

## Two species of the genus *Anthrenus* from Iran (Coleoptera: Dermestidae: Anthrenini)

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### Abstract

*Anthrenus* (*Anthrenodes*) *jelineki* sp. n. from Iran is described, illustrated and compared with related species. The new species differs by the form of antennae and male genitalia and setiform scales on dorsal and ventral surfaces. *Anthrenus* (*Anthrenodes*) *jordanicus* Pic, 1934 is lectotype designated and newly recorded from Iran.

### Zusammenfassung

Eine neue Art *Anthrenus* (*Anthrenodes*) *jelineki* sp. n. wird aus dem Iran beschrieben. Die neue Art unterscheidet sich durch die Form der Antennen und die männlichen Genitalien und die Anordnung der Setae auf der Ober- und Unterseite. Für *Anthrenus* (*Anthrenodes*) *jordanicus* Pic, 1934 wird der Lectotypus festgelegt und neue Funde aus dem Iran mitgeteilt.

**Key words:** Coleoptera, Dermestidae, *Anthrenus*, taxonomy, new species, lectotype designation, new records, Iran

### Introduction

The genus *Anthrenus* Geoffroy, 1762 contains about 220 species and subspecies worldwide (HÁVA 2003, 2007, 2009). The new species belongs to the subgenus *Anthrenodes* Chobaut, 1898 and is habitually similar to *Anthrenus* *A. (A.) amoenulus* Reitter, 1896, *Anthrenus* *A. (A.) ineptus* Háva et Tezcan, 2004 and *Anthrenus* *A. (A.) jordanicus* Pic, 1934. Among the material from the subgenus *Anthrenodes* Chobaut, 1898 of the genus *Anthrenus*, collected recently by entomologists in Iran, a new species has been discovered and one species newly recorded.

### Material and Methods

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

pronotal length (PL) – maximum length measured from anterior margin to posterior margin

pronotal width (PW) – maximum linear transverse distance

elytral length (EL) – linear distance from shoulder to apex of elytron

elytral width (EW) – maximum linear transverse distance.

The lectotype of *Anthrenus jordanicus* is designated in order to stabilize the nomenclature in this genus according to Article 74.7.3. of the Code (ICZN 1999).

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

AHEC – private collection, Andreas Herrmann, Stade, Germany;

BMNH – British Museum Natural History, London, United Kingdom;

DFCG – private collection, Dirk Frenzel, Sonneberg, Germany;

JHAC – author's collection;

NMPC – National Museum, Department of Entomology, Prague, Czech Republic;

NME – Naturkundemuseum Erfurt, Germany;

SMNS – Staatliches Museum für Naturkunde, Stuttgart, Germany;

ZMTI – Zoological Museum, Teheran, Iran.

Specimens of the presently described species are provided with a red, printed label with text as follows: „HOLOTYPE [or PARATYPE, respectively] *Anthrenus* (*Anthrenodes*) *jelineki* sp. n. Jirí Háva det. 2008”.

### Description

#### *Anthrenus* (*Anthrenodes*) *jelineki* sp. n. (Figs 1–4)

*Anthrenus jelineki* Kalik (unpublished name): Schawaller, 1994:27 (nomen nudum).

**Type material.** Holotype (male): „Iran, Golhak, 1400 m bei Teheran, vi–viii.1961, leg. J. Klapperich“, (SMNS). Paratypes: (36 spec.): the same data as holotype (32 SMNS, 4 JHAC); (2 males): „S Iran, N Masirí, 1650 m, 12.6.1973“, Loc. No. 236, Exp. Nat. Mus. Praha“, (1 NMPC, 1 JHAC); (10 spec.): „N-Iran, Prov.

Tehran, Tehran City, Zentrum, 30.v.2008, D. Frenzel leg.“ (4 NME, 2 DFCG, 2 ZMTI, 2 JHAC).

**Description.** Male. Body convex, elongate, covered by white, yellow and brown setiform scales; body measurements (mm): TL 1. 80 PL 0.52 PW 1.15 EL 1.49 EW 1.27. Head with big convex eyes with yellowish-white microsetae. Frons with median ocellus, covered with intermixed yellow and white setiform scales. Antennae light brown, 10-segmented, antennal club 3-segmented (Fig. 2), covered densely with white pubescence. Antenna occupies whole cavity of antennal fossa. Antennal fossa completely open along lateral margin of the pronotum. Dorsal and ventral surface of integument dark brown, slightly punctuated, covered with setiform scales. Individual scales are very long and setiform. Pronotum covered with mixed setiform scales, dark brown scales in the central part, white and yellow mixed scales on the angles and lateral parts. Elytra covered with white, brown and yellowish scales. Each elytron with four transverse fasciae covered by intermixed white and yellow setiform scales, other parts with brown setiform scales (Fig. 1). Ventral surface with only white setiform

scales. All abdominal visible sternites covered only by the setiform, white scales. 9<sup>th</sup> abdominal sternite as in (Fig. 4). Legs brown, covered with white scales and short white setation on dorsal surface, tibiae without spines along shaft. Tarsus with two tarsal-claws slightly curved. Male genitalia as in (Fig. 3).

Female externally similar to the male, but terminal antennal segment is small and short.

**Variability.** Body measurements (mm): (TL 1.72–2.31 PL 0.47–0.62 PW 0.95–1.25 EL 1.41–1.85 EW 1.17–1.55). Brown pattern of elytra vary widely.

**Differential diagnosis.** The new species belongs to the subgenus *Anthrenodes* Chobaut, 1898. The subgenus contains 27 species worldwide; only three species belonging to the subgenus are known from Iran: *A. (A.) amoenulus* Reitter, 1896, *A. (A.) ineptus* Háva et Tezcan, 2004 and *A. (A.) jordanicus* Pic, 1934. The new species differs from these three species by the setiform form of scales on dorsal and ventral surfaces, form of male genitalia and antennae. It differs from other known species of the subgenus by the setiform scales on dorsal and ventral surfaces and form of male genitalia.

	<i>Anthrenus amoenulus</i>	<i>Anthrenus ineptus</i>	<i>Anthrenus jordanicus</i>	<i>Anthrenus jelineki</i>
colour of antenna	entirely black or very dark brown	entirely brown	segments I–VII brownish-yellow; segments VIII–X from dark brown to black	entirely brown
scales covering elytra	brown, honey and white	grey	grey or grey with small white patterns	white, brown and yellow
scales covering abdominal sternites	white with yellow or brown lateral spots	grey	grey	white
spines of anterior tibia	lacking	lacking	present	lacking

**Remarks.** Kalík determined this new species as *Anthrenus jelineki* sp. n. Kalík in the year 1986, but this new taxon remained undescribed. Schawaller (1994) cited this undescribed species in the type of Coleoptera in the SMNS. Frenzel’s specimens were knocked from the white flowers of an deciduous tree.

**Name derivation.** Patronymic, the new species is dedicated to my friend Dr. Josef Jelinek (NMPC), a well known specialist in Nitidulidae (Coleoptera).

***Anthrenus (Anthrenodes) jordanicus* Pic, 1934 (Fig. 5)**

*Anthrenus jordanicus* Pic, 1934: 29.  
*Anthrenus uniformis* Kalík (unpublished name): Schawaller, 1994:27 (nomen nudum).  
*Anthrenus (Anthrenus) jordanicus*: Mroczkowski, 1968: 141.  
*Anthrenus (Anthrenodes) jordanicus*: Háva, 2007: 57.

**Type material.** (2 syntypes). Syntype 1 (female): „Palestine, Jordan, 1931, F. S. Bodenheimer“\„Pres. By Imp. Inst. Ent. B. M. 1935–40“\„AR III, 32“ [handwritten label] \„*Anthrenus jordanicus* mihi“ [handwritten label]. Syntype 2 (female): „Palestine, Jerusalem, xi.1929, F. S. Bodenheimer“\„Pres. By Imp. Inst. Ent. B. M. 1935–40“\„var.“ [handwritten label] \„*Anthrenus jordanicus* Pic, det.Pic“ [handwritten label]. Specimens of the species here designated are provided with a red written label with text as follows: „Lectotype [or Paralectotype, respectively], *Anthrenus jordanicus* Pic, J. Háva design. 2007“. Type material deposited in (BMNH).

**Other material studied.** Jordan mer. occ., 280 m, 20 km W of At Tafila, 30°52,906’N 35°26,015’E, 31.v.–1.



Figs 1-5. *Anthrenus (Anthrenodes) jelineki* sp. n.: 1 - habitus dorsal aspect; 2 - male antenna; 3 - aedeagus; abdominal sternites 4 - 9; *Anthrenus (Anthrenodes) jordanicus* Pic, 1934: 5 - anterior tibia.

vi.2007, J. Bezděk lgt., 1 spec. (JHAC); „SW Iran, Kazerun, 5-6.7.1970“\„Loc. No.45, Exp. Nat. Mus. Praha“, 2 spec., (NMPC, JHAC); „W Iran, Marg-e Malek, 3200 m, 1.7.1970“\„Loc. No. 39, Exp. Nat.

Mus. Praha“, 1 spec., (NMPC); „SW Iran, Shiraz (north), 4.7.1970“\„Loc. No.42, Exp. Nat. Mus. Praha“, 24 spec., (20 NMPC, 4 JHAC); „SW Iran, Saadatabad, 70 km N Shiraz, 4.7.1970“\„Loc. No.42, Exp. Nat. Mus.

Praha“, 2 spec., (NMPC); „S Iran, Isin, 26.5.1973“ \, „Loc. No.213, Exp. Nat. Mus. Praha“, 22 spec., (19 NMPC, 3 JHAC); „Iran, Larestan, 27.ix.2006, Sara Mohamadzadeh leg.“, 6 spec., (1 JHAC, 5 AHEC); „S Iran, Mian Jangal, 30.5.–5.6.1973“ \, „Loc. No.223, Exp. Nat. Mus. Praha“, \, „*Anthrenus uniformis* sp. n., Kalik det. 1986“ [red printed label] \, „Holotype or Allotype or Paratype“ [red printed label], 188 spec., (180 NMPC, 3 SMNS, 5 JHAC).

**Variability.** The studied specimens is variable in colour of scales on elytra. Type specimens have elytra covered with grey scales with very small white circular spots, but the elytra is unicoloroured in large Iranian series, with only grey scales. Male aedeagus slightly variable.

**Remarks.** V. Kalik studied the two syntype specimens in the year 1980 and designated it as „Hololectotype“ and „Paralectotype“. This designation is invalid because it was not published. Specimens from Iranian locality No. 223 (NMPC), Kalik determined as *Anthrenus uniformis* sp. n., but did not describe as new species. According to Kalik's notes this species differs from *jordanicus* by unicolorous scales on elytra and numbers of antennal segments (11). These differences are erroneous because the number of antennal segments of both species is identical (10-segments). The colour variability is not valid for description of new taxon in my opinion. Schawaller (1994) cited this undescribed species in the type of Coleoptera in the SMNS however. *Anthrenus (Anthrenodes) jordanicus* Pic, 1934 is very similar to *A. (A.) aegyptiacus* Pic, 1899 and belongs to a specific sub-group.; This subgroup is characterized by spins on anterior tibiae (Fig. 4).

**Distribution.** Species known from Egypt: Sinai, Israel and Jordania, new for Iran.

#### List of *Anthrenus (Anthrenodes)* species known from Iran

*Anthrenus amoenulus* Reitter, 1896

Distribution: „Caspian Lowlands“, „Caucasus“, Iran, Turkey and Turkmenistan.

*Anthrenus ineptus* Háva & Tezcan 2004

*Anthrenus angustus* Kalik (unpublished name): Schawaller, 1994:27 (nomen nudum).

Distribution: Iran, Iraq and Turkey.

*Anthrenus jelineki* sp. n.

*Anthrenus jelineki* Kalik (unpublished name): Schawaller, 1994:27 (nomen nudum).

Distribution: Iran.

*Anthrenus jordanicus* Pic, 1934

*Anthrenus uniformis* Kalik (unpublished name): Schawaller, 1994:27 (nomen nudum).

Distribution: Egypt: Sinai, Iran, Israel and Jordania.

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