

Two new *Phradonoma* species (Coleoptera: Dermestidae) from Iran

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Abstract

Phradonoma muehlei sp. n. and *P. pseudoamoenum* sp. n., from Iran, are described, illustrated and compared with related species. An identification key to Iranian species of "*Phradonoma nobile* species group" is also presented.

Key words: taxonomy, new species, Dermestidae, *Phradonoma*, Iran

چکیده

در این مقاله، گونه‌های *Phradonoma muehlei* sp. n. و *P. pseudoamoenum* sp. n. از سخت‌بال‌پوشان خانواده‌ی Dermestidae از ایران برای دنیای علم توصیف شده و با گونه‌های نزدیک به آنها مورد مقایسه قرار گرفته است. همچنین، کلید شناسایی گونه‌های ایرانی متعلق به *Phradonoma nobile* species group ارائه شده است. واژگان کلیدی: تاکسونومی، گونه‌های جدید، Dermestidae، *Phradonoma*، ایران

Introduction

The family Dermestidae is one of the commonly known beetle families and currently contains about 1300 species and subspecies worldwide (Háva, 2003). Two new species of *Phradonoma* Jacquelin du Val from a series of Dermestidae collected by H. Mühle during his travels to Iran in 2004 are described and illustrated here.

The present study follows a preceding paper about Iran's *Phradonoma* species by Háva (2006).

Materials and methods

The type material was deposited in the following collections:

AHEC – coll. Andreas Herrmann, Stade, Germany

HMCG – coll. Hans Mühle, München, Germany

JHAC – coll. Private Entomological Laboratory and Collection, Jiří Háva, Prague-west, Czech Republic

Body sizes were measured as follows:

Length – linear distance from the anterior margin of pronotum to apex of elytra.

Width – maximal linear transverse distance.

Specimens of the presently described species are provided with a red, printed label with text as follows: "HOLOTYPE [or PARATYPE, respectively] *name of taxon* sp. n. Andreas Herrmann & Jiří Háva, det. 2007".

Separate labels are indicated by slashes (/). Remarks of the author are found in square brackets [].

***Phradonoma muehlei* sp. n.**

(Figs 1-5)

Type material – Holotype (male): "Iran, Yazd, 918, 5-10 km NW Deh Bala, 10.vii.2004, 2600-2900 m, H. Mühle leg.", (AHEC). Paratypes (58 exs.): the same data as holotype, (AHEC, HMCG, JHAC).

Description of holotype. Male – Body black, broad oval, (fig. 1). Body length 2.6 mm, body width 1.7 mm. Head coarsely punctate with erected brown hairs, maxillary palp darkish brown, eyes large with microsetae, antennae with 11 antennomeres, last 3 segments form a club; antennae yellow with first antennomere brown and dark brown to black club (fig. 2). Forehead with ocellus. Pronotum entirely black, finely punctate, with strong dark and slightly erected hairs, lateral margins not visible from above. Scutellum small, black and triangular, with single brown hairs. Elytra black, posteriorly to apex feebly brightened to dark-brown, sparsely and coarsely punctate; also sparsely covered with slightly erected dark hairs, carry three fasciae and an apical spot of yellow-brownish hairs. The first one located near the shoulder, the second one slightly behind the middle and the third one on the posterior part of each elytron. Furthermore, a small apical spot is indicated by a very few bright hairs. Ventral side of the body coarsely punctate and sparsely covered with brown hairs, sternites with dark pubescens. Tibia reddish brown, femur and tarsus dark brown. Male genitalia as in fig. 4.

Female – Body is bigger on average. External characters same to those in male except the antennae. In female specimens, the club of the antenna is slightly narrower in relation to its shaft; also the shaft itself is shorter and broader than in males (fig. 3). Sclerites in bursa copulatrix as in fig. 5.

Variability – The fasciae on the elytrae are very variable, they vary from very narrow to very broad or the fasciae are divided into small patches. The apical spot could be extended, small or completely missing. In some cases, the pronotum shows lateral and apical spots of bright hairs. Body length 2.0 - 3.2 mm, body width 1.2 - 2.1 mm.

Etymology – Patronymic, this new species is dedicated to the German coleopterist Hans Mühle, a specialist on Buprestidae.

Differential diagnosis – *Phradonoma muehlei* **sp. n.** is habitually very similar to *P. amoenum* (Reitter); but differs by the shape of antennae, male genitalia and female sclerites in bursa copulatrix.

***Phradonoma pseudoamoenum* sp. n.**

(Figs 6-10)

Type material – Holotype (male): "Iran, Ostan-e Markazi, 928, 10 km SE Tafresh, 2400-2600 m, 16.VII.2004, H. Mühle leg.", (AHEC). Paratypes (15 exs.): the same data as holotype, (AHEC, HMCG, JHAC).

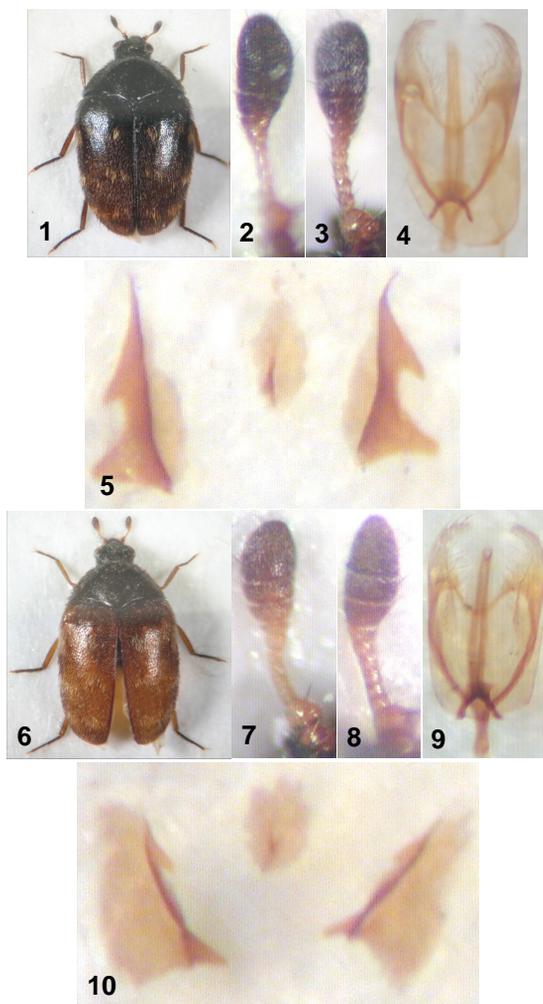
Description of holotype. Male – Body black with brown elytrae, prolate oval, (fig. 6). Body length 2.4 mm, body width 1.6 mm. Head coarsely punctate with erected brown hairs, maxillary palp darkish brown, eyes large with microsetae, antennae with 11 antennomeres, club 3-segmented, brown apically, all other segments yellow (fig. 7). Forehead with ocellus. Pronotum entirely black, finely punctate, entirely covered with quite long brown and slightly erected hairs, lateral margins are not visible from above. Scutellum small, dark brown and triangular, with single brown hairs. Elytrae brown, sparsely and coarsely punctate; also sparsely covered by slightly erected dark hairs and carry three fasciae of whitish or yellow-brownish hairs. The first one located near the shoulder, the second one slightly behind the middle and the third one in the posterior part of each elytron. Ventral side of body coarsely punctate and sparsely covered with brown hairs, sternites with greyish brown pubescens. The legs entirely brownish yellow, femur not darker than tibia. Male genitalia as in fig. 9.

Female – Body bigger on average. External characters same to those in male except the antenna. In female specimens, the club of the antenna is slightly narrower in relation to its shaft; also the shaft itself is shorter and broader than in males (fig. 8). Sclerites in bursa copulatrix (fig. 10)

Variability – The fasciae on the elytra are variable, they vary from very narrow to very broad or the fasciae are divided into small patches. Elytra often with an apical spot of bright hairs which could be extended, small or completely missing. Body length 2.0 - 3.0 mm, body width 0.8 - 1.8 mm.

Etymology – The name of this new species refers to its similarity with *P. amoenum*.

Differential diagnosis – *Phradonoma pseudoamoenum* **sp. n.** is habitually very similar to *P. amoenum*, but differs by the form of antennae, male genitalia and female sclerites in bursa copulatrix.



Figures 1-10. *Phradonoma muehlei* **sp. n.**: 1. habitus, dorsal view; 2. male antenna; 3. female antenna; 4. aedeagus; 5. sclerites in bursa copulatrix. *Phradonoma pseudoamoenum* **sp. n.**: 6. habitus, dorsal view; 7. male antenna; 8. female antenna; 9. aedeagus; 10. sclerites in bursa copulatrix.

Key to Iranian species of “*Phradonoma nobile* species group”

1. Elytra with reddish transverse bands and spots **3**
 - Elytra without reddish transverse bands and spots **2**
2. Antennal club black (figs 2-3); elytra black with apical part somewhat brightened to dark-brown; aedeagus as in fig. 4; sclerites in bursa copulatrix (fig. 5)..... ***P. muehlei* sp. n.**
 - Antennal club dark brown (figs 7-8); elytra brown; aedeagus as in fig. 9); sclerites in bursa copulatrix (fig. 10) ***P. pseudoamoenum* sp. n.**
3. Terminal antennal segment triangular; elytra brownish-black except for three (sometimes only two) reddish and transverse bands ***P. nobile* (Reitter)**
 - Terminal antennal segment oval; elytra black except for three reddish transverse bands and apex ***P. jelineki* (Háva)**

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References

- Háva, J.** (2003) World catalogue of the Dermestidae (Coleoptera). *Studie a Zprávy Oblastního Muzea Praha-východ v Brandýse nad Labem a Staré Boleslavi*, Supplementum 1, 1-196.
- Háva, J.** (2006) Notes on the genus *Phradonoma* from the Middle East with description of nine new species (Coleoptera: Dermestidae: Megatominae). *Genus* 17, 79-94.

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