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Contributions to the Knowledge of Steninae

CCXXXVIII

On some African *Stenus*-Species (Staphylinidae, Coleoptera)

Abstract

Descriptions of six new African beetles of the genus *Stenus* LATR.: *S. (Hypostenus) obconicus occultatus ssp. n.* (Zaire), *S. (H.) pulchellulus sp. n. (Nigeria), S. (H.) sabulicola* sp. n. (Zaire), *S. (H.) spathipenis* sp. n. (Zaire), *S. (H.) terlutteri* sp. n. (Cameroon), *S. (H.) traducticius* sp. n. (Ivory Coast), and confirmation of the species status of *S. (s. str.) magnopunctatus* Hammond including description of its male sexual characters.

The staphylinid subfamily Steninae is represented by 300 species of the genus *Stenus* LATR. in the Ethiopian region. Some of them are of doubtful status since males are unknown. Amongst material sent to me from the Musée royal de l'Afrique Centrale, Tervuren, the Institut royal des Sciences naturelles de Belgique, the U. S. National Museum, Washington, Dr. TERLUTTER, and Mr. M. PFEIFFER five new species, one new subspecies, and males of one hitherto doubtful species have been found which are described below.

Stenus (Hypostenus) spathipenis sp. n.

This new species belongs to the group of *S. fulgidus* PUTHZ (PUTHZ, 1971: 242) where it resembles *S. cooperi* BERNH.. The *fulgidus*-group is widely distributed in tropical Africa including Madagascar. So far only two species of that group have been recorded from the region around Lake Edward and Ruwenzori Mountains: *S. cooperi* BERNH. and *S. obconicus* FAUVEL. But both taxa have been determined without reference to males, and so their identifications have to be considered as doubtful, for general facies and punctation show a considerable variability in the species of the *fulgidus*-group. Now, fortunately, males have come to light which belong to two different species, both of them new. Consequently former records of *S. cooperi* BERNH. and *S. obconicus* FAUVEL from the above mentioned area should be regarded as even more doubtful than before.

Black, strongly shining, coarsely and very densely punctured, pubescence short, pale. Antennae at base brown, club blackish. Palpi brown, 3rd segment dark brown. Legs black, tarsi brownish. Labrum black, densely pubescent.

Length: 4.5–5.7 mm (fore parts: 2.1–2.3 mm).

♂- **holotype** and 1 ♂, 3 ♀♀- paratypes: ZAIRE (Congo belge): Parc National Albert, Mutsora [à 5 km au Sud de Mutwanga, 1200 m], 26.V.1952.

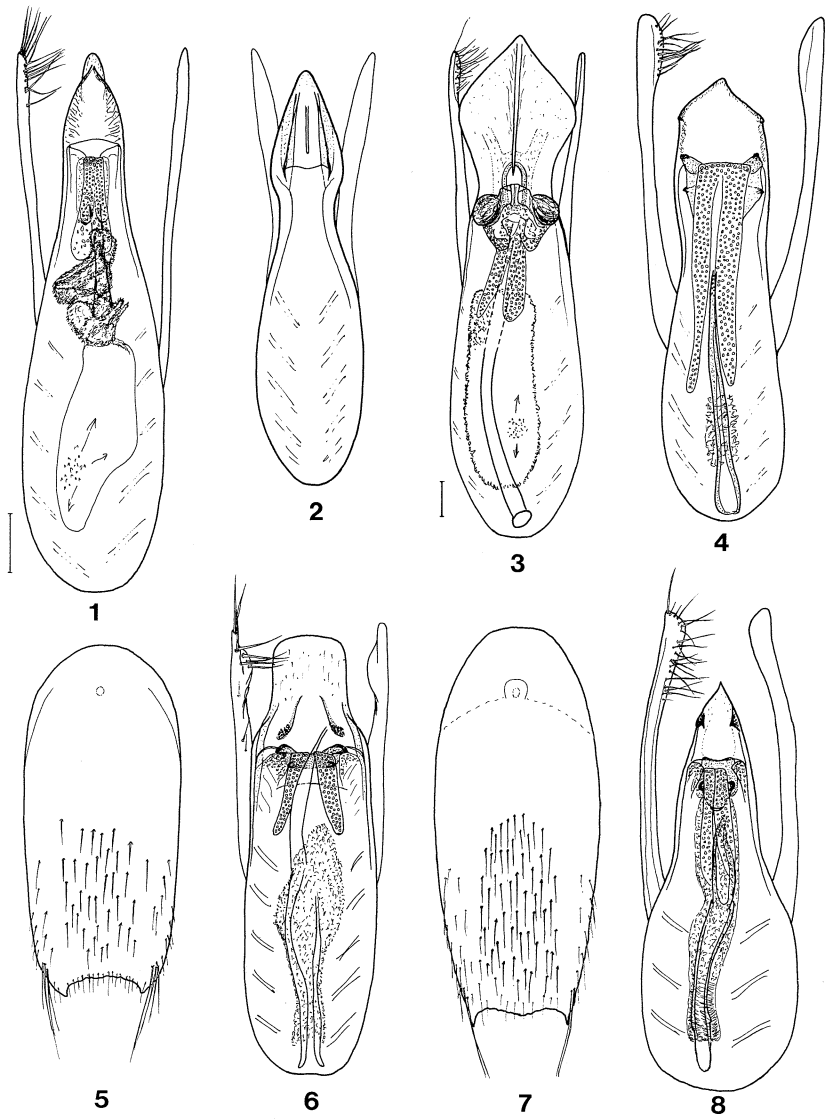
Proportional measurements of the holotype: width of head: 33; average distance between eyes: 19; width of pronotum: 30.2; length of pronotum: 31; greatest elytral width: 43.6; greatest elytral length: 42; sutural length: 34.

Male: Femora distinctly more robust than in female. Metatibiae in their posterior half distinctly curved upwards. Metasternum broadly impressed, coarsely and very densely punctured. 3rd sternite with a short and broad impression at posterior border, sides somewhat roundly elevated, posterior margin broadly and shallowly emarginate, base of sternite moderately coarsely, densely punctured, apical impression with puncturation and pubescence fine and dense. Sternite 4 broadly impressed in posterior half, sides of impression very markedly elevated, elongated, and enlarged forming broad, apically rounded, prominent lobes with very fine brush-like pubescence; these lobes raise the segment off the ground and can easily be seen in lateral aspect; puncturation of sternite 4 basally coarse and dense, before impression sparse, impression finely and densely punctured. 5th sternite in posterior half broadly impressed, sides roundly elevated, puncturation fine and very dense, posterior margin broadly emarginate. 6th sternite with a shallow impression in posterior half, puncturation as on sternite 5. 7th sternite slightly impressed in posterior middle where it is much more finely and densely punctured and pubescent than on sides, posterior margin with a narrow and shallow notch. 8th sternite with a narrow notch in posterior two-fifths (31 : 77). 9th sternite in posterior half broadly depressed, apicolaterally shortly pointed. 10th tergite at smooth posterior margin broadly rounded. **Aedeagus** (fig. 3): apical portion of median lobe spade-like (*spathipenis*) with a long and narrow ventral carina; internal sac membranous and with a long, strongly sclerotized tube, no flagellum; parameres slender, apically set with numerous fine setae.

Female: 8th sternite apically rounded. Valvifera broadly rounded or blunt posteriorly, no distinct prominent point. 10th tergite very broadly rounded, nearly truncate at posterior margin.

Head slightly broader than pronotum, front with five small shining areas, which are narrow and small, and not as remarkable as in most other members of the *fulgidus*-group: at first glance the coarse and very dense puncturation attract attention while the shining areas are less striking. **Pronotum** very densely and equally punctured, no remarkable shining areas except two ± small ones in posterior half. **Elytra** coarsely and densely punctured, slightly less dense in sutural third. **Abdomen** coarsely and densely punctured, less coarsely posteriorly and less dense in the middle of tergites than on the sides. Tergite 7 with a broad membranous fringe apically (the species is fully winged). Puncturation of tergite 7 moderately coarse and dense, diameter of punctures as wide as cross-section of the base of the 3rd antennal segment, interstices laterally slightly smaller than punctures, medially as large as punctures. 8th tergite slightly coarser and somewhat more densely punctured than the 7th tergite. 10th tergite moderately finely and densely punctured.

In my key of the group (PUTHZ, 1971) *Stenus spathipenis* sp. n. has to be placed after # 28 (25). It is distinguished from both *S. cooperi* BERNH. and *S. obconicus* FAUVEL by the less noticeably shining areas of the front, lack of remarkable shining plaques on the pronotum, slightly denser puncturation of tergite 7 and the male sexual characters. From *S. hamatipenis* PUTHZ (Kivu), which also has a densely punctured front, the new species can be distinguished by its broader head, denser and coarser puncturation of pronotum, and the sexual characters of the male.



Figs. 1–8. Ventral aspect of aedeagus (2 without internal sac and setae of parameres) and 9th sternite of male. *Stenus (s. str.) magnopunctatus* HAMMOND (1). – *S. (Hypostenus) obconicus occultatus* ssp. n. (holotype) (2). – *S. (H.) spathipenis* sp. n. (ht) (3). – *S. (H.) sabulicola* sp. n. (ht) (4). – *S. (H.) terlutteri* sp. n. (ht) (5, 6). – *S. (H.) pulchellulus* sp. n. (ht) (7, 8). – Scale = 0.1 mm (1 = 4–8; 3 = 2).

Holotype and paratypes in the Musée royal de l'Afrique Centrale, Tervuren, one paratype in the author's collection.

***Stenus (Hypostenus) obconicus occultatus* ssp. n.**

This *Stenus* was found together with the previous; it also belongs to the group of *S. fulgidus* PUTHZ but to a different species. The general facies and the male sexual characters lead to the conclusion that it represents a new subspecies of the polytypic *S. obconicus* FAUVEL. *S. obconicus* has been described from Madagascar but is widely distributed over the whole of tropical Africa. At present four subspecies are known, one from Western Africa, one from Cameroon, one from S. W. Africa, and one from Malawi. CAMERON (1950) recorded *S. obconicus* from the Albert National Parc, Zaire, but all the specimens he knew seem to be females. The male, described below, differs clearly from the other subspecies of *S. obconicus* and can therefore be considered as new.

Black, strongly shining, coarsely and densely punctured except for some areas of the front and of the pronotum, pubescence short and pale. First antennal segment brown, the following ones somewhat lighter, infuscated towards club. Base of palpi light brown, 3rd segment dark brown. Legs black, tarsi brownish. Labrum blackish, densely pubescent.

Length: 3.7–4.0 mm (fore parts: 2.0 mm).

♂ **- holotype**: ZAIRE (Congo belge): Parc National Albert, Mutsora [à 5 km au Sud de Mutwanga, 1200 m], 26.V.1952.

Proportional measurements: width of head: 27.5; average distance between eyes: 16; width of pronotum: 25.8; length of pronotum: 28; greatest elytral width: 39; greatest elytral length: 38; sutural length: 32.

Male: Femora somewhat enlarged, metatibiae in posterior half curved, distinctly curved inwards and upwards. Sternite 3 coarsely and very densely punctured. 4th sternite broadly but shallowly impressed near posterior border, basally set with coarse puncturation, impression very finely and sparsely punctured and pubescent, posterior margin nearly truncate. 5th sternite with a very broad and deep impression in posterior half, the sides of which are carinate towards the posterior margin and distinctly prominent, puncturation and pubescence of impression very fine and very dense, posterior margin broadly emarginate. 6th sternite even more deeply impressed and with even more elevated lateral carinae (seen from lateral aspect these form prominent, blunt teeth), puncturation and pubescence of impression extremely fine and dense, inner pubescence of carinae brush-like, posterior margin broadly emarginate. 7th sternite basally with a broad medial impression, slighly impressed in posterior middle, where it is very finely and densely punctured and pubescent. 8th sternite with a very deep, triangular excision in about posterior half (38 : 75), sides of excision not straight but slightly angular. 9th sternite apicolaterally pointed. 10th tergite rounded at smooth posterior margin. **Aedeagus** (fig. 2), median lobe with a broad-lanceolate apical portion, which is separated from the basal portion by a distinct lateral constriction, and with a long ventromedian carina; internal sac as usual in *S. obconicus*, with a long flagellum.

Female: unknown.

Stenus obconicus occultatus ssp. n. strongly resembles *S. obconicus quinquecarinatus* CAMERON from which it can be distinguished by the somewhat coarser puncturation of the fore parts, especially of the pronotum, by the more distinct shining areas on the pronotum, and the male sexual characters: in *S. obconicus quinquecarinatus* the apical notch of sternite 8 is distinctly deeper than half the sternite, and the median lobe is straight laterally up to the apical half of the apical portion (see PUTHZ, 1969, fig. 4). From *S. cooperi* BERNH., which is very close to *S. obconicus* FAUVEL, the new subspecies is separated by its male sexual characters (see PUTHZ, 1967); I do not know of other clear sculptural differences; so the identification of females remain insecure. The new subspecies is distinguished from *S. spathipenis* sp. n. as noted above.

Holotype in the Musée royal de l'Afrique Centrale, Tervuren.

***Stenus (Hypostenus) terlutteri* sp. n.**

This new species belongs to the *bifrons-nairobiensis*-group (PUTHZ, 1971 : 231) where it resembles *S. obscurellus* BERNH.

Black, strongly shining, coarsely and densely punctured, pubescence moderately short. Antennae brownish, bases of proximal segments light brown, rest distinctly darker, club dark brown. Palpi with its 1st and the basal half of 2nd segment yellow, rest brown to dark brown. Femora well in its basal half reddish-yellow or lighter, apical portion abruptly dark brown to blackish, tibiae in about basal half dark brown, becoming lighter brownish towards apex, tarsi dark brown, 5th segment slightly paler. Labrum dark brown. Clypeus und labrum moderately pubescent.

Length: 4.0–5.0 mm (fore parts: 2.4–2.5 mm).

♂**- holotype** and 4 ♀♀- paratypes: CAMEROON: NW-Province: env. Bamenda: Cascade of Alateming, 24.XII.1981, H. TERLUTTER.

Proportional measurements of the holotype: width of head: 38; average distance between eyes: 20; width of pronotum: 28; length of pronotum: 31; greatest width of elytra: 43,5; greatest length of elytra: 42; sutural length: 34.

Male: Legs simple. 3rd and 4th sternites sparser punctured in middle. 5th sternite broadly and shallowly impressed in posterior middle, puncturation sparser than on the sides. 6th sternite with a broad and very deep impression in posterior two-thirds, of which the sides are strongly carinate, posterior margin broadly emarginate, puncturation of impression fine and sparse. 7th sternite broadly impressed in anterior middle, the impression becomes much shallower towards posterior margin of the sternite, which is truncate, puncturation in the sternite's middle finer and denser than on the sides. 8th sternite with a triangular notch in about posterior third. 9th sternite (fig. 5), apicolaterally with a short, rounded point. 10th tergite rounded at smooth posterior margin. **Aedeagus** (fig. 6), apical portion of the median lobe broad, parallel-sided, apically very broadly rounded, not extending towards apices of parameres, ventrally with two stronger sclerotized ridges, which are densely set with sensoric setae posteriorly.

Female: 8th sternite posteriorly rounded. Valvifer apicolaterally acute. 10th tergite rounded at smooth posterior margin.

The whole surface lacks microsculpture.

Stenus pulchellulus sp. n. resembles *S. pulchellus* PUTHZ so closely, that identification should be made sure by studying the male sexual characters. In my key of the group (*l. c.*) the new species has to be placed after # 10 (11), exoscelettally it can be (doubtfully) distinguished from *S. pulchellus* by its somewhat sparser abdominal puncturation.

Holotype and 1 paratype in the U.S. National Museum, Washington, other paratypes in the author's collection.

***Stenus (Hypostenus) traducticius* sp. n.**

This new species belongs to the group of *S. spinifer* PUTHZ and is closely related to both *S. palifer* PUTHZ and *S. angolanus* PUTHZ.

Black, shining, coarsely and densely punctured, pubescence short and sparse. Palpi with the 1st segment and the basal 3rd of 2nd segment yellow, rest infuscate to blackish. Antennae and legs chestnut- brown, posterior quarter of femora and tarsi blackish. Labrum brown, clypeus and labrum moderately densely pubescent. 10th tergite spade- like (fig. 9).

Length: 3.2–4.0 mm (fore parts: 1.9–2.0 mm).

♂ **- holotype**: IVORY COAST: Comoé National Parc, ca. 9° N, 3°50' W, IX.1990, M. PFEIFFER.

Male: Legs simple. 7th sternite in posterior middle with the puncturation finer and denser than on the sides, posterior margin with a narrow and shallow emargination. 8th sternite with a subtriangular notch in about posterior 3rd (length of sternite: depth of notch = 59 : 22). 9th sternite apicolaterally acute (fig. 10). **Aedeagus** (fig. 11) with a median-lobe which is broadly rounded apically, and with a broad, parallel-sided ventral lobe; internal sac densely set with small, strongly sclerotized spines. Parameres extending well the main corpus of aedeagus having numerous setae in their apical 3rd.

Head much narrower than elytra (28 : 35), front moderately narrow (average distance between eyes: 15), longitudinal furrows distinct in anterior half, median portion slightly narrower than each of the side portions, distinctly elevated, smooth and shining as the antennal tubercles and a small area near inner eye margin posteriorly; puncturation moderately coarse and dense, diameter of punctures about as large as apical cross section of 3rd antennal segment, interstices often slightly larger than half the diameter of punctures.

Antennae short, when reflexed somewhat extending beyond the middle of pronotum, 9th segment slightly broader than long, 10th segment about as long as broad, 11th segment 1.5 x as long as broad.

Pronotum somewhat longer than broad (25 : 23), sides moderately convex with a small callus in about the middle; puncturation coarse and dense, slightly coarser than on head, very dense near anterior margin, less dense on rest of surface where interstices are as large as half the diameter of punctures or slightly larger but not as large as the diameter of punctures.

Elytra subquadrate, much broader than head (35 : 28), as long as broad, shoulders prominent, sides moderately rounded, posterior margin broadly and deeply emarginate

(sutural length: 29); sutural impression distinct but short; also there can be seen a distinct humeral impression and a further transverse impression in posterior half, which make the elytra elevated between them. Puncturation distinctly coarser than on pronotum, largest punctures as large as apical cross section of 2nd antennal segment, interstices above as large as half the diameter of punctures or slightly larger, less large on the sides.

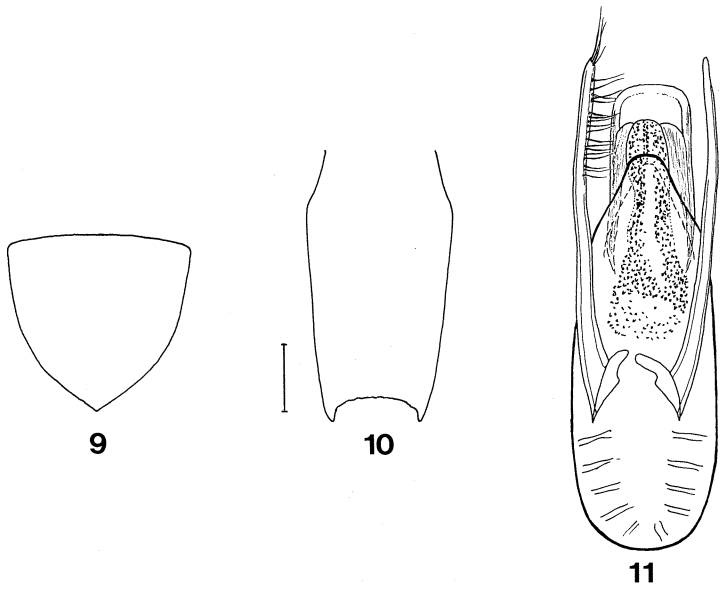
Abdomen cylindric, moderately pointed at apex, basal constrictions of first segments deep, 7th tergite with a distinct membranous fringe apically (the species is fully winged). Puncturation anteriorly (basal half of tergite 3) very coarse and dense, less coarse posteriorly and on the following tergites, punctures of tergite 7 about as large as basal cross section of 3rd antennal segment, interstices slightly larger than diameter of punctures, 10th tergite moderately fine and densely punctured.

Legs slender, posterior tarsi nearly $^{2}/_{3}$ as long as the metatibiae, 1st segment nearly as long as the 2 following segments together, less long than the last segment, 3rd and 4th segments bilobed.

The whole insect without groundsculpture.

In my key of the *spinifer*-group (PUTHZ, 1971: 312) *Stenus traducticius* sp. n. has to be placed after # 20 (25): from *S. angolanus* PUTHZ it is distinguished by its shorter length and the male's sexual characters, from both, *S. palifer* PUTHZ and *S. paliferoides* PUTHZ it can be distinguished by its denser elytral puncturation and the male sexual characters.

Holotype in the author's collection.



Figs. 9–11: *Stenus (Hypostenus) traducticius* sp. n. (holotype): 10th tergite (9), posterior portion of 9th sternite (10), dorsal aspect of aedeagus (11). – Scale = 0.1 mm

***Stenus (Hypostenus) sabulicola* sp. n.**

This new species belongs to the group of *S. ascendens* FAUVEL (PUTHZ, 1971: 296) and is the sister-species of *S. subascendens* PUTHZ, which is known only from Ft. Sibut (Rép. Centrafr.) some 240 km N. Libenge.

Black with slight brownish tint, moderately shining, very coarsely and very densely punctured, pubescence short, whitish-yellow. Antennae light brown, club infuscted. Palpi yellow, 3rd segment reddish-yellow. Legs reddish-yellow, knees brownish, apices of tarsal segments infuscated. Labrum dark brown to black, clypeus and labrum moderately densely pubescent.

Length: 3.0–3.8 mm (fore parts: 1.6–1.9 mm).

♂- **holotype** and 1 ♀- paratype: ZAIRE: Libenge, I. 1948, sable rivière (»*sabulicola*«), R. CREMER & M. NEUMAN.

Male: Femora moderately clubbed, mesotibiae with a minute preapical spur, metatibiae in posterior half distinctly curved upwards and with a distinct preapical tooth. Sternite 3–5 coarsely and densely punctured. 6th sternite with a short and broad impression near posterior border the sides of which are somewhat prominent posteriorly, impression finely punctured (anteriorly) to impunctate (posteriorly), posterior margin broadly emarginate. 8th sternite with a triangular excision in about posterior fourth (17 : 60), the excision distally broadly triangular, proximately narrow and nearly parallel-sided. 9th sternite apically serrate. 10th tergite finely toothed at semicircular posterior border, distinctly turned upwards in posterior half, moderately coarsely punctured, and densely reticulate. **Aedeagus** (fig. 8), apical portion of median lobe comparatively broad.

Female: 8th sternite apically broadly rounded. Valvifera apically serrate. 10th tergite straight, apically serrate but without ground sculpture.

Head in both sexes slightly broader than elytra (first measurement from holotype: 88 : 86; second measurement from paratype: 103 : 101), front broad (average distance between eyes: 51; 59), broadly excavated, median portion narrow, half, or less, as broad as each of the side portions, indistinctly separated, slightly elevated; puncturation coarse (near eyes) to very coarse (medially), diameter of lateral punctures as large as widest cross section of 3rd antennal segment or slightly greater, diameter of medial punctures as large as widest cross section of 1st antennal segment, interstices extremely narrow except in the middle where they become slightly larger but not as large as half the diameter of neighbouring very coarse punctures; in the ♀- paratype there can be seen a narrow, short, and shining median carina, in the ♂- holotype this area is less remarkably shining; antennal tubercles shining.

Antennae moderately slender, penultimate segments 1,5 x as long as broad.

Pronotum distinctly longer than broad (75 : 64; 85 : 71), broadest in about middle, sides towards anterior margin moderately convex, towards posterior margin moderately concave; puncturation very coarse and very dense, slightly coalescent in the middle, average punctures about the same size as largest punctures of front.

Elytra subquadrate, slightly narrower than head, slightly broader than long (86 : 85; 101 : 95), shoulders prominent, sides rather evenly but slightly widened, restricted in posterior fourth, posterior margin broadly and deeply emarginate (sutural length: 65; 73);

sutural and humeral impressions short, moderately distinct; puncturation distinctly coarser than on pronotum and very dense, only slightly coalescent, interstices much smaller than half the diameter of punctures.

Abdomen parallel-sided, pointed at apex, basal constrictions of first segments very deep, 7th tergite with a distinct membranous fringe apically (the species is fully winged); puncturation anteriorly very coarse and very dense, posteriorly moderately fine and moderately dense, average punctures of tergite 7 about as large as basal cross section of 3rd antennal segment, interstices almost as large or as large as punctures.

Legs moderately slender, posterior tarsi slightly longer than half the metatibiae, 1st segment longer than 2nd and 3rd together, longer than ultimate segment, segment 4 deeply bilobed.

No groundsculpture throughout except (in traces) on tergite 8 and on the male's 10th tergite.

Stenus sabulicola sp. n. (the ♀- paratype still bears sand grains on its pygidium) should be inserted into my key of the group under # 1 (6): from *S. brachelytratus* PUTHZ and *S. profundepunctatus* L. BENICK it is distinguished by subquadrate elytra (not trapeziform in shape), less broad head, and the male sexual characters (f. e. angular sides of excision of sternite 8), from *S. brevialatus* PUTHZ by its much narrower head, longer elytra, and the male sexual characters. From the variable *S. ascendens* FAUVEL and from *S. subascendens* PUTHZ the new species can be distinguished by its broader head, (mostly) coarser puncturation of front, and the male sexual characters.

Holotype in the Institut royal des Sciences naturelles de Belgique, Brussels, paratype in the author's collection.

Stenus (s. str.) magnopunctatus HAMMOND

Stenus jovino magnopunctatus HAMMOND 1975: 8.

Stenus magnopunctatus; PUTHZ, 1976: 338.

This *Stenus*, originally described as a subspecies of *S. jovino* EICHELBAUM, was later identified to belong to the strictly South African group of *S. hessei* L. BENICK. Since only the ♀- holotype was known and this was found very close to *S. capensis* PUTHZ, the status of *S. magnopunctatus* has been doubtful. New records including males lead to the conclusion that *S. magnopunctatus* is a valid species close to *S. capensis* PUTHZ.

Male: Femora distinctly more robust than in the female, mesotibiae with a strong apical tooth, metatibiae with a strong preapical tooth. Metasternum coarsely and moderately densely punctured, interstices smooth and shining. Sternites coarsely and densely punctured, punctures slightly longitudinally elongated; puncturation becomes finer on sternite 6 and 7 where it is moderately fine and dense. 7th sternite medially somewhat impressed, posterior margin slightly emarginate. 8th sternite with a narrow triangular notch in posterior seventh. 9th sternite apicolaterally pointed. 10th tergite apically rounded. **Aedeagus** (fig. 1), apical portion of median lobe shoe-like, internal sac membranous with chitinized tufts, parameres as long as the median lobe, narrow, apically set with numerous strong setae.

S. magnopunctatus HAMMOND has to be inserted into my key of the *hessei*-group after # 10 (11), it can be distinguished from *S. capensis* PUTHZ by the more robust general facies and the male sexual characters. Both species have been collected together in the same locality; so I can give relative measurements of both males: *S. magnopunctatus*, and, in parentheses, *S. capensis*: Width of head: 31,5 (30); average distance between eyes: 17 (16); width of pronotum: 26,5 (25); length of pronotum: 26,5 (25); greatest width of elytra: 43 (37); greatest lenth of elytra: 40,5 (35); sutural length: 33 (30); length of fore parts: 2,1 mm (1,9 mm).

Material: 3 ♂♂, 1 ♀: SOUTH AFRICA: Sederbergen, Uytkijpas, 7.I.1898, R. JOCQUE 1253 [This locality, 32°25' S, 10°11' E, is about 120 km N of the type locality (Du Toit's Kloof), but there can be no doubt of conspecificity as has been verified by comparison with the holotype.] (Musée royal de l'Afrique Centrale, Tervuren and the author's collection).

Zusammenfassung

Beschreibung von 6 neuen Taxa der Gattung *Stenus* LATR. aus der Äthiopischen Region: *S. (Hypostenus) obconicus occultatus* ssp. n. (Zaire), *S. (H.) pulchellulus* sp. n. (Nigerien), *S. (H.) sabulicola* sp. n. (Zaire), *S. (H.) spathipenis* sp. n. (Zaire), S. *(H.) terlutteri* sp. n. (Kamerun), *S. (H.) traducticius* sp. n. (Elfenbeinküste) sowie Beschreibung der männlichen Sexualcharaktere von *S. (s. str.) magnopunctatus* HAMMOND, die den Status und die Zuordnung dieser Art zur Gruppe des *S. hessei* L. BENICK bestätigen.

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