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Notes for the revision of the genus *Stripsipher* GORY & PERCHERON, 1833, with descriptions of four new species

(Coleoptera, Cetoniidae, Trichiinae, Trichiini)

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Abstract

The Trichiini genus *Stripsipher* GORY & PERCHERON, 1833 is confined to South Africa, where it is endemic. With the four new species here described (*S. centralis* sp.n., *S. braunsi* sp.n., *S. drakensbergi* sp.n., *S. werneri* sp.n.), the genus now holds nine species. The type series of *S. zebra* GORY & PERCHERON, 1833, is designated. The same species is designated as type species of the genus.

Introduction

The genus *Stripsipher*, proposed by GORY & PERCHERON (1833), originally included species now belonging to different genera. It was correctly settled by PERINGUEY (1907), who considered the genus as senior synonym of *Stringophorus* BURMEISTER, 1840 and included only two species, *S. longipes* (SWEDERUS, 1787) and *S. zebra* GORY & PERCHERON, 1833, both South African. SCHENKLING's (1922) proposal to establish *Stripsipher* as a subgenus of *Agenius* SERVILLE is unjustified and confusing, and was already rejected by ARROW (1926). Moreover, SCHENKLING, in its Coleopterorum Catalogus, added to the PÉRINGUEY's list some species known from tropical Africa, which is not correct¹⁾. *Stripsipher* is endemic in South Africa and well established within Trichini.

ARROW (1926) added to the genus two new species, *S. spectralis* ARROW, 1926 and *S. turneri* ARROW, 1926. Another species, *S. jansoni* PÉRINGUEY, 1908, was not included in the Coleopterorum Catalogus. I have not seen any type of this species and I am not able to include it in the keys by the means of the description alone.

Reading the literature it seems that the *Stripsipher* type species has never been explicitly fixed: we here propose *Stripsipher zebra* GORY & PERCHERON, 1833, as the type species of the genus.

Methods and Definition of Taxonomic Characters

Taxonomic material and preparation.

The genus has been studied on 175 specimens, 50 of which are types. Most of the specimens were loaned by many institutions collections: all the specimens deposited in the main South African collections were studied, along with the specimens preserved in the collections of several other institutions, and all the traceable types were studied.

The specimens were carefully dissected and the aedeagus glued on a white tag, pinned at the same pin of the specimen.

¹⁰ They are: Stripsipher latipennis BLANCHARD, 1850, from Senegal?, Stringophorus monochrous FAIRMAIRE, 1894, from Zanzibar and Stringophorus morulus JANSON, 1885, from Cameroon. All these species belong to other genera.

Character examination

All the morphological characters were analysed in order to confirm the systematic position of the genus within the Trichiini South African genera. A set of stable characters was selected and is presented hereunder. As a general rule they are shown by both sexes whenever it is possible. Sexual characters and the parameres shape were used as confirmatory characters. No attempts have been done so far to perform a phylogenetic analysis of the species belonging to the genus or of the genus versus the other South African genera.

Collection abbreviations

Private collections:

CA	Enrico Ricchiardi	Torino
AE	Arthur Evans	Los Angeles
KW	Karl Werner	Peiting (D)
PC	Renzo Perissinotto & Lynette Clennel	Durban
Institutio	ns Collections:	

BMNH	The Natural History Museum	London
CMNH	The Carnegie Museum of Natural History	Pittsburgh
DNSM	Durban Natural Science Museum	Durban
MHNG	Muséum d'Histoire Naturelle	Gèneve
LACM	Natural History Museum of Los Angeles County	Los Angeles
SAM	South African Museum	Cape Town
TMSA	Transvaal Museum	Pretoria
PPRI	Plant Protection Research Institute	Pretoria
USNM	National Museum of Natural History	Washington D.C

Measurements

The specimen length is measured from the anterior margin of pronotum to the elytron apex. The specimen width is the maximum width of the elytra. The clypeus length is measured from the anterior margin to the antenna implantation.

Distribution and species list

Distribution. The species belonging to the genus *Stripsipher* are distributed from Cape Town to Pretoria, inhabiting the coastal side and the near mountains. A lot of collecting would be necessary in the future to better define the distribution of the species. Two of them, *S. longipes* (SWEDERUS) and *S. zebra* GORY & PERCHERON, are very common and present in most of the area where the genus is present. The other species have a more limited distribution.

Updated species list:

brannsi sp.n. centralis sp.n. drakensbergi sp.n. jansoni Péringuey, 1908 longipes (Swederus, 1787) spectralis Arrow, 1926 turneri Arrow, 1926 werneri sp.n. zebra Gory & Percheron, 1833 E. Cape Natal, Free State, E. Transvaal E. Cape, Natal, Free State Natal W. Cape, E. Cape, Natal, E. Transvaal E. Cape, Natal E. Cape Natal W. Cape, E. Cape, Natal, E. Transvaal

Natural History

The adult specimens were collected from September to February, with a maximum in November and December.

We know very few on the pre-imaginal states. EATON (1928) reported of many specimens of *S. zebra* GORY & PERCHERON found into some oak log from 7th July to September, at Rosebank and Newland. He wrote: "the eggs are pearly white, globular, and about the size of a large pin's head". The pupae started to exuviate on 27th September and the sexes were equally divided". EATON (1928) described the way he found the beetle into the log: "the beetles were all embedded deep in the wood and had to be carefully chipping the log away. Each lay at the end of a tunnel (which, as far as I could see, was of the same bore throughout) filled with a finely granulated detritus. The log in which I found them was fairly solid, in spite of having been exposed to all weathers for the past six years, and was perforated by many debris-filled tunnels – whether made by the larvae of *Stripsipher* or some other wood-boring insects I cannot say. Owing to the uniform diameter of the tunnels and the position of the adult beetle in many cases, though not in all, at the blind end of a tunnel in which position it had no possible chance of escaping, I am inclined to think that *S. zebra* took advantage of the labours of some previous worker".

Both sexes of many species are reported as flower frequenters ("*Rubus* flowers" and "*Arum* flowers" for *longipes* (SWEDERUS), teste ENDRÖDY-YOUNGA; "on yellow flowers", for *zebra* GORY & PERCHERON, teste ENDRÖDY-YOUNGA; "on white flowers", for *werneri* sp.n., teste K. WERNER, personal communication. Renzo PERISSINOTTO and Lynette CLENNEL reported (e-mail to the author) *S. drakeusbergi* sp.n. from the Compassberg at an altitude of 2100 m a.s.l. According to them some specimens of both sexes were collected while flying on some rocks, while other were collected under the excrement of a "Dassie", *Procavia capensis* (PALLAS)²⁾. The Compassberg is an arid mountain situated in the Eastern Cape. As a confirmation I. C. SHARP collected the holotype of the same species in the Golden Gate National Park, high in the Free State Drakensberg's.

The Stripsipher live at the sea level too: "on beach", for zebra GORY & PERCHERON, teste unknown.

The scattered information we have on the genus shows that a lot of fieldwork should be done to better know the *Stripsipher* ecology.

Genus Stripsipher GORY & PERCHERON, 1833

Stringophorus Gory & Percheron, Monogr. Cèt., 1833, p. 35

Type species: Stripsipher zebra GORY & PERCHERON, 1833, here designated.

Description. The beetles belonging to the genus *Stripsipher* GORY & PERCHERON are medium sized Trichiini, the length ranging from 9-16 mm, the width from 5.8-7.8 mm. The pronotum is much shorter than it is the elytron length. The body is often black or dark brown, but the colour patterns of the head, the antennae, the pronotum, the elytra, the pygidium and the legs vary from species to species. Some specimens of both sexes of many species (see the descriptions below) are blackish to fully black.

Head. Mainly glabrous. In some case long and thick hairs cover the frons. The clypeus is as long as it is large to as large as long and laterally rounded. It is generally hollowed, with the front border plus or minus sinuated to completely rounded, but never reflected. Antennal club shorter or at least slightly longer than it is the clypeus length.

Prothorax. Some species show a pre – prosternal apophysis but other does not show it. The pronotum is generally rounded, with the hind corners rounded too, without any ridge at the hind border. Some species show a central, longitudinal hollowed line. Many bear a rounded impression situated centrally at both the lateral borders. The pronotum can be shining to heavily punctuated, but it is always glabrous, with or without white tomentum lines or spots. Two species – *S. longipes* (SWEDERUS) and *S. braunsi* sp.n. – bear a spine below the hind corners of the pronotum.

Scutellum. Triangular, with the apex rounded. From larger than it is long to as large as long, sometime covered by white tomentum.

²⁾ In the same conditions Renzo and Lynette collect some Cetoniini whose females are brachypterous. The females of *Stripsipher* are, as far as we know, all winged.

Elytra. Umbones generally well visible. Striae and interstriae well marked by deep points to effaced. All the species show a continued ridge at the lateral border. Apex of the elytra rounded. Some species show white tomentum spots on the elytron.

Pygidium. Triangular, shining to punctuated, glabrous. Some species show white tomentum drawing, the other do not show white tomentum at all.

Abdomen. Generally glabrous, sometime with long hairs. The mesosternal protrusion is sometime well visible, sometime obsolete, and sometime not present. Many species do not show any white tomentum on the sternites, while other bear white tomentum spots on them.

Legs. Front tibia generally three toothed, sometime the first and the second tooth closer one to another than it is the third. The males of one species (*S. werneri* sp.n.) have front tibiae with two teeth only, the third being obsolete³. Middle tibia of male curved (not strongly) outwardly. First hind tarsi joint longer than it is the second.

Hind femur large about ¹/₃ than its length. Arolium well developed and bisetose. Wings. Both sexes are winged.

The character set that could better define Stripsipher is:

- 1 scutellum larger than it is long, to as large as long, with the apex rounded;
- 2 pronotum shape trapezoidal, with the posterior corners plus or minus rounded and visible;
- 3 pronotum hind margin not ridged at the centre;
- 4 pronotum from glabrous to covered by very scattered long or short hairs;
- 5 clypeus larger than it is long or as large as long;
- 6 clypeus anterior border sinuated, sometime very slightly, sometime deeply (with the exception of *S. braunsi* sp.n. where the clypeus anterior border is not sinuated), never reflected;
- 7 a complete ridge is present at the lateral margin of the elytron;
- 8 pygidium glabrous or covered by very scattered long or short hairs;
- 9 at the front margin of the hind tibia two spurs are present;
- 10 hind femur not enlarged (wide less than 1/3 than they are long);
- 11 male middle tibia without any strong spine at the apex;
- 12 male middle tibia curved outwardly (never strongly);
- 13 male hind tibiae apex without any strong spine;
- 14 first hind tarsi joint longer than it is the second;
- 15 front tibia of both sexes three toothed externally (with sometime the third tooth obsolete);
- 16 both sexes are winged.

The following characters can distinguish the females:

- 1 elytra more enlarged at the middle;
- 2 Abdomen never hollowed (lateral view);
- 3 antennal club shorter than the corresponding male one (see the species descriptions);
- 4 middle tibia never curved outwardly;
- 5 anterior tibia always externally three toothed and larger than it is the males one;
- 6 tomentum, when present, reduced.

Key of the species (both sexes)

³⁾ Some males of *S. turneri* ARROW have the third tooth of the front tibiae obsolete.

2	Hind pronotum corners with a spine below (Figs	. 1i and 3i)
	Hind pronotum corners without any spine below	spectralis Arrow

Species discussion

Stripsipher braunsi sp.n. (Fig. 1 a-l)

Type series. Holotype & TMSA, Eastern Cape, Willowmore, 15 December 1921, legit Dr. BRAUNS. 9 paratypes: 19 16 CA, 16 HNHM, 16 TMSA, same data as the holotype; 299 USNM, South Africa, 17 November/9 December 1900; 16 PPRI, Eastern Cape, Haarlem 33°44'S-23°17'E, 17 December 1986, legit M. W. MANSELL; 19 PC, Eastern Cape, Near Rieebeck East, 11 November 1995, Legit R. PERISSINOTTO & L. CLENNEL; 16 PC, Eastern Cape, Compassberg, 28 December 1997, Legit R. PERISSINOTTO & L. CLENNEL.

Holotype male description. Length: 10,5 mm; width: 6,4 mm.

Prothorax. Black, with the sides ridged and slightly crenulated, with a trace of a longitudinal hollowed line at the centre of the disc; glabrous, shining; bearing rounded, deep puncture, each point separated from the others by a width larger than theirs diameter; hind corners noticeable, with the apex rounded, with a spine below; hind border laterally sinuated, ridged basolaterally only; with a distinct round supra marginal black coloured impression on each side of the disk. Preprosternal apophysis not present.

Head. Black, glabrous, and closely punctuated. Clypeus as wide as it is long, depressed, rounded, spoon like shaped, with the sides and the anterior border elevated but not trimmed; with the anterior border not sinuated. Head and clypeus without any white tomentum spots.

Antennae. Club testaceous, much longer than it is the clypeus length.

hind borders. Legs black centralis sp.n.

⁴⁾ The black specimens *S. zebra* Gory & Percheron, 1833 belong to ab. *niger* Gory & Percheron, 1833.

Scutellum. V shaped, black, shining, without punctures, with the sides slightly outwardly rounded; larger than it is long (long less than 0,8 than large); with a white tomentum area anteriorly.

Elytra. Glabrous and shining, testaceous, with a black area that joins the suture on the disc; a similar black area is present at the hind margin; the outer margin is blackish too; without any white tomentum areas or spot; apex rounded. The elytra striae, (slightly marked by rounded, deep points) start from the anterior border and stop at the end of the disc, not reaching the hind border. Interstriae neither remarkable nor punctuated.

Pygidium. Triangular, larger than it is long, black and glabrous, the surface shagreened; with a C-shaped white tomentum area superiorly on each side. Body black below.

Abdomen. Shiny and glabrous, hollowed but without a central longitudinal line; with a white tomentum band, centrally interrupted, superiorly on each sternites and at the middle of the first and second visible abdominal sternites. The mesosternal protrusion is not present.

Legs. Orange; the knee, the tibiae and the tarsi of middle and hind legs that are black to blackish brown. Anterior tibiae with equally spaced three teeth. The middle tibia is slightly curved outwardly. Hind tarsi first joint much longer than it is the second.

Paratype female description (differences only). Length: 10,4 mm; width: 6,7 mm.

Pronotum. black, more deeply and closely punctuated. White tomentum absent.

Antennae. Testaceous, the club much shorter than it is the clypeus length.

Scutellum. Black, punctuated, without any white tomentum.

Elytra. Entirely black, glabrous and shining, without any white tomentum. Striae deeply marked with horseshoes points. Interstriae somewhere punctuated with rounded points, somewhere not punctuated.

Pygidium. Black and glabrous, the surface shagreened, with a depression at both superior corners; without any white tomentum. Body black below.

Abdomen. Without any white tomentum; not hollowed. On the fifth visible abdominal sternites, close to the hind margin, there is a line of scattered, whitish, long hairs, directed toward the back.

Legs. Black. Anterior tibiae larger than the males one, three toothed. Hind tarsi first joint slightly longer than it is the second.

Diagnosis. This new species share with *S. longipes* the spine visible below the pronotum hind corners. *S. braunsi* sp.n. can be easily distinguished from *S. longipes* (SWEDERUS) because of the lack of white tomentum spots on the elytra of both sexes and because of the presence of a slightly longitudinal hollowed zone at the pronotum middle. The *S. braunsi* males can be distinguished by the *S. longipes* (SWEDERUS) one from the legs, that are testaceous, and from the white tomentum areas limited at the superior side of the abdominal sternites. The females are entirely black. Finally *S. braunsi* bears an equally spaced three toothed front tibia, while *S. longipes* has the first two teeth closer than it is the third.

Distribution. This species has been collected at the Western/Eastern Cape borders.

Temporal data. The specimens were collected in November and December.

Derivatio nominis. This species is dedicated to Dr. BRAUNS who in 1921 collected most of the specimens.

Stripsipher centralis sp.n. (Figs 7 g and 8 i-n)

Type series. Holotype & LACM, RSA, Natal, Sordwana Bay N. P., 27°33'S – 32°40'E, 0-50 m., 8/10 November 1984, legit C. L. BELLAMY, H. & A. HOWDEN, R. G. OBERPRIELER, C. H. SCHOLTZ.

5 Paratypes: 1 d CA, same data as the holotype; 1 d LACM, RSA, Free State, Golden Gate N. P., 28°33'S-28°30'E, 27 January 1987, legit W.F. BOTHA; 1 d PPRI, Gauteng, Pretoria, University of Pretoria Campus 25°45' S-28°14' E, 27 October 1995, legit R. STALS; 1 Q CA, Upper Tongaat, November 1901; 1 PC, Natal, Fairbreeze, November 1996, legit R. PERISSINOTTO & L. CLENNEL.

Holotype male description. Length: 14 mm; width: 7,6 mm.

Prothorax. Shape trapezoidal with the sides ridged but not crenulated; without any longitudinal hollowed line; shining, glabrous, with some scattered and obsolete puncture; reddish, with two longitudinal black bands on the disk which ends far from the anterior and the hind borders; hind corners completely rounded, without any spine below, hind border laterally sinuated and ridged basolaterally only; with a distinct round, supra marginal, black impression on each side of the disk. Preprosternal apophysis present.

Head. Black, with the frons glabrous.

Clypeus. Orange, with two slightly visible blackish rounded spots at the anterior (rounded) corners; tea spoon like shaped, larger than long, with the anterior border sinuated inward, the sinuation much larger than long. Head and clypeus without any white tomentum areas.

Antennae. Orange-reddish, club longer than it is the clypeus length.

Scutellum. Shining, without punctures; V shaped, with the sides outwardly rounded; larger than it is long; reddish with the sides blackish; without any white tomentum.

Elytra. Apex rounded; without any white tomentum areas or spot; glabrous and shining; reddish, with the anterior umbones, a semicircular band at the middle, the hind umbones and the border, blackish; elytra striae with horse-shoe, deep puncture; interstriae slightly convex, almost without puncture.

Pygidium. Glabrous, black, with the apex and the disc reddish; larger than it is long; without any white tomentum areas.

Body. Black below. Abdomen shiny and glabrous, brownish; hollowed but without a central, longitudinal line; without any white tomentum. The mesosternal prothrusion is noticeable and slightly visible in lateral view.

Legs. Reddish-orange, with the knees and the apex black. Anterior tibia external border blackish too. Anterior tarsi dark reddish, middle and hind tarsi black. Anterior tibia three toothed, the first two teeth closer than the it is third. The middle tibia is slightly curved outwardly. Hind tarsi first joint longer than it is the second.

Description of the paratype female (differences only).

The female shows the same colour pattern as the male. The clypeus front border is more deeply incised. The pygidium is wider than the males one.

Variation within the type series.

The paratype deposited in the CA is coloured as the holotype but the pronotum lacks the two black and short lines on the disk. Its pygidium in fully reddish. The scutellum and elytra lack any black drawings, being completely reddish. The legs vary from almost completely black to testaceous with knee and hind tarsi black. The LACM paratype is completely black.

Diagnosis. This new species is very close to *S. zebra*, both species sharing the hind pronotum corners completely rounded, and can be easily distinguished by its reddish ground colour and by the legs entirely black. The parameters too are very distinctive. Only the parameters shape can distinguish the black specimens belonging to this species. The females can be separated by its colour pattern, the legs black and by clypeus front border much more deeply sinuated than it is the clypeus of the female of *S. zebra* GORY & PERCHERON.

S. centralis can be distinguished from *S. spectralis* ARROW because its dimensions, being bigger. The latter species displays white tomentum pronotum borders, while *S. centralis* do not show any tomentum at all.

Distribution. We know *S. centralis* from Natal, Free State and Gauteng. Two specimens has been collected at the sea level while one third has been found up to the Drakensberg's Golden Gate National Park, at the Natal-Free State borders. Finally the northward known locality, the Pretoria's University campus, grants for a very wide distribution of this new species

Temporal data. The specimens were collected from October to November. The specimen from Golden Gate N. P. was collected in January.

Stripsipher drakensbergi sp.n. (Fig. 2 a-i)

Type series. Holotype &, PPRI, Free State, Golden Gate N. P., 28°30 S-28°31 E, I-1980, legit I. C. SHARP. 8 paratypes: 1 G CA, Natal, Drakensberg, 4-I-1925, legit D. KROOM; 1º, TMSA, Eastern Cape, Embotyi Forest, Pondoland, 25/28-II-1957, legit G. VAN SON; 1d 1º CA, 2dd 2ºº PC, Eastern Cape, Compass Berg, 2300 m., 15-XII-1997, legit R. PERISSINOTTO & L. CLENNEL.

Holotype male description. Length: 11,2 mm; width 7,3 mm.

Prothorax. Black, trapezoidal, with the sides ridged and not crenulated; glabrous, shining; with rounded, deep puncture, each point separated from other by a width a bit larger than its diameter; with a longitudinal depression at the centre of the disc that goes from the anterior margin to the hind one. The depression is covered with white tomentum; a similar white tomentum band runs along the lateral

borders. The hind corners are noticeable, with the apex rounded; the hind border is laterally sinuated, ridged basolaterally only. Pronotum with a distinct, round, supra marginal impression on each side of the disk. Preprosternal apophysis not present.

Head. Black, opaque, and closely punctuated. Frons covered by long, thick, yellowish, hairs; clypeus larger than it is long, depressed before the anterior margin (that is trimmed), smoothly sinuated and covered by the same long hairs. Head and clypeus without any white tomentum areas.

Antennae. Brown, club as long as it is the clypeus length.

Scutellum. Black, opaque, punctuated, V shaped, with the sides rounded outwardly, as long as large, without any white tomentum area.

Elytra. Glabrous and slightly shining, with the apex rounded; without any white tomentum; yellowish, with a black round area after the scutellum (round with the two elytra together). Suture and outer margin black; two black band runs from the anterior umbones (an appendage goes to the outer sutura) to the sutura. A second band covers the pre-hind margin zone. Striae of the elytra well marked by deep, horseshoes points. Some interstriae is punctuated, some not.

Pygidium. Brown and glabrous, triangular, larger than it is long, the surface shagreened; with a C-shaped white tomentum area on each side; the tomentum area depressed. Body brownish below.

Abdomen. Shining and glabrous, hollowed but without a central longitudinal line; with a white tomentum area superiorly and centrally on each sternites, not on the anal one. The mesosternal protrusion is in trace only.

Legs. Entirely brown. Anterior tibiae three toothed, the first two teeth closer one to another than it is the third. Middle tibia slightly curved outwardly. Hind tarsi first joint much longer than it is the second. Paratype female description (differences only). Length: 10,7 mm; width: 6,6 mm.

Pronotum. Black, with the same puncture as the males. The longitudinal hollowed line is limited to the pre-hind margin. White tomentum not present.

Head. Without any hairs; the anterior depression of the clypeus (interrupted longitudinally at the centre) forming a small, rounded ridge.

Antennae. Blackish-brown, club shorter than it is the clypeus length.

Elytra. Interstriae more deeply and widely punctuated.

Pygidium. As in the male, larger, slightly depressed at the apex. Body brown below.

Abdomen. With white tomentum areas at the superior side only of the abdominal sternites; not hollowed.

Legs. Black. Anterior tibiae three toothed, larger than the males one. Hind tarsi first joint only a bit longer than it is the second.

Variation within the type series.

One paratype 9 deposited in the PC collection does not show any white tomentum spots on the pygidium.

Diagnosis. This species is close to *S. turneri* and *S. werneri*. It can be distinguished from *S. turneri* ARROW by the presence of a longitudinal hollow, covered by white tomentum on the pronotum disc of the male, by the black legs, by the middle tibia almost straight in the male, by the clypeus anterior border much less sinuated. It can be distinguished from *S. werneri* sp.n. by the different colour of the pronotum, pygidium and head. The male anterior tibia is three toothed, while *S. werneri* sp.n. bears two teeth only (the third being sometime entirely absent, sometime obsolete). *S. turneri* has some male without the third tooth (rarely).

Distribution. The holotype was collected in the Golden Gate N. P., at the Free State/Natal borders. The paratypes were collected in the Natal and Eastern Cape.

Temporal Data. We know specimens collected in December, January and February.

Stripsipher jansoni Péringuey, 1908 (Péringuey, 1908: 682-683)

I was not able to see the type of *Stripsipher jansoni* PÉRINGUEY, 1908, which should be deposited in the Leyden Museum (with the O.E. JANSON collection). The hereunder original description is not sufficient to settle this species in the key.

Here follows the original descriptions by PÉRINGUEY (1908): "Black with a few white splashes on the margins of the prothorax; elytra flavescens and having an U-shaped black band reaching from the humeral ridge to the past median part, and a narrow marginal band becoming very broad in the posterior margin; pygidium with a conspicuous sub-triangular lateral white patch, abdominal segments each with longitu-

dinal interrupted white band, pro-, meso-, and metathorax, and also the coxae with a white patch; antennae and palps brick-red, legs reddish with the hind tibiae and tarsi infuscate (d), or completely black with only the antennae reddish brown (\mathfrak{P}). Head with the clypeus deeply incised in the centre, the whole surface is deeply and closely punctuates. Prothorax obliquely ampliated laterally from the apex to about the median part, nearly parallel thence to the basal angle which is sharp, base deeply bi-sinuate and with the median part somewhat prolonged, the surface is depressed and somewhat irregularly and not closely punctuate, there is above the base a slight longitudinal elongated impression continued in the d in a very faint line, and the outer margin is sparingly fimbriate; scutellum moderately punctuate; elytron once and a half the length of the prothorax, broad than the latter but with the humeral callus greatly developed and the humeral part greatly sloping, very nearly straight laterally for some distances from the shoulders, singly rounded behind, the suture and two alternate costae on each side are raised and so is the second interval but in the anterior part only, the humeral costa is very strong, and the intervals and sides have deep seriate sub-foveolate punctures; pectus and femora clothed with a long greyish pubescence, legs sparingly punctuate; pectus and side pieces variolose punctuate.

Length: 11-11¹/₂ mm ; width 5.5-6 mm.

Habitat. Natal (no exact locality).

This species is more nearly related to *S. zebra* than to *S. longipes*, if the name of that species is what I believe it to be, but it differs from *S. zebra*, in which the clypeus is also deeply incised, in having the angles of the prothorax very sharp, and even dentate underneath in the \mathfrak{P} ; the elytra shorter and the humeral callus very much longer."

Stripsipher longipes (Swederus), 1787 (Fig. 3 a-l)

swederi Schonh, Syn. Ins., i, 3, p.106; flavipennis Gory & Percheron, 1833, loc. cit., p. 96, pl. 11 fig. 6; horsfieldi MC Leay, Illustr. Zool. S. Africa, iii., pl. 14, pl. i.

Studied types. Lectotype & (here designated) of *flavipennis* Gory & Percheron, 1833⁵), MHNG, Coll. Melly, Caffria. Other studied material. Transvaal: 338, 399, CA, East Transvaal, Piet Retief, November 1991, legit C. R. Owen.

Natal: 1ở TMSA, 1910, legit PAULUS; 7ởở, 7೪೪, SAM, Durban, 1893, legit C.F. BARKES; 1೪ SAM, Frere, 1892, legit A. MARSHALL; 1೪ CA, Howick Midmar, 14 November 1991, legit RICHTER; 1೪ TMSA, 19 October 1897, 5ởở೪೪ DSNM, Malvern, 1901; 1೪ TMSA, Malvern?; 1ở CA, Middld, Karkloof grassveld, 29°19'S-30°15'E, grassveld with river, 7 December 1989, legit ENDRÖDY & KIMASZEV; 3ởở೪೪ KW, Nqutu, Babanango, 10 November 1994, legit K. WERNER; 1೪ PPRI, Pietermaritzburg, 18 November 1913, legit G. BEDFORD; 1೪ PPRI, Pietermaritzburg, 29°26'S-30°24'E 27 November 1982, legit P. REAVELL; 1ở CA, Port Natal (Durban); 1ở CA, Shogweni, November 1991, legit C. R. OWEN; 1ở DNMS, Upper Tongaat, 1901; 1ở 1೪ CA, Weza Forest Station, 30°36'S-29°45'E, *Rubus* flowers, 26 November 1989, legit ENDRÖDY & KIMASZEV;1° CA, Nqutu, Babanango, 10-XI November 1994, legit KARL WERNER.

Eastern Cape: 1ð 1º CA, Amatole, Isidenge Forest Station, 31°41 S – 27°15 E, grassnet & Arum flowers, 18 November 1987, legit ENDRÖDY-YOUNGA; 13ď dº P TMSA, Amatole, Isidenge Forest Station, 31°41 S-27°15 E, grassnet & Arum flowers, 18-XI/8.XII-1987, legit ENDRÖDY-YOUNGA; 1ď SAM, East London, November (?) 1885; 1ď PPRI, East London, September 1923; 1ď PPRI, Grahamstown, Faraway Farm, 33°20'S-26°28'E, 22 November 1988, legit B. GROBBELAAR; 1ď PPRI, Mooiplaas, 45 Km N East London, 32°43'S-28°02'E, 26 November 1988, legit B. GROBBELAAR; 1º CA, Port St. John, November 1917, H. H. SWINNY; 1º PPRI, Transkei, 20 Km w Butterworth, 32°20'S-28°09'E, on *Senecio pterophorus*, 10 November 1984, legit I. M. F. MUWANGA – Zake; 2d°d, PPRI, Transkei Butterworth, 32°20'S-28°09'E, on *Senecio pterophorus*, 4/6 November 1984, legit I. M. F. MUWANGA – Zake; 1º CA, Transkei, Lusikisiki, 17 November 1991, legit RICHTER; 2d°d CA, Fort Fordyce, 18 January 1998, legit R. PERISSINOTTO & L. CLENNEL; 2d°d 1º PC, Near Bedford, 24 November 1995, legit R. PERISSINOTTO & L. CLENNEL; 1d° PC, Boshoks Travel; 30 November 1997, legit R. PERISSINOTTO & L. CLENNEL.

Western Cape: 1 d CA, Cap Bon Spei; 1 d 1 P MHNG, Cape B. E.; 1 d TMSA, George, December 1918, legit Dr. BRAUNS.

Remarks. This species has been settled as senior synonym of several ancient described species. I have been able to study the Gory type only (that is a male) deposited in the MHNG (ex. MELLY Collection). As far as I know, reading the descriptions, I share with PÉRINGUEY (1907) the synonymies.

⁵⁾ This specimen is the type of GORY.

S. longipes is a common species that could be distinguished from *S. braunsi* as stated in the diagnosis of that species. *S. longipes,* variable in colours, shows the following colour patterns.

Male: pronotum from black to brownish. I know some specimens with the pronotum red. Elytra from testaceous with black areas to brownish.

Female. Pronotum entirely black, rarely brick red. Elytra black, rarely brown. The pygidium, according to the pronotum colour, can be red, black or brown.

Temporal data. The specimens have been collected from October to December, with one case in September.

Stripsipher spectralis Arrow, 1926 (Fig. 4 a-h)

Type series. Holotype &, BMNH, Eastern Cape, Port St. John, Pondoland, September 1923, legit R. E. TURNER. Other studied specimens. 1º CA, RSA, Eastern cape, Willowmore, 15 December 1921, legit BRAUNS; 1d CA, RSA, Natal, Ngome Forest, 31 October/4 November 1970, legit H & M Townes.

Diagnosis. Holotype length: 9,2 mm; width: 5,8 mm. This species has been described on the holotype male, collected in Eastern Cape. I have seen two more specimens, one from Natal and the second from Eastern Cape. The female was unknown and is described hereunder. *S. spectralis* shows the same pronotum colour pattern as *S. zebra*, but is much smaller in size and the antennal club of its male are longer than it is the clypeus length. The female antennal club of *S. spectralis*, are shorter than it is the clypeus length. Moreover *S. spectralis* can be distinguished from *S. zebra* and *S. centralis* by the presence of white tomentum areas or spots on pronotum, scutellum, elytra, pygidium and on the superior side of the abdominal sternites. The mesosternal protrusion is reduced. The interstriae are punctuated. Other distinctive features are the presence of scattered, whitish short hairs on the pygidium, the clypeus much less deeply sinuated, the middle tibiae of the male much curved outwardly, the longitudinal excavation on the middle of the pronotum, finally the evidently punctuated pronotum.

Variation within the type series. All the three specimens studied are coloured. We have not seen any black specimen so far. The male paratype deposited in the CA bears a longitudinal, white tomentum area in the hind pronotum central depression.

Description of the female (differences only). Length: 8,4 mm; width 6 mm.

Antennal club shorter than it is the clypeus length. The pygidium is wider and the white tomentum area on the pygidium is reduced to four spot, one on each superior corner, two, smaller, near the pygidium superior margin. Laterally, at the superior corners, there is a rounded depression. The white tomentum areas on the superior side of the abdominal sternites are reduced. The abdomen is not hollowed. The anterior tibiae are much larger and externally three toothed. Many of these characters being sexual differences, the female of this species can be very easily associated with its male.

Distribution. We know this species from Eastern Cape and Natal provinces only. Temporal data. The specimens were collected from September to December.

Stripsipher turneri Arrow, 1926 (Fig. 5 a-h)

Type series. Lectotype &, BMNH, Eastern Cape, Port St. John, Pondoland, November 1923 2 paralectotypes: 1&, 1&, BMNH, Eastern Cape, Port St. John, Pondoland, September/October 1923. Note: In BMNH are deposited other 6 paralectotypes (5&&, 1&) which I have not examined. Other studied material. 1&, TMSA, Eastern Cape, Port St. John, December 1913, legit H. H. Swinny; 1&, CA, Eastern Cape, Transkei, Embotyi Forest, 3 January 1987; 1&, CMNH, Eastern Cape, Port St. John, 7/16 December 1970, legit H. & M. Towsen.

Remarks. ARROW (1926) described both sexes from a dozen of specimens taken in the Eastern Cape Province, nine of which are currently deposited at the BMNH. *S. turneri* can be easily distinguished by the other two species of this group; see remarks on their descriptions for details.

Distribution. We know this species from Eastern Cape only.

Temporal Data. The specimens were collected from September to December. Remarks. See the *S. werneri* diagnosis.

Stripsipher werneri sp.n. (Fig. 6 a-h)

Type series. Holotype 3, TMSA, N.E. Natal, Nqutu, Babanango, 10 November 1994, legit K. WERNER. 17 paratypes, same data as the holotype: 1133 19 Coll. K. WERNER; 13 299 CA, 13 SAM.

Holotype male description. Length: 10,8 mm; width 6,5 mm.

Prothorax. Dark metallic green; trapezoidal, with the side ridged and not crenulated, glabrous; shining, it bears rounded, deep puncture, each point separated from the other by a width a bit larger than its diameter. Hind corners noticeable, with the apex rounded, without any spine below; hind border laterally sinuated, ridged basolaterally only; with a distinct round, supra marginal impression on each side of the disk; without any tomentum. Preprosternal apophysis not present.

Head. Dark metallic green, with the clypeus black, closely punctuated; frons covered by long, thick, yellowish, long hairs; clypeus larger than it is long, depressed before the anterior margin that is sinuated but not trimmed; head and clypeus without any white tomentum areas.

Antennae. Club as long as it is the clypeus length, brown.

Scutellum. V shaped, with the sides rounded outwardly; larger than long, shining, metallic green, glabrous; with a few scattered rounded points; without any white tomentum area.

Elytra. Glabrous and shining, with the apex rounded; anterior umbones black; two large, black bands run transversally, one at the middle of the elytra, the second band cover the pre-hind margin zone; without any white tomentum areas or spot; yellowish, with the suture and the outer margin black, the juxtascutellar part of the suture metallic green. Elytra striae marked by not deep, horseshoes points. Some interstriae is punctuated, some not.

Pygidium. Triangular, larger than it is long, black and glabrous, the surface shagreened; with a C-shaped white tomentum area on each superior corner. Body black below.

Abdomen. Brownish, shiny and glabrous, with a few very scattered yellowish long hairs; hollowed and without a central longitudinal line; on the abdominal sternites there is white tomentum, interrupted at the middle and in one area for each side. The mesosternal protrusion is not present.

Legs. Entirely black; anterior tibia with two teeth, the third one being in traces only to absent; middle tibia slightly curved outwardly. Hind tarsi first joint longer than it is the second.

Paratype female Description (CA, differences only). Length: 11,2 mm; width: 7,3 mm.

Pronotum. The anterior corners, rounded, are more noticeable than in the males.

Head. Entirely black, glabrous.

Antennae. Brown, club much shorter than it is the clypeus length.

Elytra. With the same colour pattern than the males but with the yellow blackish. The drawing is much less evident; striae more deeply punctuated by horseshoe points; interstriae somewhere deeply punctured, somewhere rough.

Pygidium. Black, glabrous and shagreened; larger than the male one, not depressed at the apex. With the tomentum reduced. Body black below.

Abdomen. Black with very small white tomentum areas at the superior side only of the abdominal sternites; not hollowed.

Legs. Black. Anterior tibiae larger than the males one, three toothed, the teeth regularly spaced; first joint a bit longer than it is the second.

Type series variability. Length: males 9,2-10,9 mm; females 11,2-12,2 mm. Width: males 5,6-6,6 mm; females 7,2-7,6 mm.

There is no remarkable variability within the known specimens.

Diagnosis. This species is allied with *S. drakensbergi* and *S. turneri* because it shares with them the same hind corners of the pronotum, being noticeable and with the apex rounded. Its males can be distinguished because of their lack of white tomentum on the pronotum. Both sex because of the pronotum colour being black instead of metallic.

Distribution. We know a single locality, Nqutu, situate in North Natal.

Temporal Data. Karl WERNER collected the specimens in November.



Fig. 1: *Stripsipher braunsi* sp.n. Holotype & TMSA. a. Habitus c. Pygidium e. Left anterior tibia g. Parameres front view (I detail) h. Parameres lateral view i. Spine below the pronotum hind corner. Paratype & CA. b. Habitus. d. Pygidium. f. Left anterior tibia.

Derivatio nominis. This new species is dedicated to Karl WERNER, a very consecrate field entomologist, who collected the specimens and kindly gave them to me for study.

Stripsipher zebra Gory & Percheron, 1833 (Figs. 7 a-f, 8 a-h)

var. niger Gory & Percheron, Mon. Cét., p.99, pl. 12 fig. 1;

Type series (here designated). Lectotype ⁹ MHNG⁶⁰, ex. Coll. MELLY, Western Cape, Cape B. Esp. Paralectotype 1⁹ MHNG coll. MELLY, Western Cape, (Var. *nigra*), Cap b. sp. Other studied specimens. Western Cape: 1³ DEI, Cap b. Sp, Coll. KRAATZ; 1³, CA, George, February 1918, legit

⁶⁾ The specimens belonging to the type series are both GORY types.



Fig. 2: Stripsipher drakeusbergi sp.n. Holotype & PPRI. a. Habitus. c. Pygidium. e. Left anterior tibia. g. Parameres front view (i detail). h. Parameres lateral view. Paratype & SAM. b. Habitus. d. Pygidium. f. Right anterior tibia.

Dr. BRAUNS; 1.J., CA, Keurboomstrand, 34°00'S – 23°27'E, on yellow flowers, 6 December 1976, legit ENDRÖDY-YOUNGA; 1.J., CA, Swellendam, 27 October 1980, legit R. SOUTHY; 1.J., TMSA, George, legit B. KRUGER; 1.J., TMSA, George, 1 February 1918, legit Dr. BRAUNS; 1.J. 1.Q., CA, George, January 1915, legit Dr. BRAUNS; 5.J. TMSA, George, December 1916/21, legit Dr. BRAUNS.

Eastern Cape: 1 d, TMSA, East London, 29 October 1923, legit G. VAN SON; 1 F, CA, East London, 13 November 1922, legit R. E. TURNER; 1 P, TMSA, East London, 2-XII-1921, legit H. K. MUNRO; 1 d, CA, Amatole, Isidenge For. Stat. B1, 32°41'S-27°18'E, beating indig. for., 21 November 1987, legit ENDRÖDY-YOUNGA; 1 d, TMSA, Amatole, Isidenge For. Stat. B1, 32°41'S-27°14'E, *Podocarpus* Bark, 15 November 1987, legit ENDRÖDY-YOUNGA; 1 d, TMSA, Port Elizabeth, on beach, 6 January 1910; 3 P CA, Fordyce, 18 January 1998, legit R. PERISSINOTTO & L. CLENNEL; 1 d PC, Bedford, 30 December 1994, legit R. PERISSINOTTO & L. CLENNEL; 1 d PC, Cape Recife, 6 December 1997, legit R. PERISSINOTTO & L. CLENNEL; 1 d PC, Near Bedford, 24 November 1995, legit R. PERISSINOTTO & L. CLENNEL; 1 d PC,



Fig. 3: *Stripsipher longipes* (*Swiptrus*). Specimen & CA. a. Habitus, c. Pygidium, e. Left anterior tibia, g. Parameres front view (I detail). h. Parameres lateral view, i, Spine below the pronotum hind corner. Specimen & CA. b. Habitus, d. Pygidium, f. Left anterior tibia

Woody Cape, 7 October 1994, legit R. PERISSINOTTO & L. CLENNEL.

Natal: 13 DEI, Natal, Coll. KRAATZ; 13 CA, 13 19 DNSM, karkloop, November 41, Legit MULER; 233 19, DNSM, Upper Tongaat, November 01; 13, DNSM, Ladysmith, 9 November 1962, Legit A. H. NEWTON; 13, DNSM, Nqutu (Zululand), 20 November 1949, Legit A.H. NEWTON; 19, CA, Natal Middld, Karkloof For, 29°18'S-30°13'B, 1300 m., beating in the forest, 4 December 1989, legit ENDRODY & KLIMASZEW; 19, KW, Balelesberg, January 1996, legit T. BEYERS; 19, TMSA, S. Natal, Weza, Ingeni Forest, 30°32'S-29°41'E, hanging fruit trap, 18 November 1989, legit ENDRODY & KLIMASZEV; 19, CA, Natal Middland, Howick Town, 29,29S 30.14E, garden ornamentals, 12 December 1989, legit O. BOURQUIN.

Transvaal: 19 DEI, Transvaal, Coll. KRAATZ; 19, TMSA, Graskop, December 1974, legit P. E. REAVELL; 19, TMSA, Johannesburg, St. Geo. Home Dist., 19 November 1939, legit A. L. CAPENER; 19, TMSA, Witbank, M.J.P., A.R.I. Pretoria, December 1961; 13, CA, Florida (Johannesburg), 15 October 1976; 13, CA, Johannesburg, January



Fig. 4: Stripsipher spectralis ARROW. Holotype & BMNH. a. Habitus. c. Pygidium. e. Left anterior tibia. g. Parameres front view. h. Parameres lateral view. 9 CA. b. Habitus. d. Pygidium. f. Left anterior tibia.

1930, legit G. Kobrov; 1 J, CA, Pretoria, Waterkloof, 25°43'S – 28°11'E, 5 November 1989, legit Endrody-Younga; 1 J, TMSA, Emerontia, September 1974, legit H. R. Hoburn; 1 J, TMSA, Pretoria, Waterkloof, 25°43'S-28°11'E, 5 November 1989, legit Endrody-Younga; 2 J, TMSA, Johannesburg, November 1931/1934, legit G. Kobrov; 1 J 1 P, TMSA, Florida (Johannesburg), 15 October 1976.

Male description. Length: 10,5 mm; width: 6,4 mm.

Prothorax. Shape trapezoidal with the sides ridged but not crenulated; without any longitudinal hollowed line; shining, glabrous, with some scattered and obsolete puncture; orange, with two longitudinal black bands from the anterior to the hind margins of the disc; hind corners completely rounded, without any spine below, hind border laterally sinuated, ridged basolaterally only; with a distinct, round, supra marginal black impression on each side of the disk. Preprosternal apophysis present.

Head. Black, with the frons covered by scattered, yellowish, long hairs.

Clypeus. Orange, with two blackish rounded spots at the anterior (rounded) corners; tea spoon like shaped, as wide as long, with the anterior border sinuated, the sinuation much larger than it is long. Head and clypeus without any white tomentum areas.



Fig. 5: *Stripsipher turneri* ARROW. Lectotype & BMNH. a. Habitus. c. Pygidium. e. Left anterior tibia. g. Parameres front view. h. Parameres lateral view. Paralectotype & BMNH. b. Habitus. d. Pygidium. f. Left anterior tibia.

Antennae. Orange; club as longer as it is the clypeus length.

Scutellum. Shining, without punctures; V shaped, with the sides outwardly rounded; larger than it is long (long less than 0,8 than large), orange with the sides blackish, without any white tomentum.

Elytra. Apex rounded, without any white tomentum areas or spot, glabrous and shining; orange, with the anterior umbones, a semicircular band at the middle, hind umbones and border blackish; elytra striae with deep, horse-shoe like, puncture; interstriae slightly convex, almost without puncture.



Fig. 6: Stripsipher werneri sp.n. Holotype of TMSA. a. Habitus. c. Pygidium. e. Left anterior tibia. g. Parameres front view. h. parameres lateral view. Paratype 9 CA. b. Habitus. d. Pygidium. f. Left anterior tibia.

Pygidium. Glabrous, black, with the apex and the disc orange; larger than it is long; without any white tomentum areas.

Body. Black below. Abdomen shiny and glabrous, hollowed but without a central, longitudinal line, without any white tomentum. The mesosternal prothrusion present, visible in lateral view.



Fig. 7: *Stripsipher zebra* GORY & PERCHERON. Drawings of two specimens CA. a. Habitus ϑ , b. Habitus ϑ , c, d. Pygidium ϑ and ϑ . e, f. Right anterior tibia ϑ and ϑ . *Stripsipher centralis* sp.n. (the habitus is identical but the colours are different). Drawing from the holotype ϑ CA. g. Front border of the clypeus.

Legs. Orange, with the knees and the apex black. Anterior tibia external border blackish too. Anterior tibia three toothed, the first two teeth closer than it is the third. The middle tibia is slightly curved outwardly. Hind tarsi first joint longer than it is the second.

Female description (differences only). Length: 13 mm; width: 7,4 mm.

Antennae. Club orange, shorter than it is the clypeus length.

Pygidium. Wider than the it is males one, larger than long, without any white tomentum areas, glabrous, black with the apex and the disc orange and slightly curved inward.

Abdomen. Not hollowed.

Legs. Orange, with the knees, the tarsi and the apex black. The middle tibia is straight, not curved outwardly. Hind tarsi first joint slightly longer than it is the second.

Variation within the species. Male: Length: 10,3-13,8 mm; width: 6,3-7,8 mm. Female: Length: 10,8-14,6 mm; width: 6,4-8,9 mm.



Fig. 8: *Stripsipher zebra* GORY & PERCHERON. Drawings of a specimen CA. a, c. Parameres of a male from Western Cape, the lateral lobe is reduced. b, d. Details. e, g. Parameres with the normal lateral lobe. f, h. Details. *Stripsipher centralis* sp.n. Holotype & LACM. i. Parameres in front view. m. Parameres in lateral view. l, n. Details.

Many specimens belonging to both sexes are entirely black (var. *niger*). Some specimens are entirely brown: these are most probably immature. Some specimens show the longitudinal, yellow line of the pronotum slightly noticeable to absent. In such a case the pronotum itself shows black with the lateral borders yellow and with one round, black spot on the middle of each yellow area. The hairs on the frons sometime disappear entirely.

Distribution. S. zebra GORY & PERCHERON is distributed from Cape Town to Pretoria, following the coastal line. Specimens are known from Transvaal, Natal, Eastern and Western Cape.

Temporal data. The specimens were collected from September to February.

Remarks. Some males belonging from Western Cape show the lateral lobe of the parameres apex less marked. I was not able to find a single characters to support a new species or subspecies. This problem should be investigated in the future. To distinguish this species from the other of the genus see the *S. centralis* diagnosis.

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Literature

ARROW, G.J. 1926: African species of Cetoniidae Coleoptera. – Annals of the Magazine of Natural History 9(17), 652-653.

EATON, H. G. 1928: Notes on Stripsipher Zebra (GORY & PERCHERON). (Cetoniidae, Coleoptera). – South African Journal, NHK, 190-191

GORY, H.L., PERCHERON, A.L. 1833: Monographie des Cétoines et genres voisin. - Paris.

PÉRINGUEY, L. 1907: Descriptive catalogue of Coleoptera of South Africa – Transactions of the South African Philosophical Society 13, 304 – 306.

 – 1908: Descriptive catalogue of Coleoptera of South Africa. – Transactions of the South African Phylosophical Society 13, 682 – 683.

SCHENKLING, S. 1922: Coleopterorum Catalogus, Pars 75 Scarabaeidae: Trichiinae, Valginae. – W. JUNK, Berlin.

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