

Additional notes on some Dermestidae and new species from Yemen – Part I (Coleoptera)

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Abstract: The following species and subspecies from Yemen and Oman are described, illustrated and compared with related species: *Anthrenus (Anthrenops) cervenkai* **n. sp.** (Yemen, Oman); *Anthrenus (Anthrenops) geisthardti* **n. sp.** (Yemen) and *Anthrenus (Anthrenus) picturatus arabicus* **n. ssp.** (Yemen). New records extending the known geographical distribution are published for the following species: *Phradonoma hirsutulum* (Reiche, 1868); *Anthrenus (Anthrenodes) malkini* Mroczkowski, 1980, *Anthrenus (Anthrenus) flavipes flavipes* LeConte, 1854 and *Anthrenus (Anthrenops) coloratus* Reitter, 1881, all species having been collected in Yemen, partly for the first time. A key to the *Anthrenops*-species is given.

Zusammenfassung: Die folgenden Arten und Unterarten aus dem Jemen bzw. Oman werden beschrieben, abgebildet und mit verwandten Arten verglichen: *Anthrenus (Anthrenops) cervenkai* **n. sp.** (Jemen, Oman); *Anthrenus (Anthrenops) geisthardti* **n. sp.** (Jemen) und *Anthrenus (Anthrenus) picturatus arabicus* **n. ssp.** (Jemen). *Phradonoma hirsutulum* (Reiche, 1868), *Anthrenus (Anthrenodes) malkini* Mroczkowski, 1980, *Anthrenus (Anthrenus) flavipes flavipes* LeConte, 1854 und *Anthrenus (Anthrenops) coloratus* Reitter, 1881, werden erstmals für den Jemen gemeldet. Ein Schlüssel für die *Anthrenops*-Arten wird entworfen.

Key words: Taxonomy, new species, new faunistic records, Coleoptera, Dermestidae, Yemen, Arabia

Introduction

Dr. Michael GEISTHARDT, Wiesbaden (Germany), collected Dermestidae in Yemen during October/November 1992, when carrying out a

consultancy visit about pests of stored products. Antonius VAN HARTEN (now Sharjah, United Arabian Emirates), 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 Dr. Ahmed SALLAM (Lahj), Mr. Saleh AL HARURI (Al Kowd), Dr. Mohamed HUBAISHAN (Mukalla), Mr. Abdul-Rahman AL YARIMI (Ta'izz) and the late Mr. Monasir AFIF (Mayfa'ah). The Dermestidae were given to the authors for identification. Dermestidae from Yemen were recently been published by HÁVA (in press).

Material and Methods

With the exception of the holotypes, all specimens will be deposited in the authors' collections. Separate labels are indicated by slashes (\), remarks of the authors by square brackets []. We follow the systematical structure in Dermestidae proposed by HÁVA (2003, 2004a) and LAWRENCE & SLIPINSKI (2005). The shades of colours used in the descriptions are classified according to PACLT (1958), terminology of integumental structures according to HARRIS (1979). The size of the beetles or of their body parts can be useful in species recognition and thus, the following measurements were made: total length (TL) – linear distance from anterior margin of pronotum to apex of elytra; elytral width (EW) – maximum linear transverse distance.

The following abbreviations refer to the collections, in which the examined material is deposited:

AHEC: Private collection, A. HERRMANN, Stade, Germany.

JHAC: Private Entomological Laboratory and Collection, J. HÁVA, Prague, Czech Republic.

BGZM: Biozentrum Grindel und Zoologisches Museum, Hamburg, Germany.

Results

Dermestes (Dermestinus) maculatus DeGeer, 1774

Material examined: Yemen: Sana'a [15°21'N 44°13'E], market, 31.10.1992, M. GEISTHARDT leg. (1 ex.); Ta'izz [13°35'N 44°02'E], city market, 8.11.1992, M. GEISTHARDT leg. (1 ex.); 12 km NW of Manakhah

[15°05'N 43°42'E], Malaise trap in tree nursery, 15.5.–24.6.2003, A. VAN HARTEN leg. (1 ex.), all AHEC.

Distribution: Cosmopolitan species (HÁVA 2003, 2005).

***Dermestes (Dermestinus) frischii* Kugellan, 1792**

Material examined: Yemen: Ta'izz, city market, 8.11.1992, M. GEIST-HARDT leg. (10 ex.); Al Ghaydah [16°14'N 52°09'E], 22.7.2002, A. VAN HARTEN leg. (2 ex.), all AHEC.

Distribution: Cosmopolitan species (HÁVA 2003, 2005).

***Phradonoma oculata* Háva, 2004**

Material examined: Yemen: Al-Kowd [13°5'N 45°22'E], light trap in agricultural area, 6.2000 (1 ex.), 9.2003 (1 ex.), A. VAN HARTEN & S. AL HARURI leg., all AHEC.

Distribution: The species is endemic to Yemen (HÁVA 2004b).

***Phradonoma tricolor* (Arrow, 1915)**

Material examined: Yemen: Al-Kowd, light trap in agricultural area, 9.2001 (4 ex.), 9.2003 (1 ex.), A. VAN HARTEN & S. AL HARURI leg.; Ta'izz, light trap at agricultural research station, 9.2000 (1 ex.), A. VAN HARTEN & S. AL YARIMI leg., all AHEC.

Distribution: The species is known from India, Oman, Saudi Arabia, Yemen (HÁVA 2003, 2005).

***Phradonoma hirsutulum* (Reiche in Mulsant et Rey, 1868)**

Material examined: Yemen: Al-Kowd, light trap in agricultural area, 9.2001 (1 male), A. VAN HARTEN & S. AL HARURI leg., AHEC.

Distribution: The species is known from Eritrea, Israel, Saudi Arabia, Syria, Turkmenistan (HÁVA 2005), new for Yemen.

***Anthrenus (Anthrenodes) malkini* Mroczkowski, 1980**

Material examined: Yemen: Al Kowd, light trap in agricultural area, 9.2003 (1 male), A. VAN HARTEN & S. AL HARURI leg., AHEC.

Distribution: The species is known from Oman and Saudi Arabia (HÁVA 2005), new for Yemen.

***Anthrenus (Anthrenodes) pulchellus* Gestro, 1889**

Material examined: Yemen: Sana'a, v.1991, A. VAN HARTEN leg. (2 ex.), AHEC; Sana'a, Malaise trap, 1.–5.2003, A. VAN HARTEN leg. (1 ex.), AHEC.

Distribution: The species is known from Saudi Arabia and Yemen (HÁVA 2005).

***Anthrenus (Anthrenops) coloratus* Reitter, 1881**

Material examined: Yemen: Al Kowd, light trap in agricultural area, 1.2000 (1 ex.), 6.2000 (3 ex.), 8.2000 (2 ex.), 3.2003 (2 ex.), 9.2003 (16 ex.), A. VAN HARTEN & S. AL HARURI leg.; Lahj [13°03'N 44°52'E], Malaise trap in compound of College of Agriculture, 6.2000 (2 ex.), 5.2001 (1 ex.), A. VAN HARTEN & A. SALLAM leg., all AHEC.

Distribution: The species is known from Europe, Canary Is., Turkey, Algeria, Egypt, Eritrea, Morocco, Sudan, Tunisia, U.S.A., Afghanistan, India, Israel, Kazakhstan, Kyrgyzstan, Saudi Arabia, Syria, Tadzhikistan, Turkmenistan (HÁVA 2003, 2005), new for Yemen.



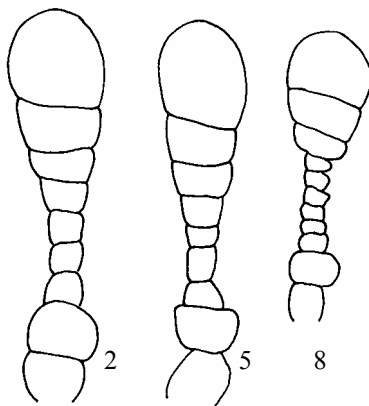
Fig. 1: *Anthrenus (Anthrenops) geisthardti* **n. sp.** habitus, dorsal aspect.

Fig. 4: *A. (Anthrenops) cervenkai* **n. sp.** habitus, dorsal aspect.

***Anthrenus (Anthrenops) geisthardti* n. sp.**

(Figs 1–3)

Type material. Holotype (male): Yemen, Al Mukalla [14°33'N 49°8'E], light trap, 6.2003, A. VAN HARTEN & M. HUBAISHAN leg. Holotype provided with label: „HOLOTYPE *Anthrenus (Anthrenops) geisthardti* sp. n. J. Háva & A. Herrmann det. 2005“. [red label, printed]. Holotype AHEC, later to be deposited in BGZM.



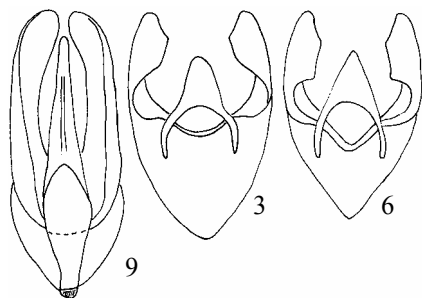
Figs 2, 5, 8: male antenna of: *Anthrenus (Anthrenops) geisthardti* n. sp. (2); *A. (Anthrenops) cervenkai* n. sp. (5); *A. (Anthrenops) picturatus arabicus* n. ssp. (8).

Description: Male. Measurements (mm): TL 2.0 EW 1.5; body oval, brownish-black. Dorsal surface covered by white and yellow scales (Fig. 1). Individual scales mostly widest about middle with sides converging to strongly rounding apex. Head covered by white scales. Labial palpi brown, lacinia brown. Antennae with 9 segments, brown, antennal club with 3 segments, brown, compact (Fig. 2). Eyes with median margin entire. Median ocellus of front presented like in all species of this genus. Pronotum covered by yellow scales on disc, white scales laterally. Scutellum triangular, without scales. Each elytron covered by yellow scales, with four transverse bands and apical spot with white scales. Ventral surfaces covered by white scales, particularly abdominal sternites not bearing small spots at antero-lateral margins. Sternites I–V covered by white scales only. Prosternum covered by white scales only. Metasternum covered by white scales only, without a large patch at lateral margins. Legs brown with white scales and white setae. Male genitalia see Fig. 3.

Differential diagnosis: The new species belongs to the subgenus *Anthrenops* Reitter, 1881 according to the number of antennal segments.

From the Arabian peninsula the following species are known: *A. (A.) coloratus* Reitter, 1881, *A. (A.) longus* Arrow, 1915 and *A. (A.) subclaviger* Reitter, 1881. The new species differs from them in the structure of the antennae and male genitalia.

Name derivation. Patronymic, dedicated to the German coleopterist Dr. Michael GEISTHARDT, Wiesbaden.



Figs 3, 6, 9: Aedeagus of: *Anthrenus (Anthrenops) geisthardti* **n. sp.** (3); *A. (Anthrenops) cervenkai* **n. sp.** (6); *A. (Anthrenops) picturatus arabicus* **n. ssp.** (9).

***Anthrenus (Anthrenops) cervenkai* n. sp.**

(Figs 4–6)

Type material. Holotype (male): Yemen, Mayfa'ah [17°02'N 43°38'E], light trap, 26.–28.5.1998, A. VAN HARTEN & M. AFIF leg. Paratypes Oman: Dhofar prov., Wadi Nashib, Nashib env. (17°02'N 54°19'E), 50–250m, 25–26.9.2003 (1 female), S. JÁKL lgt.; Oman: Dhofar prov., Taqah – Nashib rd. (17°02'N 54°23'E), ca 150–500m, 26.–28.9.2003 (2 females), R. ČERVENKA lgt.; Oman: Dhofar prov., Taqah env. (17°02'N 54°23'E), 0–100 m, 17.–23.9.2003 (1 female), R. ČERVENKA lgt. Holotype and paratypes specimens provided with labels: „HOLOTYPE [or PARATYPE respectively] *Anthrenus (Anthrenops) cervenkai* sp. n. J. Háva & A. Herrmann det. 2005“. [red label, printed]. Holotype AHEC, later to be deposited in BGZM, paratypes in JHAC.

Description: Male. Measurements (mm): TL 1.7 EW 1.2; body oval, blackish-brown. Dorsal surface covered by intermixed light brown and white scales (Fig. 4). Individual scales widest about middle with sides converging to strongly rounded apex. Head covered by white scales. Labial palpi brown, lacinia brown. Antennae with 9 segments, brown, antennal club with 3 segments, brown, compact (Fig. 5). Eyes with median margin entire. Median ocellus on front presented. Pronotum covered by intermixed white and light brown scales discally, white laterally. Scutel-

lum triangular, without scales. Each elytron with intermixed white and light brown scales (undefined white transverse bands). Ventral surface covered by white scales, particular abdominal sternites not bearing small spots at antero-lateral margins. Sternites I–V covered by white scales only. Prosternum covered by white scales only. Metasternum covered by white scales only, without a large patch at lateral margins. Legs brown with white scales and white setae. Male genitalia see Fig. 6.

Female. External characters corresponding to those in male except for the form of antennal club (terminal antennal segment small as terminal segment of male). Dorsal surfaces variable intermixed with light brown scales. Measurements (mm): TL 2.0–2.4 EW 1.3–1.6.

Differential diagnosis: The new species looks similar to the precedent described species, but differs from it in the structure of the antennae and male genitalia.

Name derivation. Patronymic, dedicated to the Czech coleopterist and collector of the new species Radek ČERVENKA, Prague.

***Anthrenus (Anthrenus) picturatus arabicus* n. ssp.**

(Figs 7–9)

Type material. Holotype (male): Yemen, Sana'a, ii.1999, A. VAN HARTEN leg.. Paratypes (16 ex.): the same data as holotype. Holotype and paratypes specimens provided with label: „HOLOTYPE [or PARATYPE respectively] *Anthrenus (Anthrenus) picturatus arabicus* n. ssp. J. Háva & A. Herrmann det. 2005“. [red label, printed]. Holotype AHEC, later to be deposited in BGZM, paratypes in AHEC and JHAC.

Description: Holotype. Measurements (mm): TL 2.7 EW 1.7; body oval, brown-black. Dorsal surface covered by black, white and pale-yellow scales (Fig. 7). Individual scales generally widest at about proximal 1/3 or middle with margins tapering gradually toward apex. Head covered by pale-yellow and black scales. Labial palpi dark-brown to black, lacinia dark-brown. Antennae with 11 segments, dark-brown to black, antennal club with 3 segments, brown-black, compact (Fig. 8). Eye with median margin broadly and deeply emarginate at about anterior 1/3. Pronotum covered by black and pale yellow scales discally, white laterally. Scutellum triangular, without scales. Each elytron with three transverse bands or patches with intermixed pale-yellow and white scales and one small spot near scutellum; suture covered by white scales; other parts covered by black scales. Ventral surface covered with white and

black scales, particular abdominal sternites bearing small spots of black scales at antero-lateral margins. Sternites I–IV with two small black spots in the middle. Prosternum covered by only white scales. Metasternum covered by white scales, without a large patch at lateral margins. Legs brown with white scales and white setae. Male genitalia see Fig. 9.



Fig. 7: *A. (Anthrenus) picturatus arabicus* **n. ssp.** habitus, dorsal aspect.

Paratypes: Measurements (mm): TL 2.7-3.6; EW 1.7-2.4; females look similar to males, showing no external difference in morphology. The paratypes are variable in the colour of patterns on their elytra.

Differential diagnosis: The new subspecies differs from all other known subspecies in the structure of the male genitalia and in different colour on the dorsal surface.

Name derivation: Derived from the region Arabia, where the holotype was collected.

***Anthrenus (Anthrenus) flavipes flavipes* LeConte, 1854**

Material examined: Yemen: Lahj, Malaise trap, 8.2000, leg. A. VAN HARTEN & A. SALLAM (1 female), AHEC.

Distribution. Cosmopolitan species (HÁVA 2003), known in the Arabian Peninsula from Saudi Arabia and Oman HÁVA (2005); new for Yemen.

Key of the *Anthrenops* species

- 1(2) body form parallel, small *longus* Arrow, 1915
- 2(1) body form oval 3
- 3(4) individual scales widest at about proximal 1/3, parallelsided or slightly tapering toward apex *subclaviger* Reitter, 1881
- 4(3) individual scales mostly widest about middle with sides converging to strongly rounding apex
 - aedeagus (Fig. 3) *geisthardti* **n. sp.**
 - aedeagus (Fig. 6) *cervenkai* **n. sp.**
 - aedeagus (Fig. 9) *coloratus* Reitter, 1881

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Veranstaltungshinweis

A first Symposium, intitled “Symposium of the Hermit beetle”, took place in Sweden in August 1999. Three years later, the “2nd Symposium and Workshop on the Conservation of Saproxylic Beetles in Ancient Trees” was held in Great Britain in June 2002. During the “3rd Symposium and Workshop on the Conservation of Saproxylic Beetles”, that took place in Latvia in July 2004, we suggested that the fourth conference could be held in France.

We suggest you that the “4th Symposium and Workshop on the Conservation of Saproxylic Beetles” will take place in France, near Le Mans, from the 27th to the 29th of June 2006.

Two days, the 27th and the 28th of June, will be dedicated to the plenary sessions and the posters presentations. The third day of the symposium will be dedicated to a field trip, in the agricultural landscapes (hedgerows, chestnut orchards in witch occur *Osmoderma eremita*, *Gnorimus variabilis*, *Liocola lugubris*, *Cerambyx cerdo*, *Lucanus cervus*...).

Your proposals of papers are welcome.

A first programme and information for the registration is available at:
www.saproxylic-beetles.com/

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