

**Two new species of the genus *Scapanoclypeus*  
from Northern Cape, Republic of South Africa  
(Coleoptera: Scarabaeidae: Melolonthinae)**

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**Abstract.** Two new species of the genus *Scapanoclypeus* Evans, 1987, *S. triapicalis* sp. nov. and *S. sinepunctatus* sp. nov., from Northern Cape Province, Republic of South Africa, are described and an updated key to species of *Scapanoclypeus* is presented.

**Key words.** Coleoptera, Scarabaeoidea, Melolonthinae, Tanyproctini, *Scapanoclypeus*, taxonomy, new species, key, map, Northern Cape, South Africa, Afrotropical Region

### Introduction

The tanyproctine genus *Scapanoclypeus* Evans, 1987 was created by removing *Trichinopus aberrans* Frey, 1974 from the genus *Trichinopus* Waterhouse, 1875. The genera *Scapanoclypeus* Evans, 1987, *Trichinopus* Waterhouse, 1875 and *Oedanomerus* Waterhouse, 1875 differ from other known African genera of Tanyproctini in small size (12 mm or less), reduced mouthparts, and 8 to 10-segmented antennae (EVANS 1987). The genera *Scapanoclypeus* and *Oedanomerus* belong in the fifth group of Afrotropical tanyproctines sensu LACROIX (2007), which is characterized by simple claws without cleft or teeth at base, gently conical labrum, and the third antennomere of length equal to the fourth (LACROIX 2007). The genus *Trichinopus* belongs in the fourth group of Afrotropical tanyproctines characterized by bifid claws, markedly conical labrum with rounded end, and the third antennomere approximately as long as the fourth (LACROIX 2007). The genera *Scapanoclypeus* and *Oedanomerus* differ from each other in the following aspects: *Scapanoclypeus* – protibia without subapical calcar, antennal club at least three times longer than antennomere I–VI combined, and clypeus bent at nearly right angle to the plane of frons; *Oedanomerus* – protibia with subapical calcar, antennal club only as long as antennomere I–VI combined, and clypeus in the same plane as frons (EVANS 1987, LACROIX 2007). EVANS (1987) included the following six species in his new genus *Scapanoclypeus*:

*S. testaceus* Evans, 1987 from the Republic of South Africa; *S. cornutus* Evans, 1987 from Namibia; *S. carinatus* Evans, 1987 from the Republic of South Africa; *S. aulacocoleatus* Evans, 1987 from the Republic of South Africa and Namibia; *S. brunneus* Evans, 1987 from Namibia; and the type species *S. aberrans* (Frey, 1974) from the Republic of South Africa and Namibia. The genus *Scapanoclypeus* was subsequently mentioned only in the catalogue by LACROIX (2007), who re-drew figures and adopted the key from EVANS (1987).

Little is known about the bionomics of the species of *Scapanoclypeus*. Adults were collected at lights in sandy areas; they are fast flyers and are active from September through July (EVANS 1987; Snížek, pers. comm.).

### Material and methods

Specimens were examined with a Novex stereomicroscope; measurements were taken with an ocular grid. Length measurements are from the anterior margin of the clypeus to apices of the elytra. The habitus photographs were taken with a Canon MP-E 65mm/2.8 1–5× Macro lens on bellows attached to a Canon EOS 550D camera. Partially focused images of each specimen were stacked using the Helicon Focus 3.20.2 Pro software. The new species are provided with one red printed label: '[name of the taxon] sp. n., HOLOTYPUS [or PARATYPUS with type number], ♂, Richard Sehnal det. 2013'. Exact label data are cited for the material examined. Separate labels are indicated by a double slash [//], lines within each label are separated by a slash [/]. Information in quotes indicates the original spelling. Authors' remarks and additional comments are placed in brackets: [p] – preceding data (in quotation marks) are printed; [h] – the same but handwritten. HT – holotype, PT – paratype.

The following acronyms identify collections housing the material examined (curator's name is in parentheses):

ABCC	Aleš Bezděk collection, České Budějovice, Czech Republic;
BMNH	The Natural History Museum [formerly British Museum (Natural History)], London, United Kingdom (Maxwell V. L. Barclay);
TMSA	Ditsong National Museum of Natural History [formerly Transvaal Museum], Pretoria, Republic of South Africa (Ruth Müller);
NMPC	National Museum, Prague, Czech Republic (Jiří Hájek);
RSCV	Richard Sehnal collection, Velenice, Czech Republic.

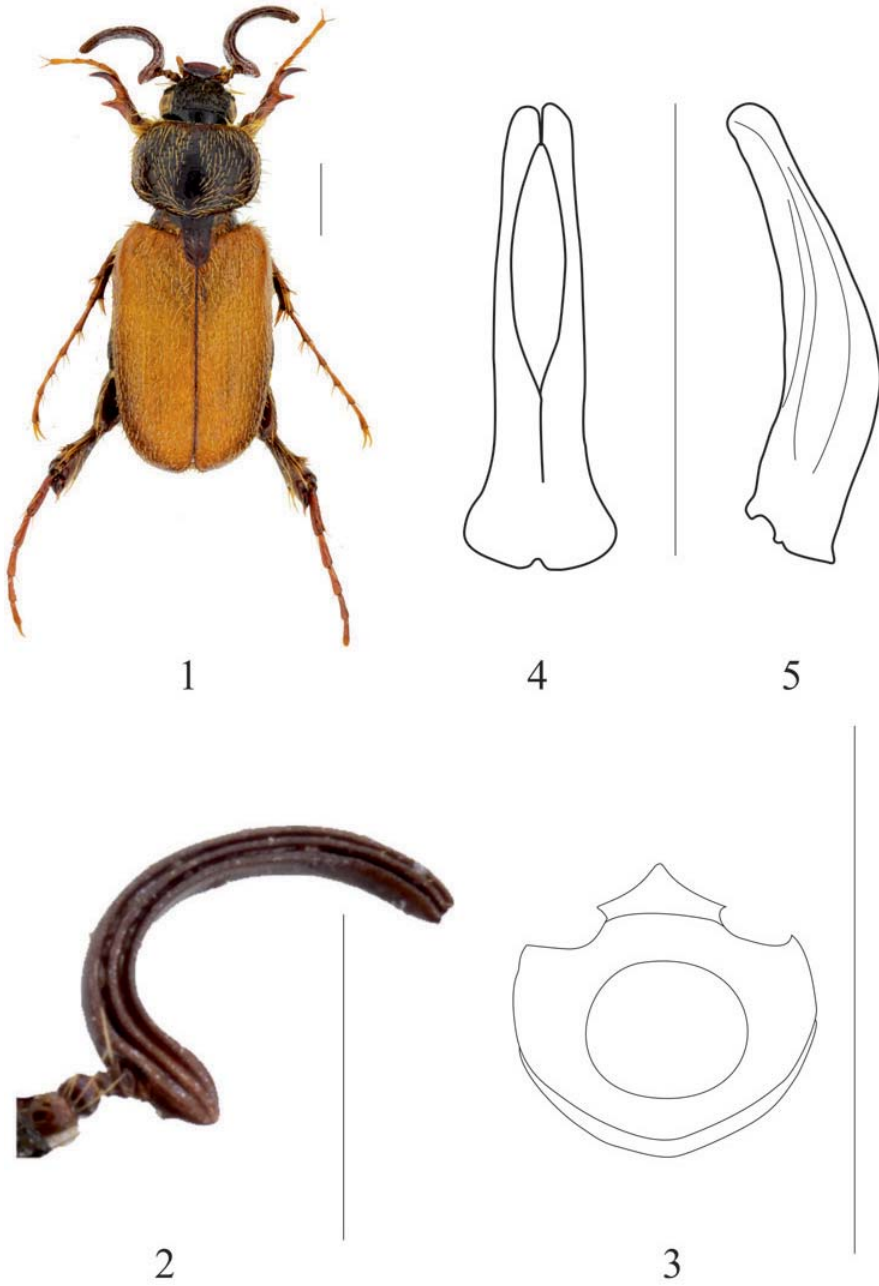
### Systematics

#### *Scapanoclypeus triapicalis* sp. nov.

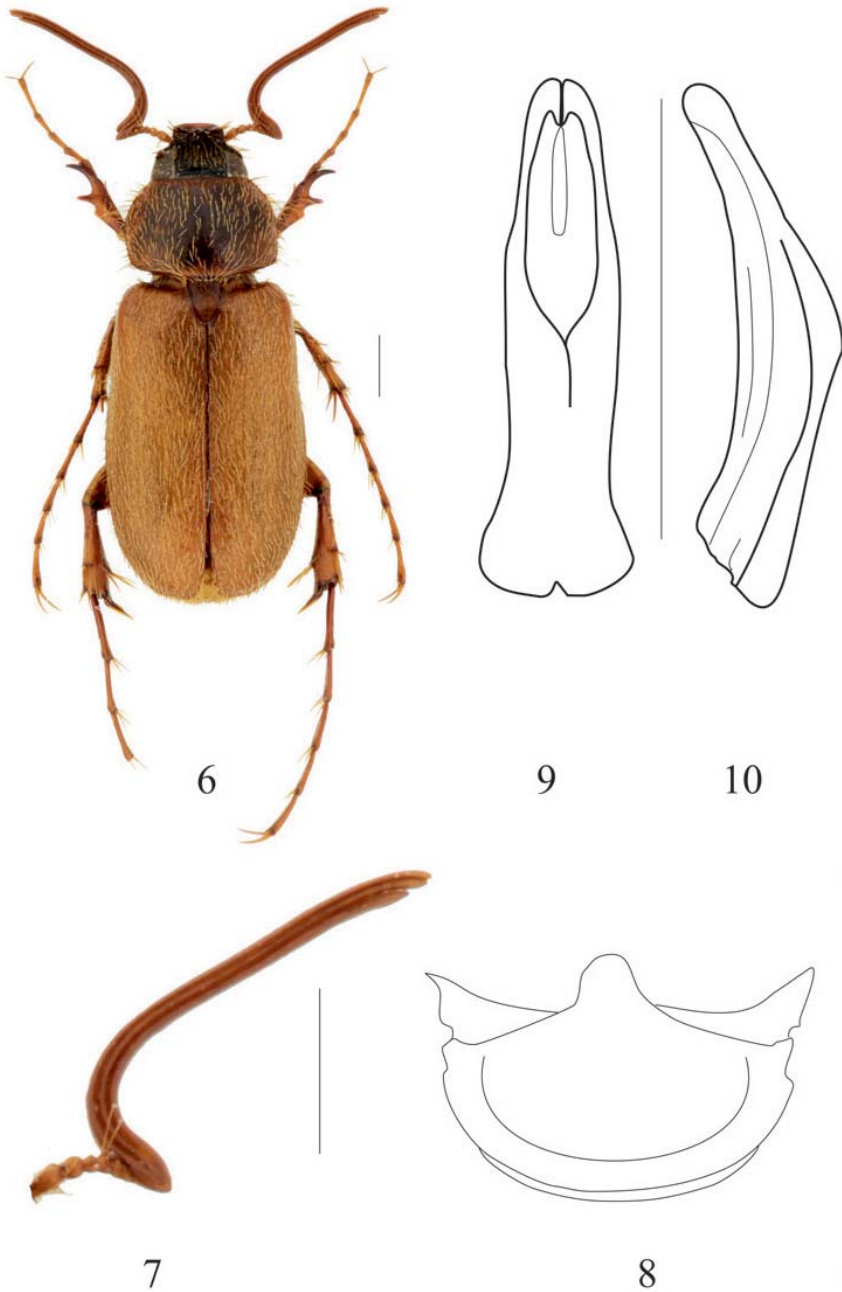
(Figs 1–5)

**Type material.** HOLOTYPE: ♂, 'RSA, N CAPE / VAN ZYLSRUS / (KALAHARI S) / 15. 1. 2001 / LGT. M. SNÍŽEK [p]' (NMPC). PARATYPES: 30 ♂♂, same data as holotype (PT Nos 1–24 in RSCV, PT Nos 25, 26 in TMSA, PT Nos 29, 30 in ABCC, PT Nos 27, 28 in BMNH).

**Description of holotype** (♂). Body length 5.7 mm. Body elongate. Head and pronotum black with reddish-brown margins, elytra testaceous, tibiae reddish brown, pro- and mesotarsi testaceous, metatarsi reddish brown. Dorsum and abdomen dark brown (Fig. 1). Antennae dark brown.



Figs 1–5. *Scapanoclypeus triapicalis* sp. nov., holotype, male. 1 – habitus, dorsal view; 2 – antenna, dorsal view; 3 – clypeus, frontal view; 4 – parameres, dorsal view; 5 – parameres, lateral view; scale 1 mm.



Figs 6–10. *Scapanoclypeus sinepunctatus* sp. nov., holotype, male. 6 – habitus, dorsal view; 7 – antenna, dorsal view; 8 – clypeus, frontal view; 9 – parameres, dorsal view; 10 – parameres, lateral view; scale 1 mm.

Clypeus broadly rounded, deeply concave in spoon-like fashion, with a large central round facet, entirely covered by evenly spaced, fine, non-setose punctures; sides slightly prolonged backward; fronto-clypeal suture weakly indicated, medially with a definite edge and toward frons with a broad-based tricuspid process (Fig. 3); anteromedial termination markedly punctate, non-setose. Labrum reduced, triangular; lobes rounded. Frons deeply rugose, edge of clypeus strongly punctate, each puncture bearing a long, semierect, posteriorly inclined yellow macroseta; macrosetae longest at edge of clypeus and around eye canthus. Eyes large, exceeding genae externally in dorsal aspect; distance between eyes in ventral aspect shorter than diameter of eye. Genae rugo-punctate, with group of long macrosetae. Antennae non-annular, antennal club strongly curved, considerably long, and at least 5.1 times longer than antennal shaft (antennomeres 1–6 combined), antennomeres 1–4 with sparse, long macrosetae, club totally densely punctate, without smooth areas. Antennomere 2 bulbous and as long as antennomeres 3–5 combined (Fig. 2). Terminal maxillary palpomere elongate, longer than palpomeres 2 and 3 combined, sub-basally with apically rounded, flat, oval alutaceous area tapering toward apex.

Pronotum weakly convex, approximately tetragonal, 1.4 times wider than long, broadest approximately at midlength, with very finely impressed medial line; except broad frontal interruption bordered all around. Anterior and posterior angles strongly rounded, poorly defined. Surface with long yellow macrosetae, deeply punctate except on disc. Anteriorly a puncture with a wrinkle, adjacent macrosetae twisted around disc toward base.

Scutellar shield slightly longer than wide, pentagonal; sides broadly arcuate, apex acute and without punctures, lateral margins without macrosetae.

Elytra moderately convex, only very slightly dilated posteriorly. Elytral disc strongly wrinkled and punctate, punctures evenly distributed, separated approximately by more than triple their diameters; macrosetose as on pronotum; macrosetae inclined posteriorly, absent from distinct sutural interval. Elytral sides punctate but not wrinkled. Lateral margin and apex of elytron darker than discal part.

#### Macropterous.

Legs. All femora shiny, irregularly coarsely punctate, macrosetae relatively long. Protibia bidentate, claws simple, each with small blunt bulges at base. Mesotibiae moderately expanded apically, metatibiae strongly expanded apically, with one oblique carina externally; apical edge with row of short stout macrosetae of equal length, terminal calcaria stout, long, lower calcar little shorter than upper; pro-, meso- and metatarsomeres without patches of short, dense macrosetae; metatarsomeres ventrally covered by long, isolated, sparse macrosetae.

Abdominal sternites dark brown, with yellow recumbent hairs. Pygidium flat, finely punctate, with brown margins and yellow center.

Male genitalia (Figs 4, 5). Aedeagus symmetrical, parameres slender, relatively long.

**Variability in males.** Paratypes somewhat variable in body length (5.2–6.1 mm), slightly variable in dorsal punctation density and length and distribution of macrosetae. Colour as in holotype.

**Female.** Unknown.

**Differential diagnosis.** Based on characters stated by EVANS (1987), the new species is similar to *S. aberrans*, from which it differs in clypeal sculpture (punctuation) and shape of frontal portion of clypeus.

**Etymology.** The species name reflects the shape of the transverse tricuspid frontal process (*triapicalis* = having three apices); adjective.

**Distribution.** Republic of South Africa: Southern Kalahari, Northern Cape Province (Fig. 11).

*Scapanoclypeus sinepunctatus* sp. nov.

(Figs 6–10)

**Type material.** HOLOTYPE: ♂, 'RSA, N CAPE / VAN ZYLSRUS / (KALAHARI S) / 15. 1. 2001 / LGT. M. SNÍŽEK [p]' (NMPC).

**Description of holotype** (♂). Body length 7.8 mm. Body elongate. Head black, pronotum yellowish-brown, elytra ochraceous, tibiae yellowish-brown, pro- and mesotarsi ochraceous, metatarsi reddish-brown, abdomen ochraceous (Fig. 6), antennal club ochre brown, shaft ochraceous.

Clypeus broadly rounded, slightly concave in spoon-like fashion, impunctate, smooth and glossy throughout; lateral corners slightly prolonged backward and turned toward frons; anterior margin without a sharp edge; medial part of base extended into a process with a rounded, glossy, hairless termination (Fig. 8). Frons flat and straight, deeply and sparsely punctate, punctures setose, macrosetae long and wide; punctures separated by twice their diameters, spaces between them shagreened. Frontal suture straight. Setation yellow, semi-erect, longest at border of clypeus and canthus. Eyes large, exceeding genae externally in dorsal aspect; distance between eyes in ventral aspect shorter than eye diameter. Genae rugo-punctate, with group of long macrosetae. Antenna nonanamous, club curved in basal third, then straight, at least 5.8 times longer than antennomeres 1–6 combined, club totally densely punctate, without smooth areas. Antennomeres 1–2 as long as antennomeres 3–6 combined, antennomeres 3 and 4 carunculous, directed forward (Fig. 7). Terminal maxillary palpomere elongate, sub-basally with apically rounded oval, flat, alutaceous area, longer than palpomeres 2 and 3 combined.

Pronotum 1.5× times wider than long, approximately hexagonal, broadest approximately at midlength, with very finely impressed medial line; except broad frontal interruption bordered all around, punctate and shagreened throughout; anterior and posterior angles strongly rounded, poorly defined, with long yellow macrosetae; anteriorly a puncture with a minor wrinkle and an adjacent macrosetae; recumbent setae directed backward and slightly toward scutellar shield.

Scutellar shield slightly longer than wide, pentagonal; sides broadly arcuate, apex acute and without punctures, lateral margins without macrosetae.

Elytra moderately convex, only very slightly dilated posteriorly. Elytral disc distinctly wrinkled and punctate, macrosetose as on pronotum, inclined posteriorly. Elytral sides only punctate, without wrinkles.

Macropterous.

Legs. Protibia tridentate, with subapical calcar, claws simple, each with small, blunt bulges at base. Meso- and metatibia moderately expanded apically, with two oblique carinae externally, apical edge with row of short stout macrosetae of equal size; terminal calcars stout, long, acute apically, lower calcar shorter than upper; pro- and mesotarsomeres without patches

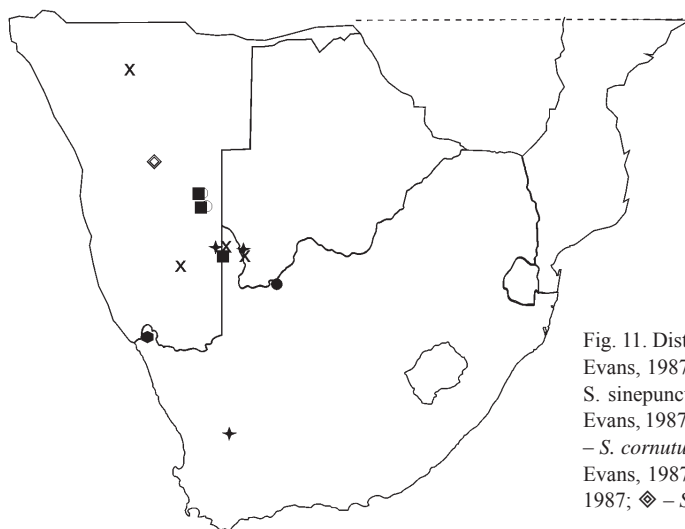


Fig. 11. Distribution map of *Scapanoclypeus* Evans, 1987. ● – *S. triapicalis* sp. nov. and *S. sinepunctatus* sp. nov.; ◆ – *S. testaceus* Evans, 1987; ✱ – *S. aberans* (Frey, 1974); ○ – *S. cornutus* Evans, 1987; ● – *S. carinatus* Evans, 1987; ■ – *S. aulacocoleatus* Evans, 1987; ◆ – *S. bruneus* Evans, 1987.

of short, dense macrosetae; claws deeply cleft, both portions acute apically; metatarsomeres covered with long, isolated, sparse macrosetae ventrally.

Abdominal sternites dark brown, yellow medially and brown laterally, with yellow recumbent hairs. Pygidium flat, finely punctate.

Male genitalia (Figs 9, 10). Aedeagus symmetrical, parameres slender, relatively long.

**Female.** Unknown.

**Differential diagnosis.** *Scapanoclypeus sinepunctatus* sp. nov. is the only species of the genus with a subapical calcar, but in all other characters it fits the generic diagnosis. Based on characters stated in EVANS (1987) it is similar to *S. cornutus*, from which it differs in shape and lack of punctures on clypeus, colour of the elytra and the subapical calcar.

**Etymology.** Named for impunctate clypeus, combining Latin *sine* (= without) and *punctatus* (= punctured); adjective.

**Distribution.** Republic of South Africa: Southern Kalahari, Northern Cape Province (Fig. 11).

### Key to species of *Scapanoclypeus*

(modified from EVANS 1987)

- 1 (2) Protibia with subapical calcar. .... *S. sinepunctatus* sp. nov.
- 2 (1) Protibia without subapical calcar.
- 3 (8) Protibia bidentate.
- 4 (5) Clypeus punctate. .... *S. triapicalis* sp. nov.
- 5 (4) Clypeus impunctate.
- 6 (7) Clypeus testaceous, shining. .... *S. testaceus* Evans, 1987
- 7 (5) Clypeus piceous, dull, alutaceous. .... *S. aberrans* (Frey, 1974)

- 8 (3) Protibia tridentate.
- 9 (10) Clypeus, viewed anteriorly, with divergent projections. ... *S. cornutus* Evans, 1987
- 10 (9) Clypeus, viewed anteriorly, without divergent projections.
- 11 (12) Medial clypeal projection narrowly acuminate, connected with transverse frontal carina by a longitudinal carina. .... *S. carinatus* Evans, 1987
- 12 (11) Medial clypeal projection broadly acuminate, without a frontal longitudinal carina.
- 13 (14) Clypeus moderately setigerously punctate; head piceous, pronotum and elytra fulvous; male genitalia with parameres showing basal line of fusion; length 7.5–9.0 mm. .... *S. aulacocoleatus* Evans, 1987
- 14 (13) Clypeus sparsely setigerously punctate; head and pronotum dark, elytra fulvous; male genitalia without line of fusion; length 6.5–8.0 mm. .... *S. bruneus* Evans, 1987

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### References

- EVANS A. 1987: A new genus of Melolonthinae from southern Africa. *Journal of the Entomological Society of Southern Africa* **50**: 363–370.
- LACROIX M. 2007: *Pachydeminae du monde, genera et catalogue (Coleoptera, Melolonthidae)*. Editions Marc Lacoix, Paris, 450 pp.