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Scapanoclypeus bicoloratus new species from Hardap, Namibia (Coleoptera: Scarabaeidae: Melolonthinae: Tanyproctini)

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Scapanoclypeus Evans (Coleoptera: Scarabaeidae: Melolonthinae: Tanyproctini) was established with *Trichinopus aberrans* Frey designated as its type species and included five additional species: *S. testaceus* Evans, *S. carinatus* Evans, *S. cornutus* Evans, *S. brunneus* Evans, and *S. aulacocoleatus* Evans. *Scapanoclypeus*, *Trichinopus* Waterhouse, and *Oedanomerus* Waterhouse are distinguished from other African Tanyproctini by their small size (12 mm or less), reduced mouthparts, and antennae with 8–10 antennomeres (Evans 1987). Species of *Scapanoclypeus* and *Oedanomerus* have simple claws without cleft or teeth at base, a slightly conical labrum, and a third antennomere that is equal in length to the fourth; while *Trichinopus* has bifid claws, a distinctly conical labrum with rounded end, and the third antennomere approximately as long as the fourth (Lacroix 2007). The antennal club of *Scapanoclypeus* is at least three times longer than the combined length of antennomeres I–IV and the clypeal surface at nearly a right angle in relation to the plane of the frons, while *Oedanomerus* has an antennal club about as long as the combined length of antennomeres I–IV and coplanar clypeal and frontal surfaces (Evans 1987; Lacroix 2007; Sehnal 2013). *Scapanoclypeus* was subsequently mentioned in Lacroix (2007), who re-drew the figures and adopted the key from Evans (1987). Three additional species have since been described from southern Africa: *S. triapicalis* Sehnal, *S. sinepunctatus* Sehnal, and *S. hardap* Sehnal (see Sehnal 2013, 2014).

Recently, Ruth Müller (TMSA) provided me with interesting specimens of *Scapanoclypeus* collected in Namibia and the Republic of South Africa. Examination of this material revealed an undescribed species and additional specimens for two previously described taxa: *S. carinatus* and *S. sinepunctatus*. The purpose of this paper is to describe the new species and provide an updated map (Fig. 3) to the known distribution of all 10 species of *Scapanoclypeus*.

Specimens were examined with a Novex stereomicroscope; measurements were taken with an ocular grid. Length measurements are from the anterior margin of the clyeus to apices of the elytra. The habitus photographs were taken with a Canon MP-E 65mm/2.8 1–5× macrolens 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. Specimens in the type series are provided with one red printed label: "*Scapanoclypeus bicoloratus* sp. n., HOLOTYPUS or PARATYPUS [with type number], ♂, Richard Sehnal det. 2016". Exact label data are cited for type 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. My 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):
RSCV—Richard Sehnal collection, Velenice, Czech Republic.
TMSA—Ditsong National Museum of Natural History (formerly Transvaal Museum), Pretoria, Republic of South Africa (Ruth Müller);

Scapanoclypeus bicoloratus Sehnal, new species (Figs. 1A–E, 3J)

Type locality. Namibia, Hardap Region, Strampiert.

Type material. Holotype and 3 paratypes (all males): "Namibia / 10km E Stampiert [= Strampiert, Hardap prov.] / 6.II.1995; leg. K. Werner [p]". Type depository: holotype and 2 paratypes in TMSA, 1 paratype in RSCV.

Description of holotype (♂). Body length 7.6 mm. Body elongate. Head and pronotum black with blackish-brown margins, scutellum black; antennae dark brown (Fig. 1B); elytra bicolored with disc yellowish brown and brownish-

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black margins (Fig. 1A). Protibiae and metabiae brownish-black, mesotibiae reddish brown, protarsi and mesotarsi testaceous, metatarsi reddish brown. Abdomen brown.

Head. Clypeus broadly rounded; deeply concave in spoon-like fashion; without a large, central, round disc; completely covered by evenly spaced, deep punctures with each bearing 1 long, columnar macroseta (often broken off); sides slightly prolonged backward. Frontoclypeal suture weakly indicated; medially with a definite edge; with broad-based, tricuspid process toward frons (Fig. 1C); 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 rugopunctate, with group of long macrosetae. Antennae with nine antennomeres; antennomeres 7–9 forming long, strongly curved club at least 6.4x times longer than antennal shaft; antennomeres 1–4 with sparse, long macrosetae; antennal club completely densely punctate, without smooth areas. Antennomere 2 bulbous and as long as antennomeres 3–6 combined. 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, 1.32x times wider than long, broadest approximately at middle, with finely impressed medial line; nearly completely bordered, anterior border widely interrupted in the middle. Anterior and posterior angles strongly rounded, poorly defined. Surface with long, yellow macrosetae; deeply punctate, punctures behind head each with a macroseta adhering to disc.

Scutellum shiny, impunctate, slightly longer than wide; margins broadly arcuate, lateral margins without macrosetae. *Elytra* moderately convex, only slightly dilated posteriorly. Disc strongly wrinkled and punctate; punctures evenly distributed, separated approximately by more than 6x their diameter; macrosetose as on pronotum, inclined posteriorly, absent from distinct humeri. Sides punctate, with lateral margins and apices diffusely darker than disc.

Macropterous.

Legs. All femora shiny and irregularly, coarsely punctate; macrosetae relatively long. Protibia tridentate [appearing bidentate], with basal tooth obscure, broadly angulate, without inner subapical spur. Claws simple, each with small, blunt bulge at base. Mesofemora dark brown. Metafemora with dark brown margins and yellow medially. Mesotibiae moderately expanded apically. Metatibiae strongly expanded apically, with 1 oblique carina externally; apical edge with row of long, stout, macrosetae of equal length; terminal calcars stout, long, lower calcar slightly shorter than upper calcar. Protarsomeres, mesotarsomeres, metatarsomeres without patches of short, dense macrosetae; metatarsomeres ventrally covered with long, isolated, sparse macrosetae.

Abdominal sternites reddish brown with yellow, recumbent setae. Pygidium yellow, flat, finely punctate.

Male genitalia (Figs 1D–E). Aedeagus symmetrical, parameres slender, relatively long.

Variability in males. Paratypes somewhat variable in body length (6.3–8.2 mm), slightly variable in dorsal punctation density and length and distribution of macrosetae. Color as in holotype.

Female. Unknown.

Diagnosis. Based on characters stated in Evans (1987), the new species differs from its congeners by the combination of following characters: tridentate protibia [appearing bidentate], inner subapical spur missing; clypeus punctate, without a large, central, round disc; elytra bicolored - disc yellowish brown, with brownish-black margins; protarsi and mesotarsi testaceous, metatarsi reddish brown. Generally, the new species is similar to *S. triapicalis*, from which it differs by having bicolored elytra, protibiae and metabiae brownish black, mesotibia reddish brown, antennal club long, curved club at least 6.4x times longer than antennal shaft, and clypeus without a large, central, round disc. In contrast, *S. triapicalis* has monochromatic elytra, tibiae reddish brown, antennal club long, strongly curved club at least 5.1x times longer than antennal shaft, and clypeus with a large, central, round disc.

Etymology. The specific epithet is given for the two colors of the elytra. The name is an adjective in the nominative singular.

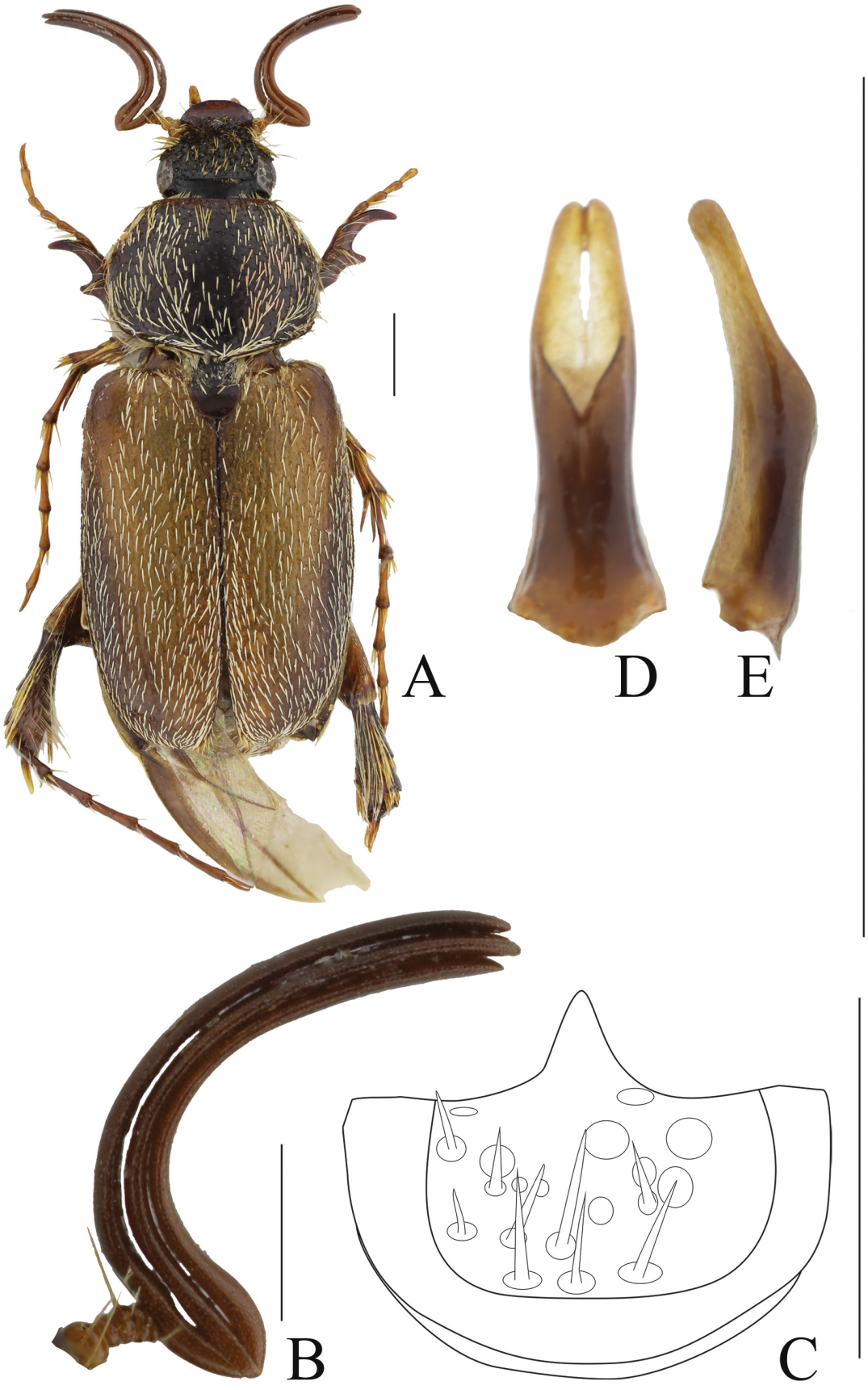
Distribution. Namibia, Hardap Region (Fig. 3J).

Faunistic notes on other *Scapanoclypeus* species

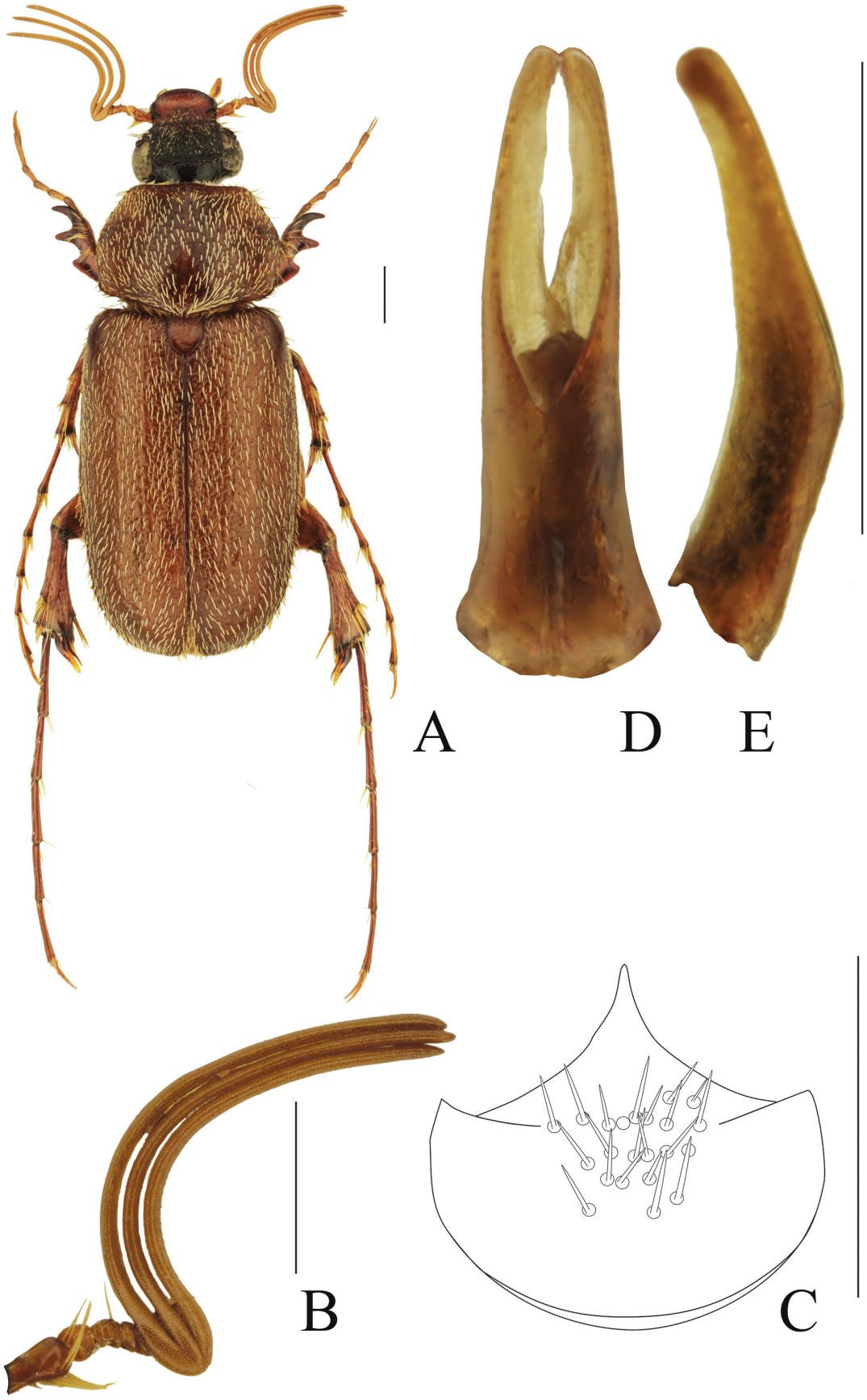
Scapanoclypeus carinatus Evans, 1987

Material studied. Namibia: Karas: Loerelei, 28°02′24″S 16°31′48″E, 2–6.iv.2002, E. Holm and H. Gebhardt, 2 ♂ in TMSA, 1 ♂ in RSCV.

Note. To date, the species was known only from the holotype. Specimens (Figs. 2D–E) from Karas Region, near Loerelei (Fig. 3E) represent additional material collected outside of the type locality. The species is recorded here for the first time for Namibia and is illustrated for the first time.



FIGURES 1A–E. *Scapanoclypeus bicoloratus* new species, holotype male. A—habitus, dorsal view; B—antenna, dorsal view; C—clypeus, frontal view; D—parameres, dorsal view; E—parameres, lateral view; scale 1 mm.



FIGURES 2A–E. *Scapanoclypeus carinatus* Evans, male. A—habitus, dorsal view; B—antenna, dorsal view; C—clypeus, frontal view; D—parameres, dorsal view; E—parameres, lateral view; scale 1 mm.

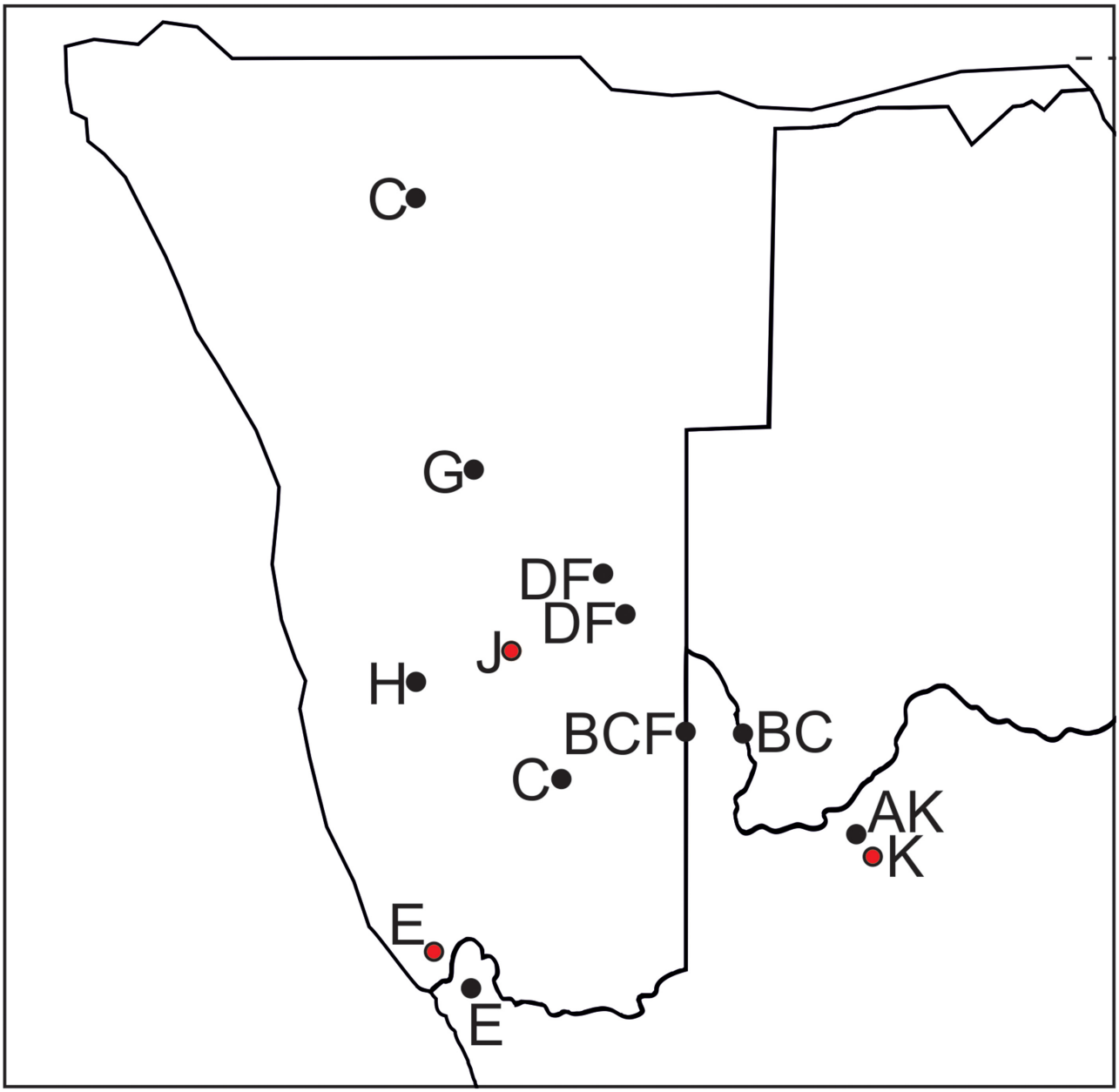


FIGURE 3. Map with currently known geographical distribution in southern Africa: A—*Scapanoclypeus triapicalis* Sehnal; B—*Scapanoclypeus testaceus* Evans; C—*Scapanoclypeus aberrans* (Frey); D—*Scapanoclypeus cornutus* Evans; E—*Scapanoclypeus carinatus* Evans; F—*Scapanoclypeus aulacocoleatus* Evans; G—*Scapanoclypeus brunneus* Evans; H—*Scapanoclypeus hardap* Sehnal; J—*Scapanoclypeus bicoloratus* new species; K—*Scapanoclypeus sinepunctatus* Sehnal. Red dots indicate new species or new locality.

Scapanoclypeus sinepuncatus Sehnal, 2013

Material studied. Republic of South Africa: North Cape: Tswalu Kalahari Reserve, 14.ii.2005, M. Burger and R. Müller, 5 ♂ in TMSA; 18.ii.2005, 1166 m, M. Burger and R. Müller, 3 ♂ in TMSA; 20–21.ii.2010, 1770 m, R. Müller, 7 ♂ in TMSA, 3 ♂ in RSCV.

Note. Previously, this species was known only from the holotype.

Key to species of *Scapanoclypeus* (modified from Sehnal 2013, 2014)

1 Protibia with inner subapical spur 2

- Protibia without inner subapical spur 3
2 Clypeus without punctures, protibial teeth long, apical tooth distinctly separated from middle tooth..... ***S. sinepunctatus*** Sehnal
- Clypeus with double punctures, protibial teeth short and evenly spaced..... ***S. hardap*** Sehnal
3 Protibia bidentate or appearing bidente 4
- Protibia tridentate 7
4 Clypeus punctate 5
- Clypeus impunctate 6
5 Clypeus with a large, central, round disc; elytra monochromatic reddish brown; protarsi, mesotarsi, and metatarsi testaceous..... ***S. triapicalis*** Sehnal
- Clypeus without a large central round disc; elytra bicolored, disc yellowish brown, with brownish-black margins; protarsi and mesotarsi testaceous, metatarsi reddish brown..... ***S. bicoloratus*** **new species**
6 Clypeus testaceous, shiny..... ***S. testaceus*** Evans
- Clypeus piceous, dull, alutaceous..... ***S. aberrans*** (Frey)
7 Clypeus with divergent projections when viewed anteriorly ..... ***S. cornutus*** Evans
- Clypeus without divergent projections when viewed anteriorly 8
8 Medial clypeal projection narrowly acuminate, connected with transverse frontal carina by a longitudinal carina. ..... ***S. carinatus*** Evans
- Medial clypeal projection broadly acuminate, without a frontal longitudinal carina 9
9 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
- Clypeus sparsely setigerously punctate; head and pronotum dark, elytra fulvous; male genitalia without basal line of fusion; length 6.5–8.0 mm ..... ***S. brunneus*** Evans

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