A new *Attagenus* species (Coleoptera: Dermestidae) from South Africa

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Abstract. The new species *Attagenus danielssoni* sp. nov. from South Africa is described, illustrated and compared with closely related species.

INTRODUCTION

During the long termed project to prepare a revision of the *Attagenus* species occurring in South Africa a so far unknown species was detected. About 200 different species respectively subspecies were included in the genus *Attagenus* Latreille, 1802 (Háva 2015). Most of the species are found in the Palaearctic, Ethiopian or Nearctic Region (Kadej & Háva 2015). From South Africa, till today, approximately 30 of them have been recorded. As confirmed by recent publications, the total number of *Attagenus* species is still increasing (Háva & Kadej 2008a, b, 2014; Herrmann & Háva 2007, 2014; Herrmann, Kadej & Háva 2015; Kadej & Háva 2015). The genus includes species defined by the following set of features: first segment of hind tarsi almost half as long as the second, free mouthparts, three-jointed antennal club and lack of distinct antennal cavity on the hypomeron. The most characteristic feature of the larvae is an extremely long caudal brush and elongate, cylindrical, strongly sclerotized body (Peacock 1993; Kadej & Háva 2014, 2015). In the present paper the authors describe another new species of the genus.

MATERIAL AND METHODS

The holotype was kept for 5 days in a solution of 1% pepsin in hydrochloric acid to free it roughly from protein tissues and make the extremities of the body movable. The abdomen was disconnected from the body and glued upside-down onto the same cardboard plate, just behind the beetle. Before this, the genitalia were extracted and then cleaned with a fine needle in a drop of 99% glycerol. Afterwards it was also glued onto the plate behind the beetle, firmly embedded in a drop of a solution consisting of polyvinylpyrrolidone, aqua demineralisata and diglycerol (the liquid solution becomes permanently solid after a few minutes). Photos of body and abdomen were taken with a digital SLR camera Sony alpha 35, connected with the Nikon CF N Plan Achromat 4x 160/ objective and extension rings; for the photos of the genitalia and antenna, the Bresser Junior USB-Handmikroskop at 200x magnification was used. Because of the low depth

of field, all photos were taken as layered images, afterwards combined on a PC by software. Nomenclature and systematic employed in the present work follow Háva (2015).

The size of the beetle and of its body parts can be useful in species recognition, so following measurements were made:

a) total length (TL) - linear distance from anterior margin of pronotum to apex of elytra.
b) pronotal length (PL) - maximal length measured from anterior margin to posterior margin.
c) pronotal width (PW) - maximal linear transverse distance.
d) elytral length (EL) - linear distance from shoulder to apex of elytron.
e) elytral width (EW) - maximal linear transverse distance.

Abbreviations of collections:

AHEC Private collection of Andreas Herrmann, Stade, Germany;
JHAC Private Entomological Laboratory & Collection, Jiří Háva, Prague-west, Czech Republic;
MZLU Museum of Zoology, Lund University, Lund, Sweden;
TMSA Ditsong National Museum of Natural History, Pretoria, South Africa.

The type specimens of the described species are provided each with a red, printed label showing the following text: „HOLOTYPUS [respectively PARATYPUS] *Attagenus* (s. str.) *danielssoni* n. sp., A. Herrmann, J. Háva & M. Kadej det. 2015".

DESCRIPTION

Attagenus (*Attagenus*) *danielssoni* sp. nov.

(Figs. 1-4)

Type material. Holotype (♂): RSA: Clanwilliam/Cederberg/West Cape, Kraal se Kloof, 06.10.2002, lgt. Robert Constantin, (AHEC). Paratypes: (2 ♂♂, 3 ♀♀): RSA: Cape Prov., Koomplanskloof, 10 km S Citrusdal, 200-270 m, 32°40´S, 19°01´E, 04-08.X.1994, loc.6, R. Danielsson leg. / Swept on sand dunes and meadows along Olif ant River, (3 MZLU, 2 JHAC); (1 ♂): RSA: Cape Prov., Hexrivier, N of Citrusdal, 32°26´S 18°58´E, 06.X.1994, loc.8, R. Danielsson leg., (MZLU); (1 ♂): S.W.Afr., Kaokoveld Sesfontein basin 19.08 S - 13.36 E / 3.2.1975, E-Y: 613 groundtrap, 14 day, leg. Endrody-Younga / groundtrap with meat bait (TMSA).

Description. Body entirely black on dorsal and ventral surfaces; robust, longish oval (Fig. 1). Body measurements (in mm): TL 3.1, PL 0.8, PW 1.7, EL 2.3, EW 1.8. Head with not very dense punctation although the punctures are deep and distinct, covered with long recumbent ochre strong hairs; palpi darkish brown. Eyes large with short but distinctly visible erect microsetae. Median ocellus present on front. Antennae entirely black, the shaft slightly broadened towards the base, 11-segmented, the last three segments forming a distinct club covered densely by fine recumbent black pubescence; the terminal segment bulged at the inside and much longer than the two preceding combined, roughly as long as the shaft (Fig. 2); shaft sparsely provided with some strong, suberect brown hairs. Pronotum bulged, broadest at the apical edges, narrowed towards the front, sparse but distinctly punctured, covered with recumbent strong hairs, lateral margins smooth, untoothed, not visible from above; the pubescence consists of darkish brown and ochre hairs, the ochre hairs build several spots and maculae as shown in Fig. 1. Scutellum small, black and triangular, with the same kind of punctures and pubescence as in the elytra. Elytra with shiny black cuticle, furnished and punctured similarly to the pronotum, humeri with a little indistinct bump. The ochre hairs build several fasciae and maculae, one macula at the apical end of each elytra, a transverse fasciae in the apical third of the elytra, another one at the first third and fringe left and right beneath the scutellum. Both fasciae are jagged, the anterior one reaches the scutellum whilst the hind one is interrupted by the suture (Fig. 1). Legs robust, black, covered

sparsely with decumbent bright hairs. All tibiae with rows of strong dark brown spines at their lateral margins. Tarsi quite long, roughly as long as the tibiae, brown. Mesosternum black, punctured as in the body surface. Abdominal sternites also black, dense and coarsely punctuate, covered quite densely with recumbent light brown hairs (Fig. 4). Genitalia as shown in (Fig. 3). Female unknown so far.

Differential diagnosis. The new species is similar to *Attagenus diversus* Reitter, 1881, *A. hottentotus* (Guérin-Méneville, 1844), *A. jucundus* Péringuey, 1885 but can be distinguished from them by the following features:

1) morphology of male antennal club: length of the last antennomere in relation to length of the two preceding antennomeres 3:1 in *A. danielssoni* sp. nov.; 2:1 in *A. hottentotus* and *A. jucundus*; 1:1 in *A. diversus*;
2) dorsal patterns on elytra: only two fasciae present on the elytra in *A. hottentotus* and *A. jucundus*, whilst two fasciae and one macula present in *A. danielssoni* sp. nov. and *A. diversus*. In *A. danielssoni* sp. nov. the colour of dorsal patterns is ochre, whilst in *A. diversus* it is brownish. Furthermore the distance between the first and second fasciae is relatively bigger in *A. danielssoni* sp. nov.

Etymology. The epithet is a patronym in honour of the coleopterologist Roy Danielsson (curator of the insect collection, MZLU).

Figs. 1-4: *Attagenus* (*Attagenus*) *danielssoni* sp. nov.: 1- habitus, dorsal aspect; 2- antenna; 3- genitalia; 4- abdomen. (all photos taken from the holotype).

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