of punctures generally discernible. Sometimes indistinct discal and dorsolateral rows of punctures are also seen. Rather shiny, microsculptured (meshes quite distinct). Epipleura pale ferrugineous, indistinctly punctated and microsculptured.

Ventral side: Dark ferrugineous to ferrugineous. Fairly coarsely and densely punctate. Abdomen almost without punctures (basally with clearly discernible punctation). Rather shiny, with scattered

reticulation. Abdomen with fine microsculpture. Stridulatory apparatus with dense and minute ridges. Prosternal process laterally distinctly margined; medial surface somewhat depressed and uneven due to coarse and dense punctures.

Legs: Pale brown to pale ferrugineous. Pro- and mesotarsus distinctly enlarged.



Figs 1185–1190: *Hydrovatus badeni*. – 1185, habitus.– 1186, head, frontal aspect. – 1187, antenna. – 1188, penis, dorsal aspect. – 1189, penis, lateral aspect. – 1190, paramere. Slanting scale 0.5 mm, antenna; horisontal scale 1 mm, head; left scale 1 mm, habitus; right scale 0.5 mm, genitalia.

Male genitalia: Figs 1188–1190.

Female: Pronotum and elytra, particularly dorsally, densely microsculptured (meshes very distinct). Without stridulatory apparatus.

Distribution: Zaire, Madagascar (Fig. 1184). Unverified records are Tanzania (ZIMMERMANN, 1926), Zimbabwe, Senegal, Nigeria, Guinea, Gabon, Congo, Ethiopia, Kenya, Tanzania, Mozambique (OMER-COOPER, 1931), Botswana (BILARDO & ROCCHI, 1987) and Iraq (ALI & ABDUL-KARIM, 1990). At least some of the unverified records are incorrectly referred to this species.

Biology: Insufficiently documented. Sometimes sampled at light collection. Cf. also BILARDO & ROCCHI (1987).

Synonymy: I agree with the synonymization of *H. badeni* and *H. subpunctatus* and *H. kivuanus* proposed earlier (ZIMMERMANN, 1920a, OMER-COOPER, 1965). An additional new synonymy is proposed here: *H. badeni* = *H. cicer. H. badeni,* being the oldest available name, is the valid name of this species. OMER-COOPER (1963) synonymized also *H. frater* with *H. badeni,* but this synonymization is regarded as incorrect; *H. frater* is now considered as a separate species (see below).

Hydrovatus leonardii Bilardo & Pederzani Figs 1184, 1191–1197.

Hydrovatus leonardii BILARDO & PEDERZANI, 1978:107, 108 (orig. descr., faun.); BILARDO & ROCCHI, 1990:181 descr.).

Type locality: Bouaké, the Ivory Coast.

Type material studied: Holotype, m: Côte d'Ivoire Bouaké 12.VIII.1973 Bilardo & Pederzani/Holotypus/*H. (Vathydrus) leonardii* Bil. & Ped. det. A. Bilardo (MCM). In all, 1 ex.

Diagnosis: *H. leonardii* is characterized by the somewhat elongated body, by the tip of the penis distinctly bent downwards, and by the lateral outlines of the penis being curved and narrowing quite abruptly towards the apex.

Length of body: 3.98 mm (original description gives 4.0–4.2 mm), breadth: 2.40 mm. Habitus in Fig. 1191; body slightly elongated.

Head: Dark ferrugineous. Indistinctly and sparsely punctate. At eyes and in shallow frontal depressions with slightly coarser punctures. Rather shiny, although clearly microsculptured (meshes distinct). Head frontally rounded, medially slightly straightened and very finely margined (margin for a short distance broken) (Fig. 1192). Antenna pale ferrugineous, rather slender (Fig. 1193).

Pronotum: Blackish ferrugineous. Laterally pronotum becomes gradually paler; at lateral margin pale ferrugineous. Rather finely and densely punctate. Laterally punctures become finer and finally even disappear except for a few coarser punctures. Shiny, finely to very finely microsculptured (meshes generally distinct although weakly developed). Lateral outline of pronotum somewhat rounded.

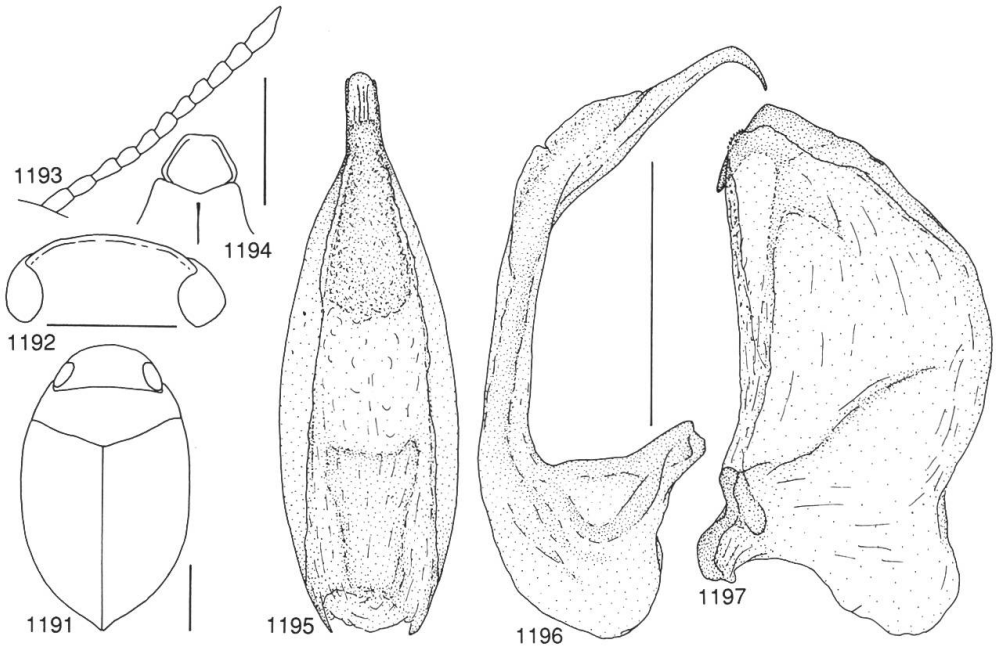
Elytra: Blackish ferrugineous, laterally elytra become gradually paler. At epipleura pale brown to pale ferrugineous. Very finely and sparsely punctate, except for rows of punctures and a few scattered coarse punctures. Laterally elytra almost impunctate. Discal row of punctures fairly distinct although slightly irregular. Dorsolateral row of punctures rather sparse but still discernible from base to apex.

Lateral row of punctures somewhat irregular but still quite distinct. Rather shiny, very finely microsculptured (meshes weakly developed but generally clearly discernible). Epipleura ferrugineous to pale brown, almost impunctate and shiny; very fine scattered reticulation may be discerned.

Ventral side: Ferrugineous. Rather finely and somewhat sparsely punctate. Metacoxal plates posteriorly and abdomen almost impunctate. Shiny, without distinct microsculpture. Abdomen partly with very fine and rather indistinct microsculpture. Stridulatory apparatus narrow, consists of numerous fine striae. Prosternal process laterally margined, anteriorly broadly obtuse (Fig. 1194). Medial surface almost flat.

Legs: Pale ferrugineous. Pro- and mesotarsus somewhat enlarged.

Male genitalia: Figs 1195–1197.



Figs 1191–1197: *Hydrovatus leonardii*. – 1191, habitus. – 1192, head, frontal aspect. – 1193, antenna. – 1194, prosternal process. – 1195, penis, dorsal aspect. – 1196, penis, lateral aspect. – 1197, paramere. Left top scale 0.5 mm, antenna and process; left bottom scale 1 mm, habitus; horisontal scale 1 mm, head; right scale 0.5 mm, genitalia.

Female: Not examined. According to original description as male, but most probably it lacks stridulatory files.

Distribution: Ivory Coast (Fig. 1184).

Biology: Unknown.

Hydrovatus frater Régimbart Figs 1198–1203, 1218.

Hydrovatus frater RÉGIMBART, 1895b:116 (orig. descr., faun.); 1903:13 (disc.); ZIMMERMANN, 1920a:33 (cat., faun.); OMER-COOPER, 1931:762 (descr., faun., biol.); GSCHWENDTNER, 1938a:6 (descr., faun.); GUIGNOT, 1940:14 (disc.); 1945a:306, 307, 310, 311 (descr., faun.); 1948c:8 (faun.); 1950a:261 (faun.); 1954b:14 (faun.); 1955a:28 (faun.); OMER-COOPER, 1956:22 (faun., biol.); GUIGNOT, 1958c:102 (disc.); 1959a:161, 170 (descr., faun.); 1959c:141 (faun.); BRUNEAU DE MIRÉ & LEGROS, 1963:847, 888 (faun.); OMER-COOPER, 1963:179 (syn. *H. badeni* Sharp); 1965:101 (syn. list.); LEGROS, 1972:461 (faun.). **Restored species status.**

Type locality: Boma, Zaire.

Type material studied: Lectotype, m, by present designation: Boma M. Tschoffen/ *frater* R./Régimbart det. *Hydrovatus frater* Rég./R. Mus. Hist. Nat. Belg. Mouchamps (ISN). – Paralectotypes: Senegal Cap Vert/Type (1 ex. MNHN); Guinea/Type (1 ex. MNHN). Possible paralectotypes, with deviating label data: Boma Sund (?) P. Rolin/ Type (1 ex. MNHN). The cotype kept in ISN is designated as the lectotype, being the only available male in the type material studied.

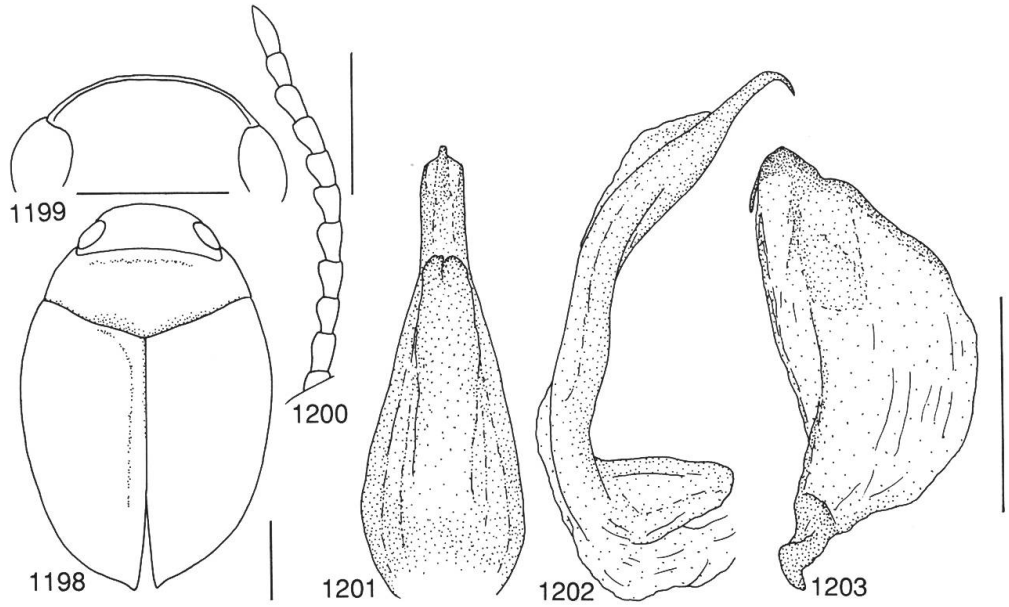
Additional material studied: Senegal: Sebikotane VIII.1971 (4 exx. MNHN, 2 exx. MZH); Somore VIII.1971 (4 exx. MNHN, 2 exx. MZH); Sangalkam VIII.1971 (1 ex. MNHN); Dakar (1 ex. MNHN); Senegal (1 ex. MNHN). – Chad: Ft. Archambault IV.1904 (1 ex. MNHN). – Ethiopia: 7000 ft. Mt. Chilalu 8.XI.1926 (1 ex. AMS). – Kenya: Ikutha (1 ex. MCN); Ikutha/*H. nigricans* Shp. det. Zimmermann (2 exx. MNB); Tiwi XI. 1911/*H. frater* Rég. det. Guignot (1 ex. MNHN); Ile Mombasa X.1911 (1 ex. MNHN). – Sudan: L. Nyibor 23.I. 1954 (1 ex. AMS); Malakal 5–20.I.1963/ad lucem (6 exx. MZH); Agadi Dar el Fungi/mares temp. eau pluie (1 ex. MNHN); Bahr el Abiad (1 ex. MNB). – Zaire: Congo Belge (1 ex. MNHN). – Tanzania: Daressalam II. 1912 (2 exx. MNB); Usagara/*H. badeni* Shp det. Zimmermann (1 ex. MNB). – Angola: Mocamedes distr., R. Coroca 23.VI.1954/small clear pool in sand with Chara (1 ex. MNH). – Zimbabwe: Wankie game res. 3, 4.IX. 1948 (5 exx. AMS); Pool Lundi 22.XI.1948 (2 exx. AMS); Mudzi VII.1986 (1 ex. coll. Smith). – Mozambique: Pr. Gorongoza Tendos de l'Urema II.1967 (1 ex. MNHN); Beira 7.IX.1955 (2 exx. AMS); Zafulene nr Lor. Marquees 3.XII.1948 (1 ex. AMS). – South Africa: KNP survey, Punda Milia 21–23.XI.1961 (1 ex. TMP); KNP Olifants Camp 26.XI.1966 (1 ex. MZH, 1 ex. TMP). In all, 55 exx.

Diagnosis: Probably very close to *H. badeni*. *H. frater* is characterized by the penis evenly narrowing towards the apex (dorsal aspect). The two species have been considered synonymous but are here separated predominantly because of the difference in the shape of the penis.

Description: only differences from description of *H. badeni* recognized, cf. above p. 506.

Length of body: 3.96–4.48 mm, breadth: 2.64–3.00 mm. Habitus (Fig. 1198), body quite globular.

Head: Almost entirely pale ferrugineous. Frontal aspect of head in Fig. 1199. Antenna in Fig. 1200.



Figs 1198–1203: *Hydrovatus frater.* – 1198, habitus. – 1199, head, frontal aspect. – 1200, antenna. – 1201, penis, dorsal aspect. – 1202, penis, lateral aspect. – 1203, paramere. Left top scale 0.5 mm, antenna; left bottom scale 1 mm, habitus; horisontal scale 1 mm, head; right scale 0.5 mm, genitalia.

Elytra: Inner part of epipleura densely and finely punctate.

Ventral side: Ferrugineous to pale ferrugineous. Prosternal process laterally indistinctly and quite narrowly margined. Medial surface of process densely and finely punctate.

Male genitalia: Figs 1201–1203.

Female: Lacks stridulatory file.

Distribution: Senegal, Chad, Guinea, Sudan, Ethiopia, Zaire, Kenya, Tanzania, Angola, Zimbabwe, Mozambique, South Africa (Fig. 1218). Unverified records (need to be re-examined) are Congo, Gabon (RÉGIMBART, 1895b), Niger (GUIGNOT, 1950a) and Rwanda (GUIGNOT, 1955a).

Biology: In Mozambique reported from a heavily manured market garden with a number of drainage ditches with grassy sides and *Limnophyton* sp. stands. Additionally collected from a slow flowing stream which formed a long marshy pool with *Marsilia* sp. and grass at the edges and finally from a marsh with lily pools and a yellow flowered weed (OMER-COOPER, 1956). In Angola collected in a small pool with clear water and *Chara* vegetation. In Sudan sampled in a rainwater puddle and in Ethiopia at an altitude of about 7000 feet. Often captured at light collection.

Hydrovatus soror n.sp. Figs 1204–1210, 1218.

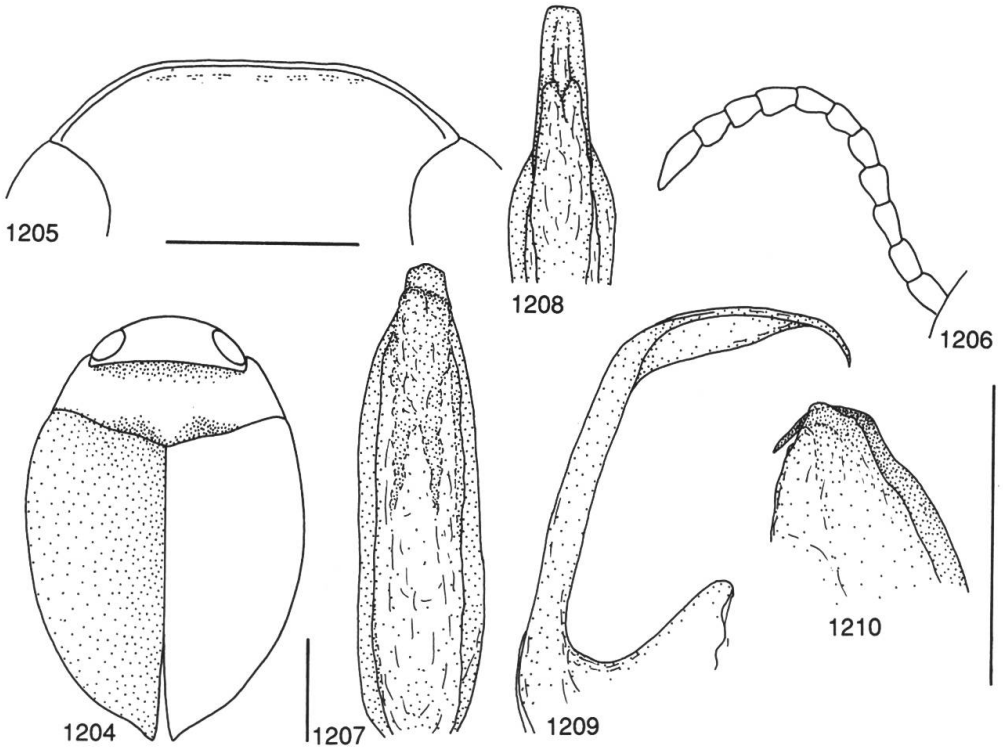
Type locality: Salisbury (= Harare), Zimbabwe.

Type material: Holotype, m: Salisbury Mashonaland G.A.K. Marshall/Brit. Mus. 1922–431/4017/4 mm (BMNH). – Paratypes: Principally with same data as holotype (1 ex. BMNH); South Rhodesia Machake 'dyke' 18.V.1952/Rev. E.J. Pearce collector (1 ex. BMNH, 1 ex. MZH); Zanzibar Mangapwani Rd. No. 8, 15 Sept. 1955 J. Omer-Cooper (1 ex. AMS). In all, 5 exx.

Diagnosis: Very close to *H. frater* (see above), from which the new species differs only by the genital features in the male. In *H. frater,* the penis (dorsal aspect) narrows more evenly towards the apex than in *H. soror.* Additionally the apical part of the penis (lateral aspect) is more strongly curved in the new species than in *H. frater.*

Description: only differences from description of *H. badeni* and *H. frater* recognized.

Length of body: 3.80–4.00 mm, breadth: 2.52–2.60 mm. Habitus in Fig. 1204.



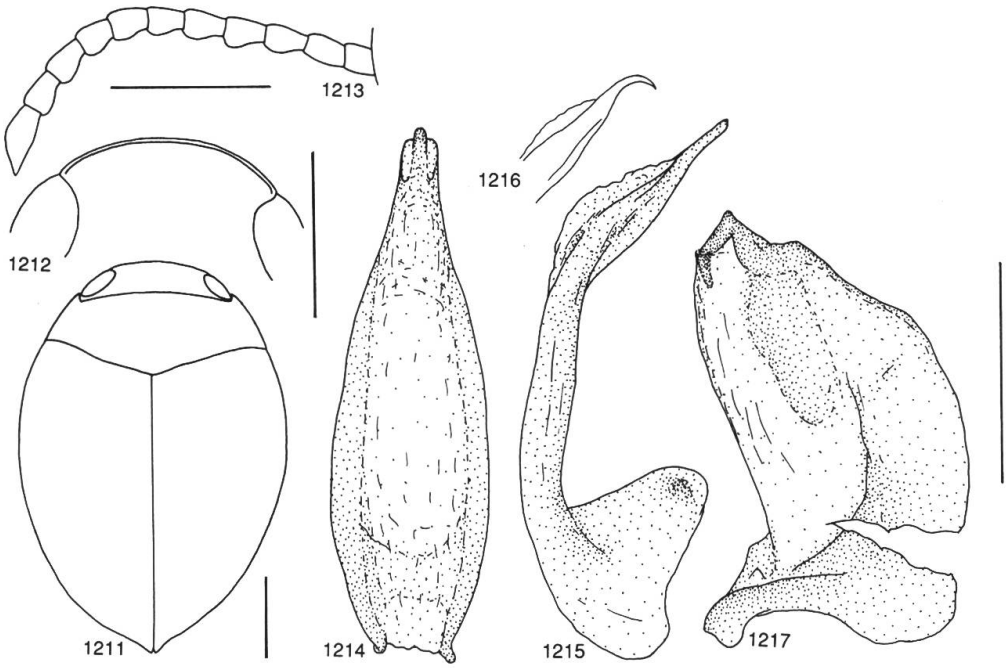
Figs 1204–1210: *Hydrovatus soror.* – 1204, habitus. – 1205, head, frontal aspect. – 1206, antenna. – 1207, penis, dorsal aspect. – 1208, penis, frontal aspect. – 1209, penis, lateral aspect. – 1210, paramere. Horizontal scale 0.5 mm, head and antenna; left scale 1 mm, habitus; right scale 0.5 mm, genitalia.

Head: Frontal aspect of head (Fig. 1205). Antenna in Fig. 1206.
Male genitalia: Figs 1207–1210.
Distribution: Tanzania, Zimbabwe (Fig. 1218).
Biology: Unknown.

Hydrovatus confusus Régimbart Figs 1211–1218.

Hydrovatus confusus RÉGIMBART, 1903:12 (orig. descr., faun.); ZIMMERMANN, 1920a:32 (cat., faun.); GUIGNOT, 1959a:161, 171 (descr., faun.); BERTRAND & LEGROS, 1971:242 (faun.).
Hydrovatus cruentatus KOLBE, RÉGIMBART, 1895b:115 (cf. GUIGNOT, 1959a:171).
Type locality: Baie d'Antongil, Madagascar.

Type material studied: Lectotype, m, by present designation: Madag. B. d'Antongil/Museum Paris coll. Maurice Régimbart, 1908/Type/*confusus* Rég. (MNHN). – Paralectotype, f: Madag./Museum Paris coll. Maurice Rgimbart, 1908/Type (1 ex. MNHn; association with *H. confusus* uncertain).



Figs 1211–1217: *Hydrovatus confusus*. – 1211, habitus. – 1212, head, frontal aspect. – 1213, antenna. – 1214, penis, dorsal aspect. – 1215, penis, lateral aspect. – 1216, supplementary illustration of penis. – 1217, paramere. Horizontal scale 0.5 mm, antenna; left top scale 1 mm, head; left bottom scale 1 mm, habitus; right scale 0.5 mm, genitalia.

Additional material studied: Madagascar: Mad.-Est Ankalampona 130 m Navana–Maroansetra III.1953/*H. confusus* Rég. det. Legros (1 ex. MNHN). In all, 3 exx.

Diagnosis: Very close or possibly synonymous with *H. badeni* or *H. frater*. From *H. badeni, H. confusus* is distinguished by a more

evenly narrowing penis towards the apex (dorsal aspect) and from *H. frater* it is separated predominantly by darker body colour and by the difference in appearance of the elytral reticulation: Male elytral reticulation if *H. frater* discally indistinct, while it is clearly visible in *H. confusus*.

Description: only clear differences from description of *H. badeni* and *H. frater* recognized.

Length of body: 4.40–4.60 mm, breadth: 3.00–3.12 mm. Habitus in Fig. 1211, body quite globular and dark coloured: Black to blackish ferrugineous.

Head: Frontal aspect of head in Fig. 1212. Antenna in Fig. 1213.

Pronotum: Lateral outline of pronotum almost straight to slightly rounded.

Male genitalia: Figs 1214–1217. Extreme apex of penis in holotype broken and lost. Supplementary illustration of penis apex drawn on the basis of non-type material.

Distribution: Madagascar (Fig. 1218).

Biology: Unknown.

Hydrovatus uniformis (Fairmaire) (sensu Sharp) Figs 1218–1222.

Hyphydrus uniformis FAIRMAIRE, 1869:185 (orig. descr., faun.).
Hydrovatus uniformis (FAIRMAIRE), SHARP, 1882a:332 (descr., faun.); BRANDEN, 1885:27 (faun.); RÉGIMBART, 1895b:114 (descr., faun.); ZIMMERMANN, 1920a:36 (faun., cat.); GUIGNOT, 1945a:310 (decsr., disc.); 1959a:182 (descr., disc., faun.).

Type locality: Madagascar.

Type material: Madagascar, Ch. Coquerel (not located).

Material studied: *Hyphydrus uniformis* Fair. Type mihi D.S. Madagascar/Madag./ *Hyphydr. uniformis* Fairm. Madag./det. Fairmaire *Hydrovatus uniformis* Fairm./Type/ R. Mus. Hist. Nat. Belg. Mouchamps (1 ex. ISN). In all, 1 ex.

Diagnosis: The status of this species is somewhat unclear. The interpretation of the species is in accordance with SHARP (1882a), but the fact cannot be excluded that he made an error in this case. Additionally only one specimen (male) has been available for study, and this specimen was unfortunately uncomplete (penis and one paramere lacking). Thus I am not able to present any distinguishing characters; I simply refer to the redescription below.

Length of body: 4.28 mm, breadth: 2.88 mm. Habitus (Fig. 1219), shape of body quite globular.

Head: Dark ferrugineous. Frontally with a vague narrow, ferrugineous area. Finely and fairly densely punctate. Submat, microsculptured (meshes distinct). Head frontally rounded, between eyes nar-

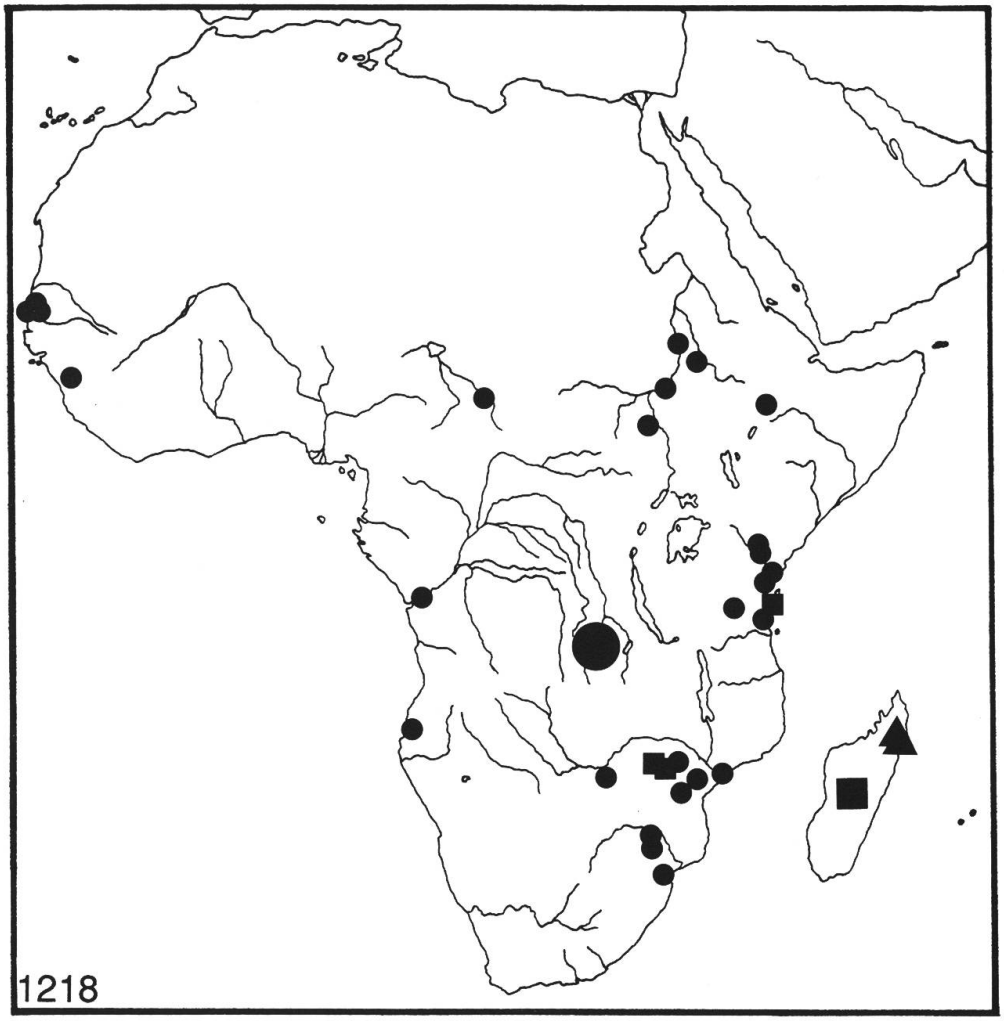
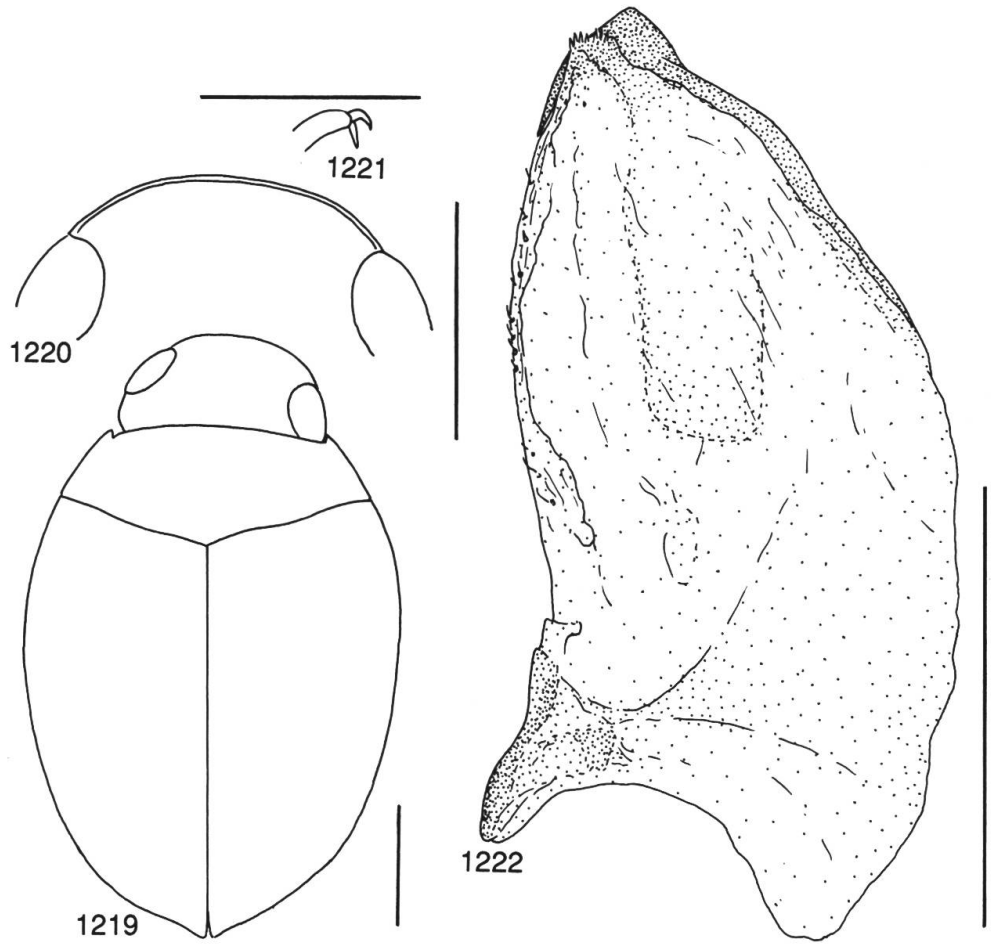


Fig. 1218: Distribution of *Hydrovatus frater* (small dot), *H. soror* (small square), *H. confusus* (triangle), *H. uniformis* (large square) and *H. pilula* (large dot).

rowly margined (Fig. 1220). At eyes with a shallow depression. Antenna pale ferrugineous, rather slender, not distinctly modified.

Pronotum: Dark ferrugineous. Laterally pronotum becomes gradually paler; at rounded sides pronotum ferrugineous. Rather finely and densely punctate. Laterally punctures somewhat finer and sparser. Submat, microsculptured (meshes distinct).

Elytra: Blackish ferrugineous to dark ferrugineous; darkest at suture and palest at epipleura but without distinct colour pattern. Rather finely and densely punctate. Laterally and apically punctures finer. Rows of punctures absent. Submat, strongly microsculptured (meshes distinct). Epipleura dark ferrugineous, close to metacoxae finely and densely punctate. Rather shiny, partly finely microsculptured.



Figs 1219–1222: *Hydrovatus uniformis*. – 1219, habitus. – 1220, head, frontal aspect. – 1221, male protarsal claws. – 1222, paramere. Horizontal scale 0.5 mm, claws; left top scale 1 mm, head; left bottom scale 1 mm, habitus; right scale 0.5 mm, paramere.

Ventral side: Dark ferrugineous to ferrugineous. Fairly coarsely and densely punctate. Abdomen almost impunctate, except basally; with rather fine punctures. Rather shiny, almost without microsculpture. Minor posterior area of metacoxae and abdomen slightly mat, microsculptured. Stridulatory apparatus consists of numerous minute striae. Prosternal process laterally distinctly and quite broadly margined, medial surface almost flat, rather finely and densely punctate.

Legs: Ferrugineous to pale ferrugineous. Pro- and mesotarsus fairly broad. Protarsal claws slightly asymmetric; one claw short and basally slightly enlarged (Fig. 1221).

Male genitalia: At dissection of specimen I could not find the penis and one of the parameres. Possibly previously dissected and penis and paramere afterwards lost? Paramere as in Fig. 1222.

Female: Unknown.

Distribution: Madagascar, exact location not given (Fig. 1218).

Biology: Unknown.

Hydrovatus pilula Guignot Figs 1218, 1223–1225.

Hydrovatus pilula GUIGNOT, 1954a:5 (orig. descr., faun.); 1954b:15 (descr., faun.); 1956d:251 (disc.); 1959a:174, 182 (descr., faun.).

Type locality: Mabwe, Upemba National Park, Zaire.

Type material studied: Holotype, f: Holotypus/Congo belge: PNU Mabwe (585 m) 2.II.1949 Mis. G.F. de Witte 2305a/Coll. Mus. Congo (ex coll. I.P.N.C.B.)/f/ Dr. F. Guignot det. 1953 *Hydrovatus pilula* Guign. Type f (MAC). – Paratype: Principally with same data as holotype but 31.I.–3.II.1949, 2299a (1 ex. MAC). In all, 2 exx.

Diagnosis: Only the female is known of this species, the systematic status of which is therefore somewhat uncertain. It is clear, however, that *H. pilula* is a well-delimited species differing from the other species in this subgroup by its large-sized body. The pronotum and elytra are also strongly microsculptured, a feature which may be useful in the identification of the species.

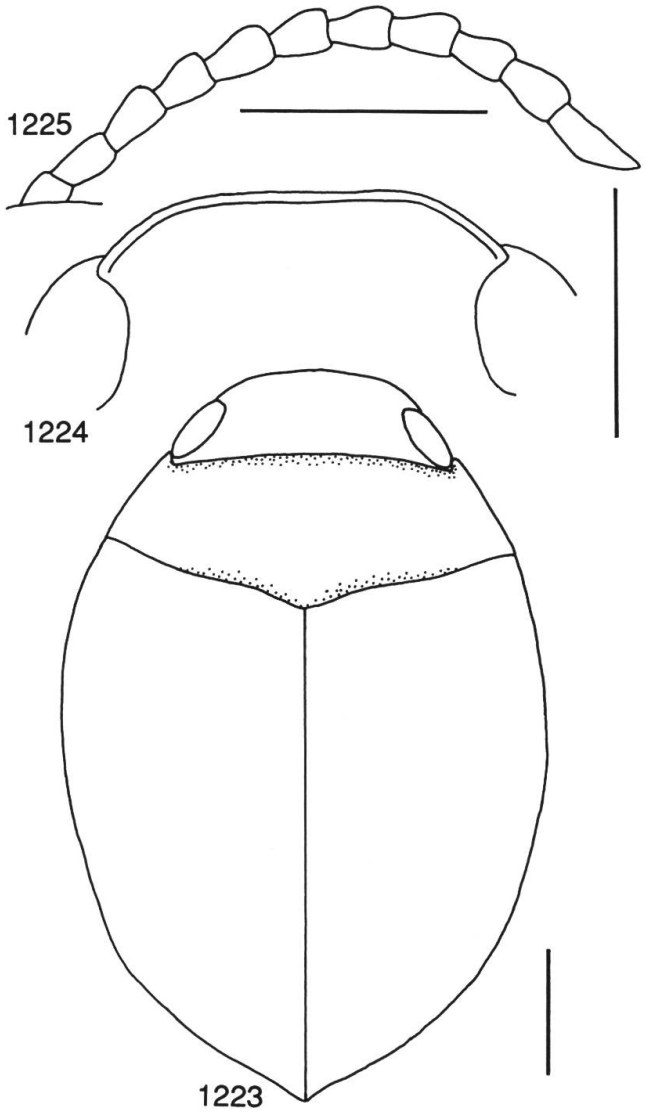
Description: based on female.

Length of body: 5.20–5.28 mm, breadth: 3.36–3.56 mm. Habitus (Fig. 1223), shape of body quite globular.

Head: Pale ferrugineous to ferrugineous. Finely to very finely and somewhat sparsely punctate. Rather shiny, although entirely microsculptured. Head frontally rounded, medially somewhat straightened, between eyes narrowly but distinctly margined (Fig. 1224). Frontally at eyes with a shallow depression, enlarged a little along anterior margin. Antenna pale ferrugineous, rather slender, not distinctly modified (Fig. 1225).

Pronotum: Ferrugineous, anteriorly and basally with narrow blackish ferrugineous areas. Finely and sparsely punctate. Laterally on disc with a narrow impunctate area. Submat, distinctly microsculptured (meshes strongly developed). Lateral outline of pronotum indistinctly curved.

Elytra: Dark brown to dark ferrugineous. Laterally elytra become gradually paler, without distinct colour pattern. Finely and fairly densely punctate (punctures somewhat indistinct due to dense reticulation). Rows of punctures hardly visible, because of dense punctation and microsculpture. Submat, densely and strongly microsculptured. Laterally elytra become gradually more shiny (meshes of mic-



Figs 1223–1225: *Hydrovatus pilula,* female. – 1223, habitus. – 1224, head, frontal aspect. – 1225, antenna. Horizontal scale 0.5 mm, antenna; top scale 1 mm, head; bottom scale 1 mm, habitus.

rosculpture laterally more weakly developed). Epipleura ferrugineous to pale ferrugineous, rather fine ly and densely punctate. Rather shiny, reticulation becomes indistinct towards metacoxae.

Ventral side: Ferrugineous to dark ferrugineous. Fairly coarsely and densely punctate. Abdomen almost impunctate; basally with fine punctures. Rather shiny, with sporadic reticulation. Abdomen slightly mat, finely microsculptured. Without stridulatory apparatus. Prosternal process laterally distinctly margined, medial surface slightly uneven and punctate.

Legs: Pale ferrugineous to ferrugineous. Pro- and mesotarsus slightly enlarged. Claws simple.

Male: Unknown.

Distribution: Zaire (Fig. 1218).

Biology: Unknown.

6.5.14. Species group 14 (sp.gr. *confertus*)

Hydrovatus sinister Sharp Figs 1226–1229.

Hydrovatus sinister SHARP, 1890:343 (orig. descr., faun.); RÉGIMBART, 1899b:236 (descr., faun.); ZIMMERMANN, 1920a:36 (cat., faun.); VAZIRANI, 1970b:105 (descr., faun.); 1977a:30 (faun.); BRANCUCCI, 1979:197 (faun.); VAZIRANI, 1981:260, 263 (faun.); ROCCHI, 1986a:33 (faun.).

Type locality: Sri Lanka.

Type material studied: Lectotype, m, by present designation: *Hydrovatus sinister* Type D.S. Ceylon 17.4. 1882 Lewis/Type/Ceylon Lewis/Sharp Coll. 1905–313 (BMNH; mounted to left on same card as one female paralectotype).

Additional material studied: Sri Lanka: Ceylon (2 exx. MNB). – India: Calcutta/*H. confertus* Shp det. Zimmermann (2 exx. f MNB; determination uncertain). – Burma: Rangoon 6.XI.1984 (2 exx. coll. Rocchi). – Laos: Vientiane Pr. Gi Sion, vill. de Tha Ngone 28.II.1965/light trap (2 exx. BBM, 2 exx. MZH); Vientiane, Ban Van Eue 30.II.1985/light trap (2 exx. BBM); Vientiane 30.V.1965/at light (4 exx. BBM, 2 exx. MZH); Vientiane 28.V.1965 (2 exx. BBM). – Malaysia: W Malaysia Selangor Serdang/Mardi 1.I .1982 (1 ex. BMNH). – Indonesia: N Sumatra Dolok-Merungir 1.X.–14.XI.1984 (2 exx. MNB). In all 25 exx.

Diagnosis: Very close to *H. confertus* below. The two species are distinguished by differences in the male antenna (slender in *H. sinister*/modified in *H. confertus*), elytral punctation (distinctly sparser in *H. sinister*) and dorsal microsculpture (less strongly developed in *H. sinister*). Body microsculpture is variable: In specimens from India and Burma elytral reticulation is more strongly developed. Incorrect association of these specimens with *H. sinister* cannot be excluded!

Description: only diagnostically important deviations from description of *H. confertus* are recognized; cf. below.

Length of body: 2.40–2.68 mm, breadth: 1.48–1.76 mm. Habitus (Fig. 1226).

Head: Frontal aspect in Fig. 1227. Antenna slender, not modified (Fig. 1228).

Pronotum: Submat to rather shiny, finely microsculptured (meshes clearly visible).