

ON SOME AFRICAN *STENUS* FROM THE U.S.  
NATIONAL MUSEUM OF NATURAL HISTORY  
(COLEOPTERA: STAPHYLINIDAE), 96.  
CONTRIBUTION TO THE KNOWLEDGE OF STENINAE

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ABSTRACT

African *Stenus* from the U.S. National Museum of Natural History are studied and cited; 5 taxa are described as new: *Stenus obconicus malawianus*, *Stenus spangleri*, *Stenus callens*, *Stenus spinicollis*, and *Stenus cooki*.

The African *Stenus* fauna is one of the most interesting in the world because of the geological history of the continent. About 230 taxa in this genus were known previously from Africa and Madagascar.

Dr. Paul J. Spangler was kind enough to send to me for study the African *Stenus* in the National Museum of Natural History [NMNH]. This paper provides a list of that material and the descriptions of 5 new taxa.

*Stenus mendicus separatus* L. Benick

1 female, Dunbrody (SOUTH AFRICA, Cape Colony): (loc. typ.).

This is the only subspecies of the polytypic species *mendicus* Erichson that is known from the Cape Colony. The specimen in the NMNH should be regarded as a paratype because it belongs to the original series.

*Stenus cameratus cameratus* L. Benick

1 female, Heluan, Fenyes; 1 female, Pyramides, 10 Aug. 1933, coll. Alfieri; 1 female, Route de Suez, jerne tour, 15 Oct. 1926, coll. Alfieri.

This species is widely distributed throughout Africa; it is known from Syria, Egypt, Sudan, Ethiopia, Kenya, Zambia, and Rhodesia. It was first described from Egypt by Motschulsky under the name *flavitarsis*.

*Stenus peringueyi* L. Benick

1 male, 9 females: SOUTH AFRICA: Transvaal, Wolmaransstad, 2 Mar. 1968, P. J. Spangler.

This polytypic species is known by its nominate form from South Africa and Angola.

*Stenus* cf. *kaguruensis* Bernhauer

1 female, L. Port, 20 Aug. 1900.

There are some females known from South Africa which differ slightly from the *kaguruensis* type. The males of these are not known at present, and it is impossible to decide whether the female cited above belongs to a



new species or to *kaguruensis*. The true *Stenus kaguruensis* is known from Tanzania.

*Stenus bifrons* Waterhouse

1 male: SOUTH AFRICA: Natal, Mtubatuba, 24 & 25 Mar. 1968, P. J. Spangler.

This species is widely spread over tropical Africa and known from [Ivory Coast], Nigeria, [Cameroun], [Egypt], Ethiopia, Kenya, Tanzania, and Rhodesia [female-records in brackets].

*Stenus nairobiensis* Fauvel

1 male, 1 female: RHODESIA: 20 mi S. Bulawayo, 1 Apr. 1968, P. J. Spangler; 18 males, 19 females: Matopos National Park, 1 & 2 Apr. 1968, P. J. Spangler.

This is one of the most common African *Hypostenus*; known previously from Ethiopia, Somalia, Kenya, Tanzania, Congo, Angola, and South Africa.

*Stenus (Hypostenus) obconicus malawianus* Puthz, NEW SUBSPECIES

This new subspecies belongs to the *fulgidus*-group which is represented by 17 taxa in Africa and Madagascar. One of the species, *S. obconicus* Fauvel, is polytypic with subspecies known from Madagascar, Southwest Africa, the Cameroons, and West Africa.

Because of general similarity in appearance several of the taxa can be distinguished only by using the male sexual characters. This applies especially to *S. obconicus* and its subspecies. This new subspecies seems to represent *obconicus* in the southeastern part of Central Africa.

A full description is not necessary, the main differentiating characters are as follows: *Stenus obconicus malawianus* n. ssp. can be distinguished from *fulgidus* Puthz by its length, by its coarser and slightly sparser punctuation of pronotum and elytra; from *decemguttatus* L. Benick by its more slender appearance and distinctly narrower pronotum; from *obconicus obconicus* Fauvel by its narrower body; from *obconicus quinquecarinatus* Cameron by the coarser punctuation of its fore-parts which is not as dense as in that subspecies; from *obconicus damarensis* Puthz by its length; from *obconicus annectens* Puthz by its smaller head; from all mentioned above by the male sexual characters (as described by the author in previous articles).

Measurements (given in microns): width of head: 660; average distance between the eyes: 380; width of prothorax: 620; length of prothorax: 650; greatest width of elytra: 970; greatest length of elytra: 960; sutural length: 780. Posterior tarsi: 140-95-105-130-160. Length of body: 3.5mm to 4.0mm.

Quite shiny, black; coarsely and densely punctate; head with five shiny plaques; pronotum shiny medially, distinctly but not densely pubescent. Antennae with the basal portion yellowish brown, the club infusate. First 2 segments and base of third segment of palpi yellowish brown, the re-



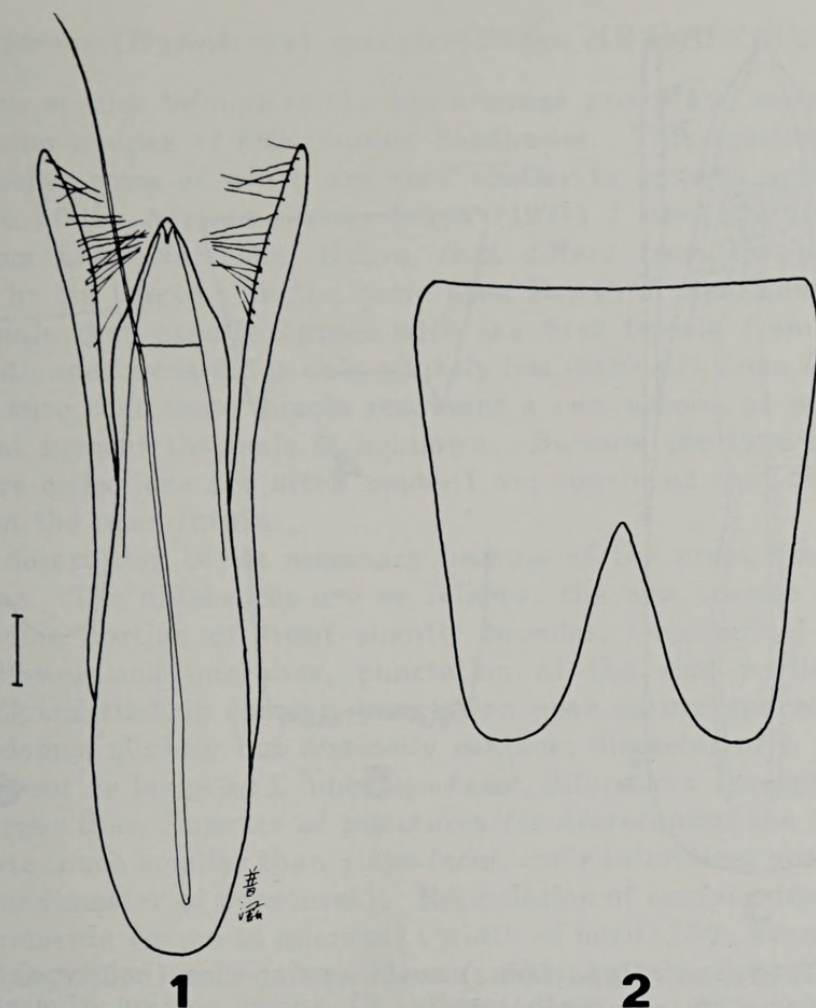


Fig. 1, 2: *Stenus (Hypostenus) obconicus malawianus* new subspecies (paratype): 1) ventral aspect of aedeagus without internal structures, except flagellum; 2) eighth sternite. Scale: 0.1mm.

mainder brown or darker. Legs dark brown to black, basal third of tibia and tarsi distinctly lighter. Labrum black, densely but distinctly pubescent.

MALE: legs quite slender, femora distinctly more slender than in *obconicus obconicus* and *obconicus quinquecarinatus*, tibia not distinctly curved. Fore sternites coarsely and densely punctured. Sternite 6 in posterior quarter with a broad but short impression, the posterior sides of which are only slightly carinate (not distinctly prominent in lateral aspect), punctation and pubescence of impression extremely fine and dense, posterior margin shallowly emarginate. Sternite 7 at posterior margin very shallowly emarginate, punctation and pubescence in middle denser and finer than on sides. Sternite 8 (Fig. 2). Sternite 9 about as in *obconicus*. Tergite 10 broadly rounded. The aedeagus (Fig. 1) is similar to that in *obconicus*, but the apical portion of the median lobe is more convex, the extreme apex has a short tooth, shorter than in *obconicus*. Inner structures (flagellum, etc.) as in *obconicus*. Parameres a little longer.

Holotype male USNM Type No. 71205 and male and female paratypes: MALAWI: 10 mi. W. Mlanje, 11 Apr. 1968, P. J. Spangler; 1 female (cf.): ZAMBIA: Namwala. Holotype and 1 paratype in the National Museum of Natural History in Washington, 1 paratype in the author's collection.



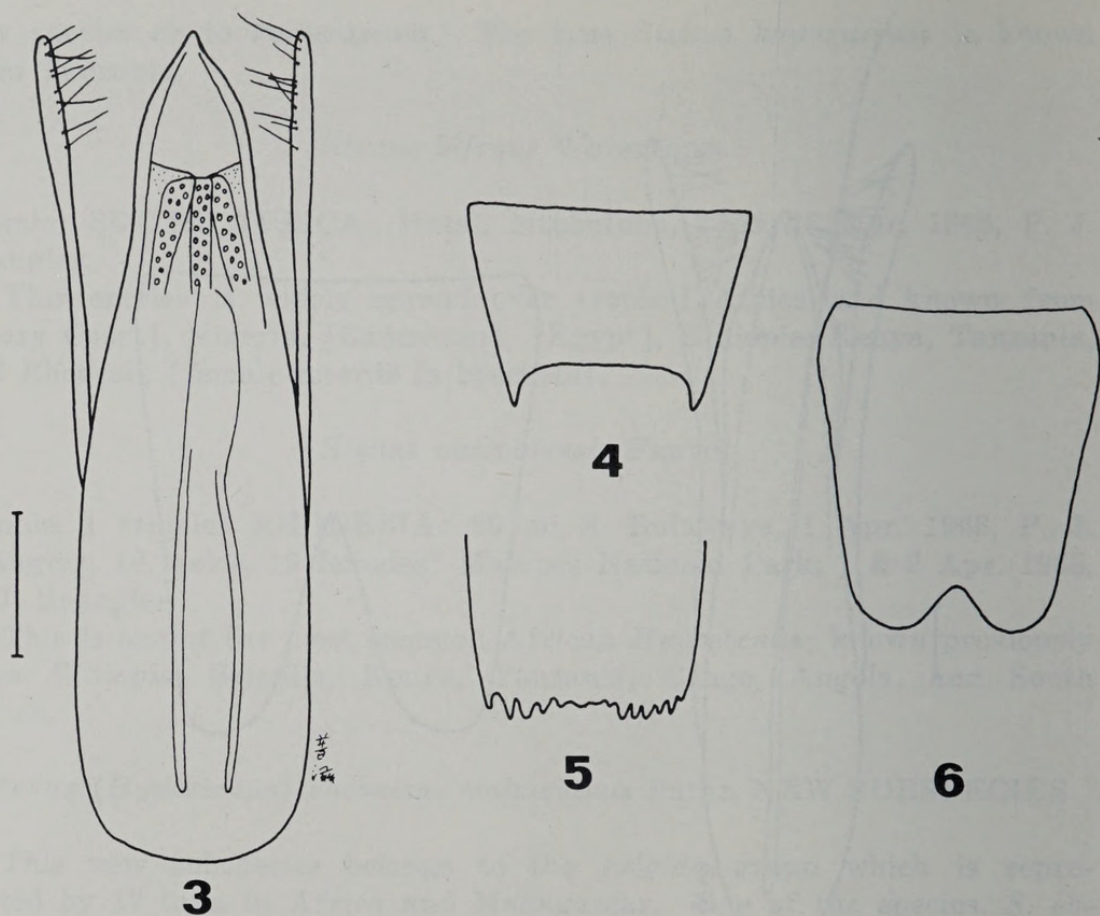


Fig. 3-6: *Stenus* (*Hypostenus*) *cooki* new species (holotype): 3) ventral aspect of aedeagus; 4) tenth tergite; 5) apical portion of ninth sternite; 6) eighth sternite (not the same scale). Scale: 0.1mm.

*Stenus obconicus* cf. *malawianus* Puthz

1 male, 1 female: SOUTH AFRICA: Natal, 13 mi. SW Empangeni, 24 Mar. 1968, P. J. Spangler.

These 2 specimens differ slightly from the types described above. These possibly represent another subspecies, closely allied to *malawianus*, but additional specimens are required to decide this question.

*Stenus obconicus* cf. *damarensis* Puthz

1 male, 5 females: SOUTH AFRICA: Natal, 13 mi. SW Empangeni, 24 Mar. 1968, P. J. Spangler.

These insects found together with those quoted above resemble closely the subspecies *damarensis*, described from South West Africa, but they are a little smaller and the median lobe is slightly longer than in the type.

*Stenus* spec. *prope obconicus* Fauvel

5 females: SOUTH AFRICA: Natal, Mtubatuba, 24 & 25 Mar. 1968, P. J. Spangler.

Undoubtedly these females belong to the polytypic species *obconicus* Fauvel, but because of extreme similarity in general appearance an exact identification is not possible without males.



*Stenus (Hypostenus) spangleri* Puthz, NEW SPECIES

This new species belongs to the *kisantuanus* group and seems to represent the sister species of *kisantuanus* Bernhauer. This species group contains 9 species, some of which are very similar in general appearance. In my revision of the African *Stenus* fauna (1971) I cited one female *kisantuanus* from Lake Naivasha, Kenya, that differs from the other known specimens by its length. In the same area Dr. P. J. Spangler collected a second female that exactly agrees with the first female from Lake Naivasha. Both specimens differ only slightly but distinctly from *kisantuanus*. I am now sure that these insects represent a new species of which, unfortunately, at present the male is unknown. Because the type locality is a place where collections are often made, I am convinced that the male will be found in the near future.

A full description is not necessary because of the great similarity with *kisantuanus*. The differences are as follows: the new species is distinctly larger, middle portion of front slightly broader, longitudinal furrows of front shallower and narrower, punctation of the side portions slightly denser. Elytra slightly shorter, punctation near suture sparser. Punctation of abdomen slightly but distinctly coarser; diameter of a puncture on tergite 5 about as large as 1 inner eye-facet, interstices (except in middle) slightly larger than diameter of punctures (in *kisantuanus* the punctures of tergite 5 are much smaller than 1 eye-facet, their interstices nearly twice as large as the diameter of punctures). Reticulation of surface denser.

Measurements (given in microns): width of head: 800; average distance between eyes: 490; width of prothorax: 630; length of prothorax: 650; greatest width of elytra: 980; greatest length of elytra: 980; sutural length: 810. Posterior tarsi: 270-125-90-95-160. Length of body: 4.0mm to 4.5mm.

Black with a greasy lustre; moderately coarsely and moderately densely punctate; with distinct, short, and moderately dense pubescence. Basal half of antenna yellowish brown, apical half dark brown. Palpi with the first 2 segments and extreme base of the third segment yellow, rest of third segment dark brown. Legs mainly dark; basal half of femur yellow, apical half sharply limited, black; tibia brownish, slightly lighter in middle; tarsal segments light brown with the apices blackish. Labrum black, quite densely pubescent.

Female: as in *kisantuanus*.

This new species, which I have the honor to dedicate to its collector, may be distinguished from all other species of the *kisantuanus* group by using my key to that group (Puthz 1971).

Holotype female, USNM Type No. 71206: KENYA: Lake Naivasha, 13 Jan. 1968, P. J. Spangler; paratype female: Naivasha, 2000 m, 13 & 14 Apr. 1957, P. Basilewsky and N. Leleup. Holotype in the National Museum of Natural History; paratype in the author's collection.

*Stenus (Hypostenus) callens* Puthz, NEW SPECIES

This new species belongs to the *spinifer* group which is defined by more or less long median spines at the apical margin of the tenth tergite (in both sexes !). In this group it is closely related to *S. angolanus* Puthz, *S. palifer* Puthz, and *S. paliferoides* Puthz.



Because of the intensive analysis of the *spinifer* group in my revision of the African *Stenus* a full diagnosis is not necessary. With regard to the shape of its tenth tergite, the new species might be confused only with the following taxa, from which it is distinguished as follows: from *grandipennis* L. Benick and *melanostolus* Puthz by its much more conspicuous callus on each elytron and darker legs (in these 2 species the extreme base of the tibia is remarkably lighter yellowish, which is not seen in the new species); from *angolanus* Puthz by its stronger elytral callus and less deep emargination of the eighth sternite in the male; from *palifer* Puthz and *paliferoides* Puthz by its stronger elytral callus and denser elytral punctation; from *depilis* L. Benick and its subspecies by its length; from all by the aedeagus. The aedeagus of *callens* resembles that of *angolanus* and *palifer*, but the median lobe is distinctly longer, narrower, and more straightly convergent towards the apex than in *angolanus*, narrower and distinctly shorter (in relation to the parameres) than in *palifer*.

The most remarkable character of the new species is its strong median elytral callus which is the strongest I have seen in any species of the *spinifer*-group.

Measurements (given in microns): width of head: 730; average distance between eyes: 380; length of prothorax: 650; width of prothorax: 580; greatest width of elytra: 940; greatest length of elytra: 910; sutural length: 750; posterior tarsi: 130-80-75-120-190. Length of body: 3.7mm to 4.2mm.

Black, shiny, coarsely and densely punctate, slightly pubescent. Antenna with the base light brown, the club dark. First segment of palpi yellow, second segment light brown, third segment dark. Legs black, tibiae, and tarsi sometimes slightly lighter. Labrum blackish, finely pubescent.

Male: Legs without any spines. Seventh sternite at posterior margin distinctly roundly emarginate. Eighth sternite with a notch in posterior sixth. Tenth tergite (also that of female) shortly tipped at apical middle, about as in *paliferoides* (see Fig. 14, Puthz 1968).

Holotype male, USNM Type No. 71207: SOUTH AFRICA: Cape Province, 22 mi. NW Knysna, 13 Mar. 1968, P. J. Spangler; 2 female paratypes: Cape Province, Plettenberg Bay, 14 Mar. 1968, P. J. Spangler; 1 female paratype: E. Cape Province, Alexandria district, pond, 13 Feb. 1955. Holotype and paratype in the National Museum of Natural History, paratypes also in the author's collection.

The following specimens are not designated as paratypes because their genitalia are slightly different from the types (median lobe shorter and a little more broadly rounded at apex). I suppose that these differences belong to the variability.

6 males, 8 females: SOUTH AFRICA: Natal, 13 mi. SW Empangeni, 24 Mar. 1968, P. J. Spangler; 2 females: Natal, Mtubatuba, 24 & 25 Mar. 1968, P. J. Spangler.

*Stenus grandipennis* L. Benick

4 males, 9 females: SOUTH AFRICA: Cape Province, Plettenberg Bay, 14 Mar. 1968, P. J. Spangler; 1 male: Cape Province: Touwsrivier, 4 Mar. 1968, P. J. Spangler; 1 male, 5 females: Cape Province, Cape Good Hope



Nature Reserve, 7-10 Mar. 1968, P. J. Spangler; 7 males, 10 females: Cape Province, Grahamstown, 15-19 Mar. 1968, P. J. Spangler.

This species is known only from the southern tip of the African continent. It seems to be more variable than supposed from the types.

*Stenus melanostolus* Puthz

1 male, 1 female: SOUTH AFRICA: Transvaal, 11 mi. SE Middleburg, 27 Mar. 1968, P. J. Spangler.

This species was known before by only 2 specimens from northern South Africa. It is very closely allied to *grandipennis* L. Benick if not a subspecies of that more southerly distributed species.

*Stenus prospector* Fauvel

32 males, 25 females: MALAWI: 10 mi. W. Mlanje, 11 Apr. 1968, P. J. Spangler; 1 female: 25 mi. SE Limbe, 11 Apr. 1968, P. J. Spangler; 1 female: KENYA: 6 mi. SW Nairobi, 13 Apr. 1968, P. J. Spangler; 1 female: SOUTH AFRICA: Natal, 13 mi. SW Empangeni, 24 Mar. 1968, P. J. Spangler.

This species is very remarkable because of the lateral spines of the pronotum. It is widely distributed throughout Africa and is known from Senegal, Haute Volta, Nigeria, Chad, Sudan, Kenya, Tanzania, Congo and Zambia.

*Stenus (Hypostenus) spinicollis* Puthz, NEW SPECIES

This new species belongs to the *spinifer* group and closely resembles *prospector* Fauvel, its sister species. A comparison of both taxa will be sufficient for describing it.

Black, dull, very coarsely, deeply, and extremely densely punctate with a short and shiny golden pubescence. Antennae reddish yellow, first 2 segments sometimes brownish, club brownish yellow. Palpi yellowish. Legs reddish brown, knees infuscate, tarsi dark-yellowish. Labrum brownish. Length of body: 3.3mm to 4.0mm.

In proportions and lateral spines of prothorax it is similar to *prospector*, but the new species is larger and the fore parts distinctly coarser and more densely punctate. Front extremely densely punctate, entirely dull. Also the abdomen is duller because of its denser punctuation.

Tenth tergite and sexual characters as in *prospector*, but the aedeagus is different: longer and narrower, the median lobe as long as the parameres, apical emargination of median lobe conspicuously more shallow than in *prospector*, nearly blunted. Parameres at their ends distinctly less spoon-like than in *prospector*.

Holotype male: "Abyssinie" (ex coll. Fauvel), 1 female paratype: ibidem. Holotype in the Institut Royal des Sciences Naturelles de Belgique, Brussels, paratype in the author's collection.

*Stenus (Hypostenus) cooki* Puthz, NEW SPECIES

This new species belongs to the *argentifer* group, the species of which



have apomorphic characters of the tenth tergite (forks, lateral spines, anchors, etc., but not a median spine as in the *spinifer* group). The *argentifer* group is the sister group of the Oriental *cursorius* group; both belong to 1 monophyletic group which has an Afro-indian distribution.

Because of intensive analysis of the *argentifer* group in my revision of the African *Stenus*, a full description of this new species is not necessary. In its coloration and the shape of the tenth tergite it could only be confused with the following taxa, from which it is distinguished as follows: from *cursorius rorellus* Fauvel, *cursorius caffer* Puthz, and *cursorius minimus* Puthz by its length, much stronger punctation (especially remarkable on head), less distinct pubescence, less deep reticulation and less infusate knees, not to regard the insect's proportions; from *tenganus* Tott., which is most similar to the new species, by its broader front; from all by its sexual characters.

Measurements (given in microns): width of head: 630; average distance between eyes: 490; width of prothorax: 470; length of prothorax: 510; greatest width of elytra: 660; greatest length of elytra: 660; sutural length: 520. Posterior tarsi: 125-63-50-62-95. Length of body: 2.8mm to 3.6mm.

Slightly shiny, nearly dull, black, very coarsely and extremely densely punctured, with very short argenteous pubescence. Antenna with the first segment brownish, the following segments yellowish red, the club slightly infusate. Palpi yellowish. Legs reddish yellow, knees indistinctly infusate. Labrum dark brown, moderately densely pubescent. Tenth tergite (Fig. 4).

Male: Legs lack special sexual characters. Fore-sternites coarsely and densely punctate. Seventh sternite with an extremely shallow emargination at posterior margin; slightly finer but distinctly more densely punctate and pubescent in front of emargination than on the sides. Eighth sternite (Fig. 6). Ninth sternite (Fig. 5). Aedeagus (Fig. 3).

I dedicate this remarkable new species to its collector, Orator Fuller Cook, one of the pioneers in the entomological investigation of Africa.

Holotype male, USNM Type No. 71208 and 1 female paratype: LIBERIA: Mt. Coffee, Feb. 1897, O. F. Cook. Holotype in the National Museum of Natural History, paratype in the author's collection.

#### *Stenus cruralis* Bernhauer

6 males, 4 females: LIBERIA: Mt. Coffee, Mar. 1897, O. F. Cook.

This species is known also from the Ivory Coast and the Congo.

#### *Stenus cursorius caffer* Puthz

36 specimens: S. RHODESIA, Sept. 1909, C. W. Howard.

This subspecies represents *cursorius* in southern Africa; it is well known from South Africa, South Rhodesia, Zambia, and Angola.

#### REFERENCES CITED

- PUTHZ, V. 1968. Steninae (Coleoptera, Staphylinidae). 27 Beitrag zur Kenntnis der Steninen. Parc. Nat. Garamba 53(3):33-64.  
 PUTHZ, V. 1971. Revision der afrikanischen *Stenus*-Fauna und Allgemeines über die Gattung *Stenus* Latr. (Coleoptera, Staphylinidae) 56 Beitrag zur Kenntnis der Steninen. Ann. Mus. R. Afr. Centr., Tervuren (Ser. 8), Sci. Zool. 186: viii+376 p.





Puthz, Volker. 1971. "On Some African Stenus from the U.S. National Museum of Natural History (Coleoptera: Staphylinidae), 96. Contribution to the Knowledge of Steninae." *The Coleopterists' Bulletin* 25(4), 137–144.

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