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res indistinct or absent. Submat, microsculptured (meshes distinct). Prosternal process laterally quite broadly but finely margined, medial surface almost flat, with a few punctures, finely reticulate.

Legs: Pale ferruginous to pale brown. Pro- and mesotarsus slightly enlarged.

Male genitalia: Figs 666–668.

Female: Externally approximately as male.

Distribution: Australia: W. Australia, Queensland (Fig. 656).

Biology: Practically unknown. (Cf. LAWRENCE & al., 1987).

6.5.7. Species group 7 (sp.gr. *gabonicus*)

Hydrovatus gabonicus Régimbart

Figs 669–680, 688.

Hydrovatus gabonicus RÉGIMBART, SEVERIN, 1892:472 (list., no descr.); RÉGIMBART 1895b:112 (orig. descr., faun.); ZIMMERMANN, 1920a:34 (faun.); GUIGNOT, 1954b:12 (faun.); 1956f:50 (disc.); 1959a:159, 161 (descr., faun.); BILARDO & ROCCHI, 1990:160, 170, 185 (descr., faun., biol.).

Hydrovatus pravus GUIGNOT, 1954a:3 (orig. descr., faun.); 1954b:10 (descr., faun.); 1959a:159, 162 (descr., faun.); 1959c:139 (faun.); BILARDO & ROCCHI, 1990:170 (list.). **New synonym.**

Hydrovatus flammulatus SHARP, GUIGNOT, 1955a:28 (in part)(faun.).

Hydrovatus difficilis GUIGNOT, 1956b:213 (faun., disc., no descr.); 1957:12 (orig. descr., faun.); 1959c:142 (faun.). **New synonym.**

Hydrovatus discifer GUIGNOT, 1958b:5 (orig. descr., faun.); 1959c:143 (faun.); BILARDO & ROCCHI, 1990:170 (list.). **New synonym.**

Type locality: Gabon.

Type material studied: *H. gabonicus*: Lectotype, m, by present designation: Gabon/Type/Museum Paris coll. Maurice Régimbart, 1908/*gabonicus* Rég. n.sp. (MNHN; mounted at left on a card with three specimens). – Paralectotypes: Same data as lectotype (2 exx. MNHN); 11199/Gabon Mocquerys Det. Régimbart 90/Coll. Severin Determin. Régimb. 1890/*Hydrovatus gabonicus* Gabon/Régimbart det. 1895: *Hydrovatus gabonicus* Rég./Type/R. Mus. Hist. Nat. Belg. Mouchamps (1 ex. ISN). – *H. pravus*: Holotype, m: 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.)/Guignot det. 1953 *Hydrovatus pravus* Guign. Type m (MAC). – Paratypes: Same collecting data as holotype (1 ex. MAC); same as holotype but 31.I. 3.II. 1949, 2299a (1 ex. MAC); same as preceding (1 ex. MAC; belongs to another *Hydrovatus* species). – *H. difficilis*: Holotype, f: Holotypus/Coll. Mus. Congo/Ruanda: Kabgaye 1850 m terr. Nyanza P. Basilewsky 9.II.1953/F. Guignot det., 1956 *Hydrovatus (Vathydrus) difficilis* n.sp. Type f (MAC). – Paratypes: Congo Belge Ituri Sabe, Lac Albert UV 16.XII.1953/f/ Paratype (1 ex. MNHN, 2 exx. ISN; specific association possibly incorrect). – *H. discifer*: Holotype, m: Holotypus/Congo belge PNG Miss. H. De Saeger II/gc/11, 30.VI.1951 Rec. H. De Saeger, 1482/Coll. Mus. Congo (ex coll. I.P.N.C.B.)/F. Guignot det., 1956 *Hydrovatus (Vathydrus) discifer* n.sp. m Type (MAC). – Paratypes: Princi-

pally with same data as holotype but 4.V.1951, 1656 (1 ex. ISN); 18.VI. 1951, 1946 (2 exx. ISN); 13.X.1951, 2595 (1 ex. ISN); 13.XI.1951, 2758 (1 ex. MAC); 26.VI.1952, 3707 (1 ex. MAC); 8.VII.1952, 3756 (2 exx. MAC); 8.VIII.1952, 3924 (1 ex. MAC); 13.IX.1952, 4058 (1 ex. ISN).

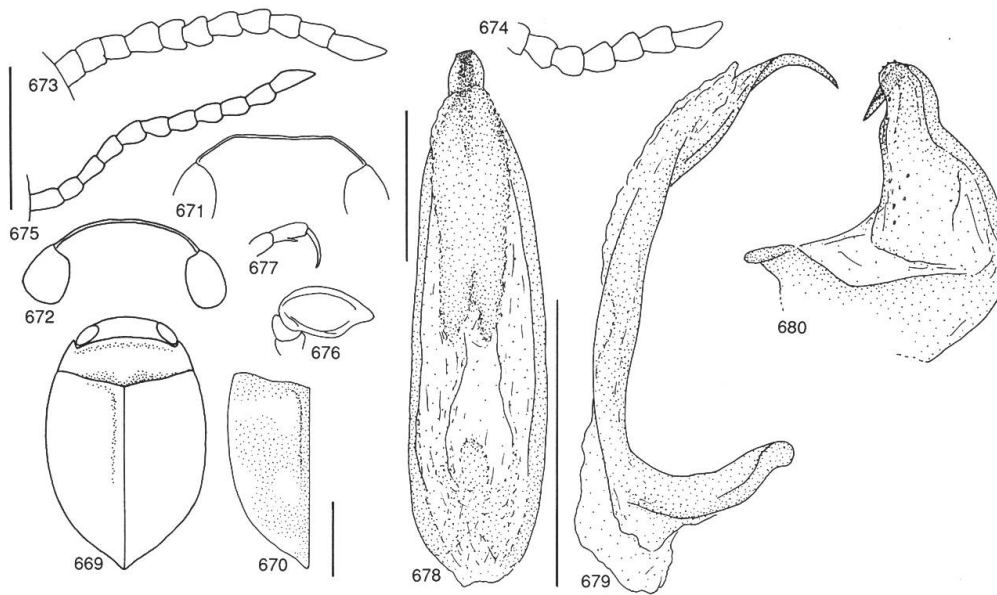
Additional material studied: Gambia: Outside Abuko Nat. Res. at water works, at light 19.00–21.50, 22.XI.1977 (1 ex. LUZ). – Senegal: Thies 1882 (1 ex. MNHN); Env. Dakar/8.IX.1956 (1 ex. MCG). – Guinea Bissau: Oio 2 km E Binar 21.VII.1992 (1 ex. coll. Persson); Cacheu: Bula 18.VII.1992 (1 ex. coll. Persson). – Benin: Zagnanado Dahomey 8–14.V.1950 (1 ex. IFAN); 3 km S Parakou 5.VII.1989 (2 exx. coll. Vondel, 1 ex. MZH); Parakou 7., 11., 14.VII.1989 (8 exx. coll. Vondel, 1 ex. MZH); 4 km S Parakou 10.VII.1989 (3 exx. coll. Vondel, 1 ex. MZH); Ouénou Nikki 12.VII.1989 (1 ex. coll. Vondel); Tourou Parakou 19.VII.1989 (3 exx. coll. Vondel); Badékparou 20.VII.1989 (3 exx. coll. Vondel); Bétérou W Parakou 21.VII.1989 (1 ex. coll. Vondel). – Chad: Bebedja 20–21.V.1973 (1 ex. MZH); Moyen Chari Ft. Archambault Bakare ou Bougoul IV., V.1904 (5 exx. MNHN, 2 exx. MZH). – Nigeria: Zaria (1 ex. coll. Rocchi); EC st., Norcap nr Abakaliki 29.VI.1973 (1 ex. MZH); Ibadan, at light 27.XI.1955 (1 ex. BMNH). – Gabon: Gabon Mocquerys (2 exx. MNHN; possible type material of *H. gabonicus*); Gabon/Régb. 91/*H. gabonicus* Régb. n.sp./*H. gabonicus* Rég. det. Régimbart (1 ex. MCG; possible type material of *H. gabonicus*). – Sudan: Aluakluak 14.V.1954/*H. gabonicus* Rég. det. Omer-Cooper (2 exx. AMS). In all, 68 exx.

Diagnosis: Easy to distinguish from the two other species attributed to this species group by study of the male antenna: The segments are only indistinctly enlarged in *H. gabonicus*, while distinctly modified in the other two species.

Length of body: 3.02–3.44 mm, breadth: 2.00–2.20 mm. Habitus (Figs 669–670).

Head: Pale ferrugineous to pale brown. Finely and sparsely punctate. Punctures frontally indistinct due to strongly developed microsculpture. Head mat to submat, microsculptured (meshes distinct). Head frontally broadly truncate, from eye to eye narrowly margined (Fig. 671). At eyes, margin sometimes for a short distance reduced, often absent. Frontally at eye with a wide, shallow depression. Antenna pale ferrugineous, segments 3–5 almost evenly broad, slightly enlarged; from segment 6 towards apex antenna narrows gradually, sometimes these segments almost equally broad (Figs 673–674). Male maxillary palpus distinctly flattened, almost oval (Fig. 676).

Pronotum: Ferrugineous, laterally slightly paler. Frontally and basally with blackish to dark ferrugineous, quite vague areas. Rather finely and quite densely punctate. Discally on each side with a rather narrow, impunctate area. Rather shiny, although microsculptured (meshes distinct). Lateral outline of pronotum slightly curved.



Figs 669–680: *Hydrovatus gabonicus*. – 669–670, habitus. – 671, male head. – 672, female head. – 673–674, male antenna. – 675, female antenna. – 676, male maxillary palpus. – 677, male protarsal claw. – 678, penis, dorsal aspect. – 679, penis, lateral aspect. – 680, paramere. Left top scale 0.5 mm, antenna, palpus and claw; right top scale 1 mm, head; left bottom scale 1 mm, habitus; right bottom scale 0.4 mm, genitalia.

Elytra: Ferruginous to pale ferruginous (palest laterally). Basally and at suture with narrow vaguely darkened areas. Colour pattern sometimes fairly distinct (Fig. 670), sometimes indistinct or absent. Rather finely and quite densely punctate (size of punctures somewhat variable). Apically punctures fine. Rows of punctures practically absent (a few punctures indicate a very irregular and indistinct lateral row). Shiny, microsculpture hardly discernible. Apically with fine reticulation. Epipleura pale ferruginous, at inner part finely and densely punctate, rather shiny, very fine microsculpture may be discerned.

Ventral side: Dark ferruginous to ferruginous, abdomen paler. Quite coarsely and densely punctate. Abdomen indistinctly punctate, except at base; quite coarsely punctate. Shiny, not microsculptured, except small posterior area on metacoxal plates and abdomen; finely microsculptured. Prosternal process laterally narrowly margined, medial surface slightly depressed to flat, finely punctate.

Legs: Pale ferruginous. Pro- and mesotarsus slightly enlarged. Protarsal claws quite long (Fig. 677).

Male genitalia: Figs 678–680.

Female: Frontal outline of head rounded (Fig. 672). Antenna slender, without enlarged segments (Fig. 675). Protarsal claws and maxillary palpus simple.

Distribution: Gambia, Senegal, Guinea Bissau, Benin, Nigeria, Chad, Gabon, Sudan, Zaire, Rwanda (Fig. 688).

Biology: Fragmentarily documented. The species has been sampled at light collection. See also BILARDO & ROCCHI (1990).

Synonymy: Lectotype and holotypes of the four species involved have been examined. Slight variation in the shape of the male antenna exists as well as differences in elytral punctation and colour pattern. These deviations are, however, quite small and are regarded as cases of intraspecific variation. Thus, at least so far, I consider all four species to belong to one, slightly variable and widely distributed species, the valid name of which is *H. gabonicus* (oldest available name).

***Hydovatus latipalpis* n.sp.**

Figs 681–688.

Type locality: Garamba National Parc, Zaire.

Type material studied: Holotype, m: Holotypus/Congo Belge PNG Miss. H. De Saeger Pali/8, 22.III.1952 H. De Saeger, 3215/Coll. Mus. Congo (ex coll. I.P.N.C.B.)/F. Guignot det., 1958 *Hydovatus (Vathydrus) latipalpis* n.sp. Holotype (MAC). – Paratypes: Same data as holotype but 24.VII.1952, 3816 (4 exx. MAC). In all, 5 exx.

Derivation of the name: The manuscript-name, proposed by Guignot, is here adopted.

Diagnosis: Easily recognized by examination of male antenna and maxillary palpus: Antenna with distinctly enlarged segments, apical segment of palpus triangular.

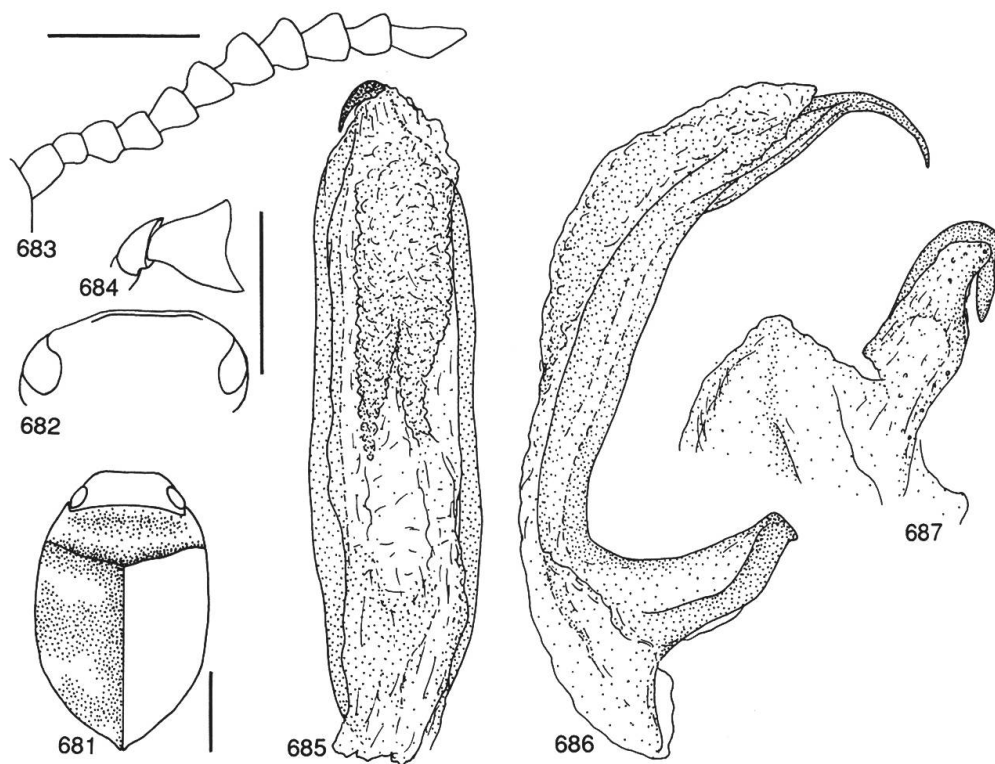
Description: only diagnostically important deviations from description of *H. gabonicus* recognized.

Length of body: 3.12–3.24 mm, breadth: 2.00–2.12 mm. Habitus (Fig. 681).

Head: Frontal aspect of head as in Fig. 682. Frontal margin does not reach eyes. Antenna strongly modified, segments 3–11 distinctly enlarged (Fig. 683). Apical segment of maxillary palpus strongly modified, triangular (Fig. 684).

Pronotum: Colour pattern quite distinct (Fig. 681). Lateral outline of pronotum almost straight to somewhat rounded.

Elytra: Blackish ferruginous to dark ferruginous, with vague, ferruginous to pale ferruginous spots (Fig. 681). Sometimes elytra covered with fine but partly indistinct microsculpture.



Figs 681–687: *Hydrovatus latipalpis*. – 681, habitus. – 682, head, frontal aspect. – 683, male antenna. – 684, male maxillary palpus. – 685, penis, dorsal aspect. – 686, penis, lateral aspect. – 687, apex of paramere. Horizontal scale 0.5 mm, antenna and palpus; left top scale 1 mm, head; left bottom scale 1 mm, habitus; right scale 0.5 mm, genitalia.

Ventral side: Prosternal process laterally rather indistinctly margined, medial surface distinctly excavate.

Legs: Pro- and mesotarsus rather slender.

Male genitalia: Figs 685–687.

Female: Frontal aspect of head almost evenly rounded. Antenna and palpi simple, not modified.

Distribution: Zaire (Fig. 688).

Biology: Unknown.

***Hydrovatus macrocerus* Régimbart**

Figs 688–695.

Hydrovatus macrocerus RÉGIMBART, 1895b:114 (orig. descr., faun.); ZIMMERMANN, 1920a:34 (faun.); GSCHWENDTNER, 1930:197 (disc., faun.); GUIGNOT, 1948c:10 (descr., faun.); 1954b:15 (faun.); OMER-COOPER, 1957:42 (descr., faun.); GUIGNOT, 1958b:5 (disc.); OMER-COOPER, 1958:59 (faun., biol.); GUIGNOT, 1959a:184, 185 (descr., faun.); OMER-COOPER, 1962:295 (disc.); 1963:161, 166, 171 (descr., faun.); 1965:96 (descr., faun.); BERTRAND & LEGROS, 1967:862, 867 (faun.); BILARDO & PEDERZANI, 1978:104.107 (descr., disc., faun.); BILARDO & ROCCHI, 1990:170 (list.).

Type locality: Cape Terr., South Africa.

Type material studied: Holotype, m: Cape T. L.P./*Hydrovatus macrocerus* type unique/Type SAM Ent. 846 (SAM).

Additional material studied: Zaire: PNA Lac Magera 27.VIII.1935/*H. macrocerus* Rég. det. Guignot 1945 (3 exx. MAC, labelled as allotype and paratypes, but in accordance with the International Code of Nomenclature they have no type status). – Zimbabwe: Inyanga Riv. 28.XII.1963 (7 exx. AMS); Stream at Salisbury 13.X.1948 (7 exx. AMS). – Botswana: Tiokweng 15–21.III.1988 (1 ex. CMNH). – South Africa: Trsvl Barberton, trib. Koop Riv. 1.XII.1948/*H. macrocerus* Rég. det. Omer-Cooper (8 exx. AMS, 1 ex. TMP); Middleburg 29.XI.1949 (1 ex. AMS); Trsvl Bandolier Kop 23.XI.1948 (2 exx. AMS); Koop Riv. W. Nelspruit 1.XII.1948 (1 ex. AMS); Nelshoogte, gallery for. 25.51S–30.53E/4.XII.1986 E–Y: 2354 UV light (1 ex. TMP, 1 ex. MZH); OFS Doornbult Hoopstad SE 2726 Cc/4–5.III.1978 (1 ex. BNM); EC Pr. Umziculu 13.III.1956 (3 exx. AMS). – Swaziland: Mbabane 5.XII.1948/*H. macrocerus* Rgb. det.

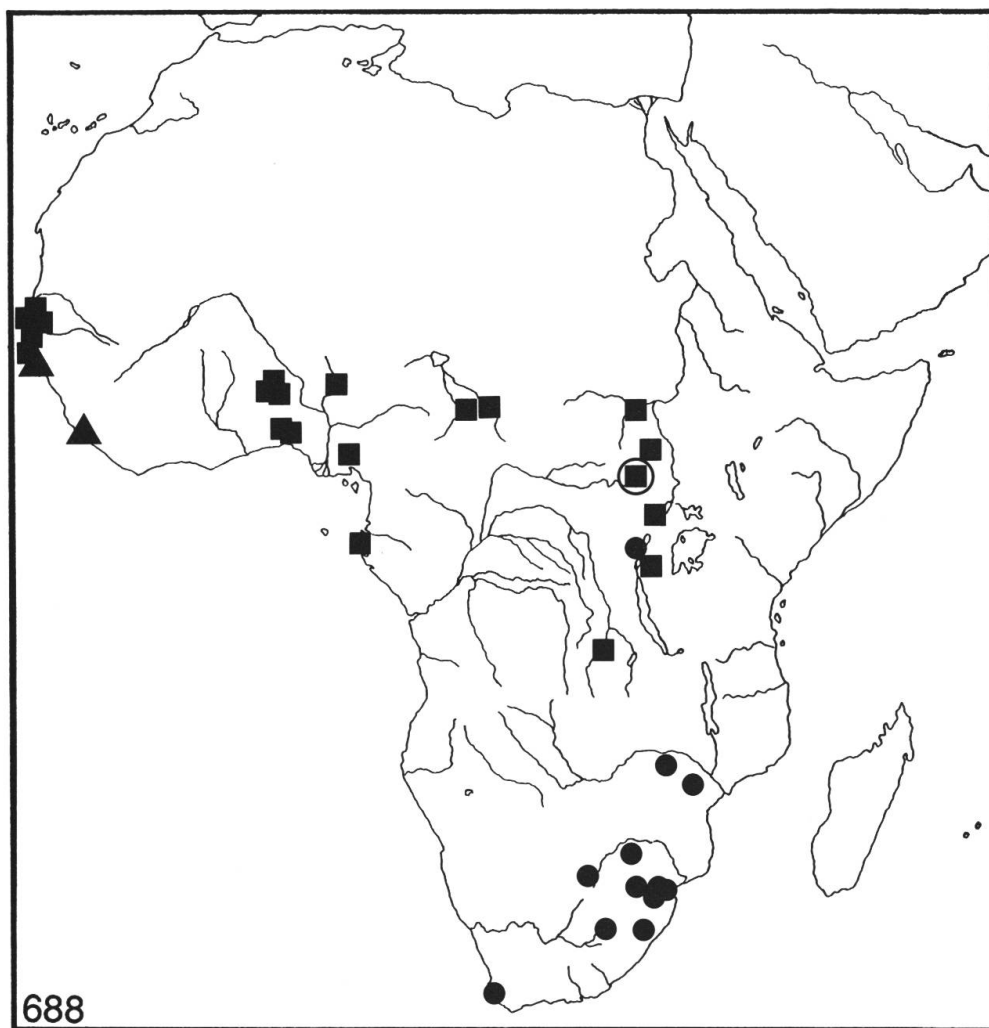


Fig. 688: Distribution of *Hydrovatus gabonicus* (square), *H. latipalpis* (circle), *H. macrocerus* (dot) and *H. rocchii* (triangle).

Omer-Cooper (1 ex. AMS). – Location unknown: C.S.I.R. Stream survey, Low 29 B 13.X.1955 (4 exx. AMS). In all, 43 exx.

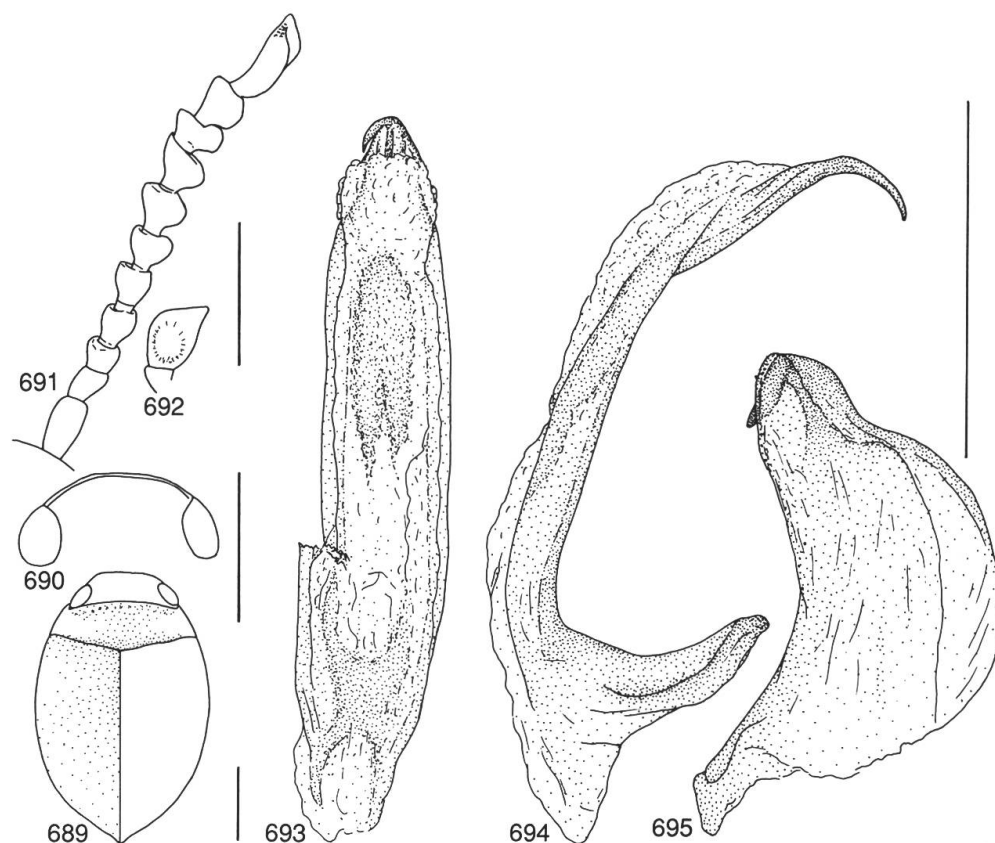
Diagnosis: Easily separated from the two preceding species by study of the male antenna and male maxillary palpus: Antenna with peculiarly modified 5th to 11th segments; maxillary palpus distinctly flattened, almost oval.

Description: only important data recognized; cf. *H. gabonicus* and *H. latipalpis*.

Length of body: 3.00–3.60 mm, breadth: 2.08–2.26 mm. Habitus (Fig. 689).

Head: Along frontal outline from eye to eye margined (Fig. 690). Antenna and palpi modified, with enlarged segments (Figs 691–692).

Elytra: Blackish brown to dark ferruginous. Laterally elytra pale brown, but distinct colour pattern absent. Elytra shiny, microsculpture absent or hardly visible (scattered, indistinct reticulation may



Figs 689–695: *Hydrovatus macrocerus*. – 689, habitus. – 690, head, frontal aspect. – 691, male antenna. – 692, male maxillary palpus. – 693, penis, dorsal aspect (laterally on left broken). – 694, penis, lateral aspect. – 695, paramere. Left top scale 0.5 mm, antenna and head; left middle scale 1 mm, head; left bottom scale 1 mm, habitus; right scale 0.5 mm, genitalia.

be observed), reduced. Apically and narrowly at base with fine microsculpture clearly discernible.

Ventral side: Abdomen at base and laterally with distinctly uneven surface; with variable impressions – not normal punctation (artefact cannot be excluded). Prosternal process laterally broadly and distinctly margined, medial surface not distinctly excavate, medially coarsely punctate.

Male genitalia: Figs 693–695.

Distribution: Zaire, Zimbabwe, Botswana, South Africa, Swaziland (Fig. 688). Additional record is the Ivory Coast (BILARDO & PEDERZANI, 1978). OMER-COOPER (1965) also lists the Congo, referring to Gschwendtner and Guignot. I believe this is a mistake; should read Belgian Congo (= Zaire).

Biology: In Zaire collected at an altitude of 2000 m. In South Africa once sampled with UV light in a gallery forest. According to OMER-COOPER (1958) recorded from spring waters with red mud probably due to iron bacteria activity.

6.5.8. Species group 8 (sp.gr. *rocchii*)

Hydrovatus rocchii n.sp.

Figs 688, 696–701.

Type locality: Suzana, Guinea Bissau.

Type material studied: Holotype, m: Port. Guinea Suzana 1964 Andreoletti/*Hydrovatus* (?) *gabonicus* Rég. det. Rocchi 1979 (coll. Rocchi). – Paratype: Sierra Leone: Makeni 12,03W,8,53N, 27.XI.1993 loc. 9 light trap 18–21/Lund University Sierra Leone Expedition 1993 leg. L. Cederholmy-R. Danielsson-R.Hall/*Hydrovatus rocchii* Biström Det. AN Nilsson -94 (1 ex. LUZ). In all, 2 exx.

Etymology: Named after Dr. Saverio Rocchi, Firenze, Italy, from whose collection the holotype of the new species comes.

Diagnosis: Resembles morphologically of the species (spec. *H. gabonicus*) placed in species group 7, but differs by having an unmodified male maxillary palpus. *H. rocchii* is particularly characterized by the peculiarly shaped male antenna.

Description: only differences from description of *H. gabonicus* on p. 328 recognized)

Length of body: 3.28–3.38 mm, breadth: 2.10–2.20 mm. Habitus (Fig. 696).

Head: Rather finely and sparsely to fairly densely punctate. In frontal, quite distinct depressions and at eyes with denser punctures. Quite shiny, although distinctly microsculptured. Frontal aspect of