

Ocnodes kruegeri (Coleoptera: Tenebrionidae), a new species from Namaqualand, southern Africa, with nomenclatural notes on Sepidiini

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A new species of the genus *Ocnodes* is described (*O. kruegeri* spec. nov.) from Namaqualand, southern Africa. Moreover, an update of the recently published catalogue (Kamiński *et al.*, 2019a) of the tribe Sepidiini is provided. This includes discovery of two nomenclatural duplications and inclusion of nine previously omitted species. The following new combinations are proposed (both species transferred from *Psammodes*): *Ocnodes badeni* (Haag-Rutenberg, 1871) and *Ocnodes damarinus* (Péringuey, 1904). *Trachynotus kruegeri* nom. nov. is introduced for *Trachynotus vicinus* Péringuey, 1886 to avoid homonymy with *Trachynotus vicinus* (Haag-Rutenberg, 1871).

Keywords: Darkling Beetles, Toktokkies, Phanerotomeina, Dr Martin Krüger.

INTRODUCTION

With over 145 described species and subspecies, *Ocnodes* Fåhræus, 1870 is the most diverse genus within Phanerotomeina Koch, 1958 (Kamiński *et al.*, 2019a). As the taxonomic concept of this genus was never fully revised, at present *Ocnodes* can only be defined in relation to other genera of the subtribe. Particularly, this genus lacks the following features: stridulatory surface of epipleura, a character specific to *Stridulomus* Koch, 1955 (monotypic); narrow metatarsi, unique to *Tarsocnodes* Gebien, 1920 (25 species and subspecies); median tooth of protibia, specific to *Psammoryssus* Kolbe, 1886 (monotypic). Furthermore from *Huilamus* Koch, 1953 (monotypic), *Ocnodes* can be easily distinguished by having marginated sides on the fifth abdominal ventrite. The lack of a clear morphological synapomorphy implies that *Ocnodes* is most likely paraphyletic (Koch, 1958, Penrith, 1987). However, apart from a few highly outstanding species – e.g., *Ocnodes procursus* (Péringuey, 1899) or *O. warmeloi* (Koch, 1953) – the genus seems to be relatively monomorphic (pers. obs.).

During a recent visit to the Ditsong National Museum of Natural History a new peculiar species of *Ocnodes* was identified and is described below. Furthermore, some errors in the recently published

catalogue of the tribe Sepidiini are corrected (Kamiński *et al.*, 2019a).

This report is a tribute to the late Dr Martin Krüger (16 October 1964 – 24 July 2019) – former Editor of the *Annals of the Ditsong National Museum of Natural History*.

MATERIALS AND METHODS

This study is based on material from the Ditsong National Museum of Natural History, Pretoria, South Africa (TMSA, previously Transvaal Museum). All label data are transcribed verbatim, with each line separated by a forward slash (/) and each label separated by quotation marks. Description style and morphological terminology follows that of Kamiński *et al.* (2019b), with additional specialized terms used for the male and female terminalia (Iwan and Kamiński, 2016). Images were taken using a Canon 1000D body with accordion bellows and a Canon EF 100 mm macro lens.

TAXONOMY

Ocnodes kruegeri spec. nov., Figs 1, 2

TYPE MATERIAL. HT ♂ [NAMIBIA: Namaqualand]: 'Schakalsberg / V.1953 / C. Koch', 'unicorn / Koch / C. Koch det.' (TMSA). PTs: female [SOUTH AFRICA, Namaqualand]: 'Daberas Dunes / Gt. Namaquald. / V.1953 / C. Koch' (TMSA); male [NAMIBIA:

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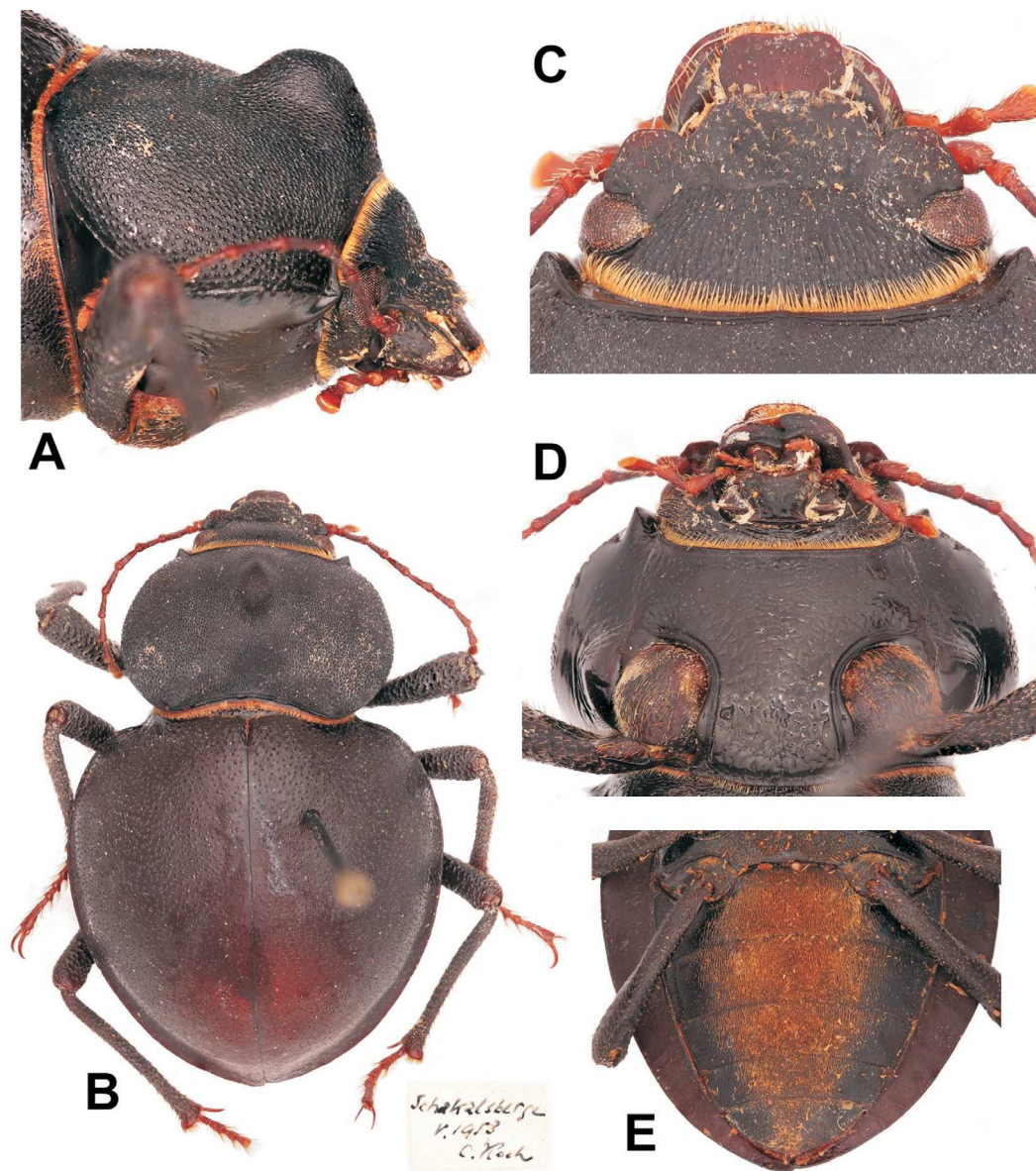


Fig. 1

External morphology and label data of *Ocnodes kruegeri* spec. nov. **A:** Head and pronotum, lateral view; **B:** habitus; **C:** head, dorsal view; **D:** head and prosternum; **E:** abdominal ventrites. Holotype (A–D); male paratype (E).

Namaqualand]: 'Schackalsberg / Gt. Namaqualand / V.1953. C. Koch' (TMSA).

DESCRIPTION. Length 17.0–23.0 mm, width of pronotum 7.0–10.0 mm and elytra 10.0–15.0 mm.

Head: prognathous. frons tuberculate, with tubercles nearly confluent in places; frontoclypeal suture distinct, with strong groove at middle; clypeus tuberculate, projecting anteriorly, extending well

beyond the epistomal ridges; apical margin of labrum emarginate medially, punctate in apical half, margin densely covered with yellowish, acuminate setae. Eye comma-shaped, with reduced ventral part slightly projecting, strongly emarginate around epistomal base. Mentum trapezoidal, not fully filling buccal cavity; anterior margin strongly emarginate at middle, lateral portions by margin depressed; with scattered fine setae. Submentum semicircular,

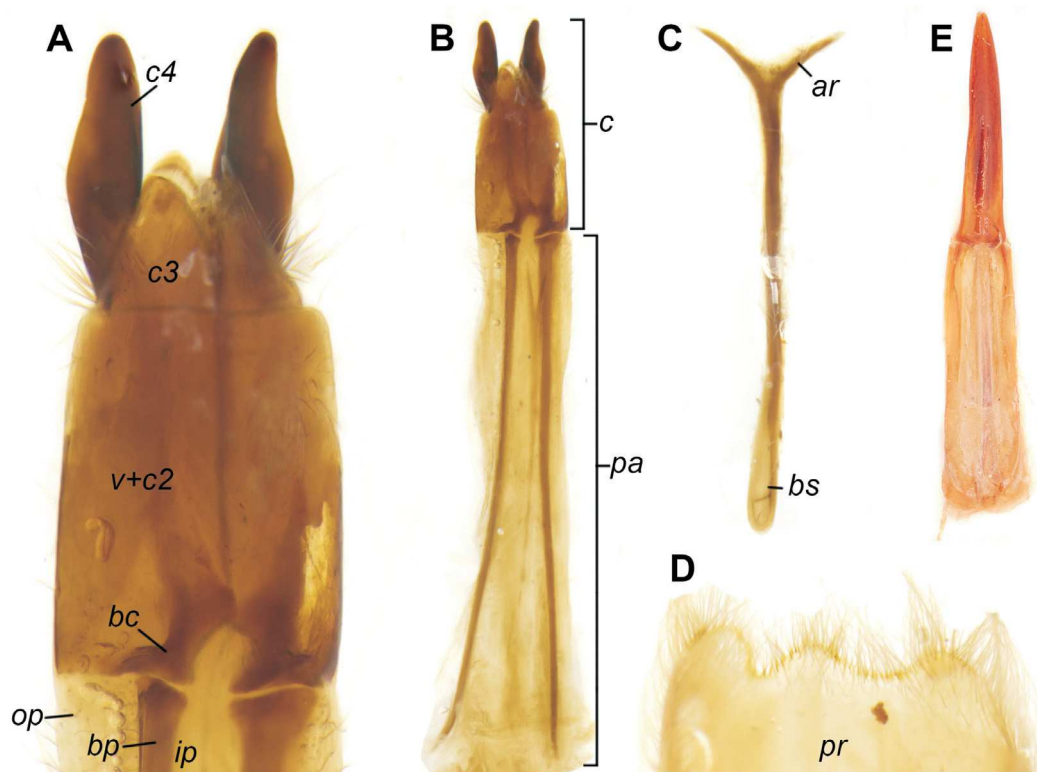


Fig. 2

Female (A–D) and male (E) terminalia morphology of *Ocnodes kruegeri* spec. nov.

Abbreviations: ar, arm of spiculum ventrale; bc, baculus of coxites; bs, base of spiculum ventrale; bp, baculus of paraproct; c, coxites; c2–c4, subsequent lobes of coxites; ip, inner plate of paraproct; op, outer plate of paraproct; pa, paraproct; pr, apical margin of proctiger; v, valvifer.

concave basally. Antenna slender, moderately covered with recumbent acuminate golden setae; antennomere 2 short, equal to 0.2 of antennomere 3 length; antenna slightly longer than pronotum.

Prothorax: pronotal lateral margin rounded, visible in dorsal view. Pronotum widest at middle. Disc dull, impunctate, covered with small tubercles; large longitudinal projection present medially, tallest at posterior half; anterior and basal pronotal margins complete, anterior apices strongly produced, basal margin strongly and widely emarginate; pair of depressions at basal margin on each side of midline. Hypomeron glabrous, convex, without submarginal groove, rugulose at medial half. Prosternal process rounded in lateral view, slightly convex.

Pterothorax: scutellum densely covered with microtubercles. Elytra widest in basal third, rounded laterally; covered with small tubercles. Elytra convex, sharply extending laterally at epipleura. Epipleura impunctate, covered with submarginal row of setae; wide, round, and concave. Mesovertrite depressed at anterior half. Metaventrte densely setose. Metepisternal suture partly visible (anterior

half). **Legs:** coarsely punctured. Procoxa exposed basally. Tibiae with scattered goldish setae, apex of protibia with prominent denticle at outer margin, lateral carina extending length of protibia; median spur reduced, reaching 0.75 of outer lateral spur length. Spurs on meso- and metatibiae of equal length. **Abdomen:** ventrites medially densely covered with golden setae (males), rugulose. **Terminalia:** ovipositor, spiculum ventrale, proctiger, and aedeagus as in Fig. 2.

DIFFERENTIAL DIAGNOSIS. This species can most easily be identified by the prominent projection or 'horn' present medially on the anterior half of the pronotum (Fig. 1A). This is the only known species of *Ocnodes* that possesses this structure. Within the tribe Sepidiini the pronotal 'horn' is a common feature of many representatives of Sepidiina (e.g., Mal, 2019); up to now it has not been reported in Phanerotomeina.

ETYMOLOGY. This new species is dedicated to Dr Martin Krüger (16 October 1964 – 24 July 2019),

prominent specialist in Lepidoptera, and the former Editor (2005–2019) of the *Annals of the Ditsong National Museum of Natural History*.

DISTRIBUTION. South Africa and Namibia: Namaqualand.

ERRATA FOR CATALOGUE OF SEPIDIINI (KAMIŃSKI *ET AL.*, 2019a)

Duplicated names

funestus Haag-Rutenberg, 1871a: 72

NOTE. Name appears twice in the catalogue. Once as a species of *Psammodes* (page 34), and also under *Ocnodes* (page 57). The second occurrence of this name is proper; therefore *funestus* Haag-Rutenberg, 1871a: 72 should be removed from the checklist under *Psammodes* (page 34).

tuberosa Fairmaire, 1882: 76

NOTE. Name appears twice in the catalogue. Once as a species of *Vieta* (page 76), and also under *Vietomorpha* (also page 76). The first occurrence of this name is proper; therefore *tuberosa* Fairmaire, 1882: 76 should be removed from the checklist under *Vietomorpha* (also page 76). See Mal (2019) for details concerning this species.

Missing species

Genus ***Ocnodes*** Fåhraeus, 1870

badeni (Haag-Rutenberg, 1871b: 38)

***Psammodes* comb. nov.**

TYPE DATA. Holotype (Zoologische Staatssammlung, Munich, Germany)

NOTE. Based on investigation of the morphology of this species it is hereby transferred to *Ocnodes*.

damarinus (Péringuey, 1904: 231) ***Psammodes* comb. nov.**

TYPE DATA. Holotype (TMSA)

NOTE. Based on an investigation of morphology of this species it is hereby transferred to *Ocnodes*.

Genus ***Psammodes*** Kirby, 1819

goryi (Solier, 1843: 283) ***Moluris*** [Gebien, 1910: 156]

TYPE DATA. Holotype (Muséum d'Histoire Naturelle, Geneva, Switzerland)

meracus Péringuey, 1899: 268

TYPE DATA. Holotype (TMSA)

nanus Fairmaire, 1893: 28

TYPE DATA. Holotype (Muséum National d'Histoire Naturelle, Paris, France)

plausibilis Péringuey, 1899: 271

TYPE DATA. Syntypes (TMSA)

regalis Haag-Rutenberg, 1875: 74

TYPE DATA. Holotype (Zoologische Staatssammlung, Munich, Germany)

Genus ***Ossiporis*** Pascoe, 1866

togata Koch, 1958: 218

TYPE DATA. Holotype (TMSA)

Genus ***Trachynotus*** Latreille, 1828

***kruegeri* nom. nov.**

TYPE DATA. Holotype (TMSA)

= *Trachynotus vicinus* Péringuey, 1886: 126 [junior secondary homonym of *Psammodes vicinus* Haag-Rutenberg, 1871b: 51 – moved to *Trachynotus* by Koch, 1955: 46]

NOTE. The newly introduced name honours Dr Martin Krüger.

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