Attagenus (s. str.) *geisthardti* sp. nov. - a further new dermestid species (Coleoptera: Dermestidae) detected by light trapping in the Republic of Yemen

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Abstract. A new species, *Attagenus* (s. str.) *geisthardti* sp. nov., occurring in the Republic of Yemen is described, illustrated and compared with related species. A list of all species of the genus *Attagenus* from Yemen is furthermore provided.

INTRODUCTION

Michael Geisthardt, Wiesbaden (Germany), collected Dermestidae in the Republic of Yemen in October/November 1992, when carrying out a consultancy visit about pests of stored products. Antonius Van Harten worked for 10 years as an entomologist with the Yemeni Plant Protection Service in Sana'a (1990-1994 and 1997-2004) and also collected Dermestidae, mainly by trapping. He was assisted by his Yemeni colleagues Ahmed Sallam (Lahj), Saleh Al Haruri (Al Kowd), Mohamed Hubaisshan (Mukalla), Abdul-Rahman Al Yarimi (Ta'izz) and the late Monasir Afif (Mayfa'ah). The Dermestidae were given to the authors for identification, and subsequently, several papers has already been published upon this material (Geisthardt 1993a, 1993b; Háva & Herrmann 2006, 2014). The present paper provides a description of another new species which have been detected during a time-consuming careful examination of many specimens looking extremely similar to each other.

The genus *Attagenus* Latreille, 1802 includes roughly 230 different species (respectively subspecies) worldwide (Háva 2015); almost hundred of them occur in Asia and 15 have been recorded from Yemen so far. Some of those species have been classified as economically important pests of stored products, museum's collections and other goods, they share the following set of characteristics: 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.

MATERIAL AND METHODS

The specimens were stored for 5 days in a solution of 1% pepsin in hydrochloric acid to remove roughly protein tissues and thus to make their extremities moveable. 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 excluded and then cleaned with a fine needle in a drop of 99 percent glycerol. Afterwards they were 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 the digital SLR camera Sony alpha 35, connected to 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 was used at 200x magnification. Because of the low depth of field, all photos were taken as layered images, afterwards combined on a PC by appropriate software.

Nomenclature and systematics in this paper follow Háva (2015).

The size of the beetle and of its body parts can be useful in species recognition, so the following measurements were made:
total length (TL) – linear distance from anterior margin of pronotum to apex of elytra;
pronotal length (PL) – maximal length measured from anterior margin to posterior margin;
pronotal width (PW) – maximal linear transverse distance;
elytral length (EL) – linear distance from shoulder to apex of elytron;
elytral width (EW) – maximal linear transverse distance.

The type specimens of the species described are provided with a red, printed label showing the following text: „HOLOTYPUS [respectively PARATYPUS], *Attagenus* (s. str.) *geisthardti* n. sp., A. Herrmann & J. Háva det. 2017".

DESCRIPTION

Attagenus (*Attagenus*) *geisthardti* sp. nov.

(Figs. 1-4)

Type material. Holotype (♂) labeled: „S-Jemen, Al Mukalla, Lichtfalle, VI.2003 leg. Van Harten". Paratypes: (1 ♂) with the same data as holotype; (2 ♀♀) labeled: „S-Jemen, Ghayl ba Wazir, Malaise, XI.-XII.2002 leg. Van Harten". [The holotype misses it right front tarsus, furthermore one palpus is disconnected. The paratypes are also more or less slightly damaged]. All specimens are deposited in the collection of the first author.

Description. Body robust, broadly oval, slightly narrowed towards the apex (Fig. 1); measurements (in mm): TL 3.0, PL 0.7, PW 1.5, EL 2.4, EW 1.7. Head shiny and black, with fine but distinct and deep punctures, sparsely covered with quite long and recumbent light brown hairs; palpi light brown. Eyes large with short and hardly visible erect interfacetal setae. Ocellus distinctly presented. Antenna entirely yellowish brown, the club as well as the first antennomere slightly darker. Antenna 11-segmented, the last three segments forming distinct club covered densely by fine decumbent brown pubescence; the whole club slightly shorter than the antennomeres 1-8 combined (Fig. 2); on these segments a few erect brown hairs are present. Pronotum slightly bulged, broadest at apical edges, narrowed towards the anterior part, entirely blackish brown and punctured as head, lateral margins smooth, untoothed, not visible from above; dorsal surface entirely covered quite densely with decumbent uniform light brown hairs, forming neither fasciae nor spots. Scutellum small, black and nearly triangular, naked, with fine punctation. Cuticle of elytra shinny brown, punctation somewhat coarser than onpronotum. The elytral pubescence consisting of similar hairs as on pronotum, but the long light brown pubescence being, however, interrupted respectively replaced by three blurred and indistinct transverse fasciae of sparsely distributed, short and thin brown hairs having roughly the same colour, they are running wave-like from the suture towards lateral margins, but not reaching them. First fascia is located in middle of elytra, the second in the apical fourth and the third one just before apex (Fig. 1); elytral humeri with a flat and indistinct bump. Legs robust and brown, sparsely covered with erect, short bright hairs. All tibiae with several rows of strong brown spines at their lateral margins. Tarsi quite long, roughly as long as tibiae, brown. Mesosternum darkish

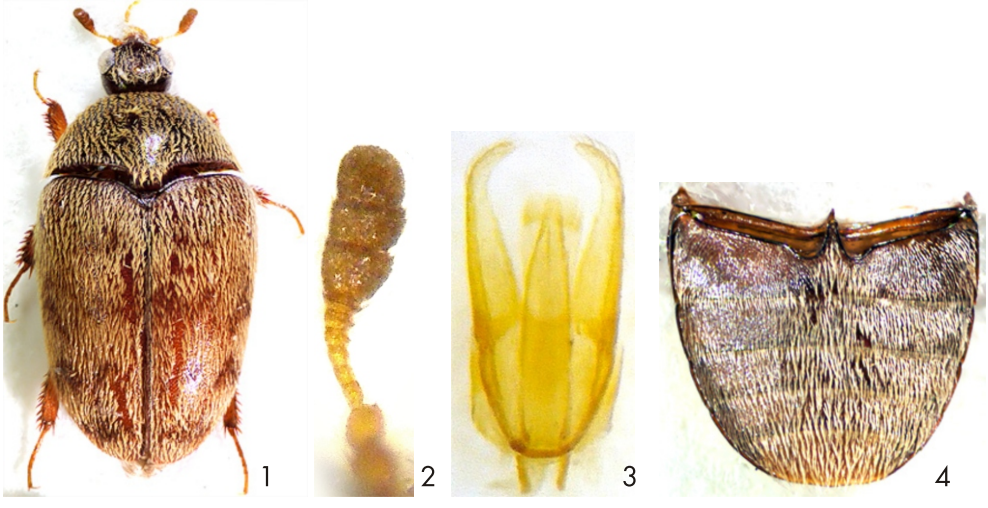
brown, covered with decumbent brown hairs as on pronotum. Abdominal ventrites brown, punctured finely and very densely, also densely covered with decumbent light brown hairs (Fig. 4). Male genitalia as shown in Fig. 3.

Female. Habitually similar to male.

Variability. Variation in size: 3.0-3.2 mm.

Differential diagnosis. The new species resembles habitually *Attagenus herrmanni* Háva, 2012, but differs very conspicuously in the size and shape of the antennal club. In the new species the club is distinctly shorter than the shaft, whilst in *A. herrmanni* the club is about twice as long as the shaft. From all other species of the genus it differs by the combination of the elytral fasciae, the characteristic shape of the genitalia and the short antennal club.

Ethymology. Patronymic, dedicated to the German coleopterist Michael Geisthardt, Wiesbaden.



Figs. 1-4. Holotype (male) of *Attagenus geisthardti* sp. nov.: 1- habitus; 2- antenna; 3- genitalia; 4- abdomen.

THE *ATTAGENUS* SPECIES SO FAR RECORDED FROM THE REPUBLIC OF YEMEN

Attagenus atripennis Pic, 1938
Attagenus brunneus Faldermann, 1835
Attagenus cyphonoides Reitter, 1881
Attagenus fasciatus (Thunberg, 1795)
Attagenus geisthardti sp. nov.
Attagenus herrmanni Háva, 2012
Attagenus kadeji Háva, 2012
Attagenus kadleci Háva, 2012
Attagenus maseki Háva, 2013

Attagenus omanicus Zhantiev, 2007
Attagenus ornatus Háva, 2007
Attagenus pellio (Linnaeus, 1758)
Attagenus posticalis Fairmaire, 1879
Attagenus unicolor (Brahm, 1791)
Attagenus vanharteni Háva, 2009
Attagenus yemensis Háva & Herrmann, 2014

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