

Reinstatement of *Orbeola* Mulsant & Rey, 1868 as a valid genus (Coleoptera: Dermestidae: Megatominae)

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Abstract. The genus *Orbeola* Mulsant & Rey, 1868 from the Palaearctic and Afrotropical Regions is reinstated from its synonymy with *Phradonoma* Jacquelin du Val, 1859. The following combinations are newly proposed: *Orbeola hirsutulum* (Reiche in Mulsant & Rey, 1868) comb. nov. (from *Phradonoma*) as a type species; *Orbeola endroedyi* (Háva, 2003) comb. nov. (from *Paratrogoderma*); *Orbeola haemorrhoum* (Gerstäcker, 1871) comb. nov. (from *Paratrogoderma*); *Orbeola reunionica* (Háva & Poussereau, 2019) comb. nov. (from *Paratrogoderma*). The species *Orbeola hirsutulum* (Reiche in Mulsant & Rey, 1868) is recorded from Oman for the first time.

INTRODUCTION

Mulsant & Rey (1868) described the subgenus *Orbeola* in the genus *Trogoderma* with type species *Trogoderma (Orbeola) hirsutulum* Reiche in Mulsant & Rey, 1868. Dalla Torre (1911) mentioned the species only as *Trogoderma* without subgenus. Winkler (1926) and Mroczkowski (1968) mentioned the *Orbeola* as subgenus in genus *Phradonoma* Jacquelin du Val, 1859. Háva (2003a, 2007) mentioned the *Orbeola* as synonym for *Phradonoma*. In the present article is *Orbeola* reinstated as a valid, independent genus.

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.
elytral width (EW) - maximum linear transverse distance.

The material studied is deposited in the following collections:

BMNH Natural History Museum, London, United Kingdom;

HNHM Hungarian Natural History Museum Budapest, Hungary;

JHAC Jiří Háva, Private Entomological Laboratory & Collection, Únětice u Prahy, Prague-West, Czech Republic;

MNHN Museum National d'histoire Naturelle, Paris, France.

RESULTS

Genus *Orbeola* Mulsant & Rey, 1868 stat. nov.

Trogoderma subgenus *Orbeola* Mulsant & Rey, 1868: 134.

Type species: *Trogoderma (Orbeola) hirsutulum* Reiche in Mulsant & Rey, 1868: 134.

Original description. „Massue des antennes orbiculaire, comprimée, composée d'articles serrés (S.-G. *Orbeola*)“.

Trogoderma hirsutula (Reiche): „Ovale; d'un noir luisant; hérissé en dessus d'un duvet noir. Antennes ordinairement d'une flave roux, quelquefois nébuleuses; à massue orbiculaire, comprimée. Pieds ordinairement d'un flave roux. Cuisses parfois obscures.“

„Obs. Les ♂ paraissent avoir les antennes et les pieds d'un roux pâle ou flavescent ou d'un flave roux : les ♀ ont parfois antennes nébuleuses et les cuisses obscures ou noirâtres.“

Short redescription. Male. Small and oval (Fig. 1). Body measurements (in mm): TL 1.7-2.0, EW 1.1-1.3. Black, brown or brown-reddish on dorsal surfaces. Eyes small, not overlapping lateral margin of head in dorsal view. Ocellus on frons present. Antennae (Fig. 2) composed of 10 antennomeres, antennal club of 3 antennomeres.

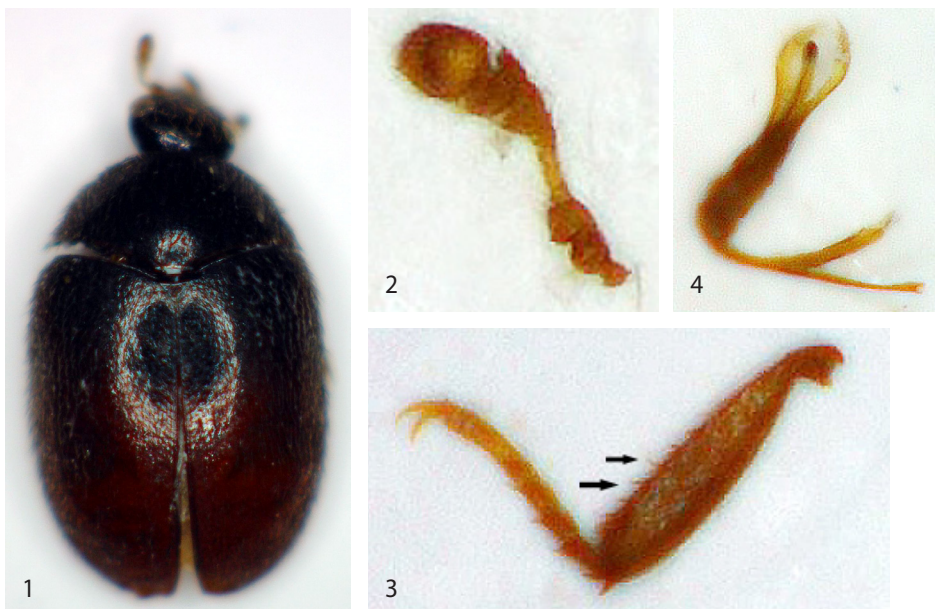
Legs with spines along shaft on tibiae (Fig. 3). Abdomen with 5 visible ventrites. First visible abdominal ventrite with distinct oblique discal striae. Pygidium black with long yellowish-light brown setation. Male genitalia: parameres and median lobe very long and narrow (Fig. 4).

Female. Externally similar to male, terminal antennomere is small as in male.

Differential diagnosis. According to 10-antennomered antennae and anterior tibiae with spines along shaft *Orbeola* is newly stated as valid genus and removed from the synonymy with *Phradonoma*. The genus *Orbeola* differs from similar genera by the characters mentioned in the following key:

- 1(6) anterior tibiae with spines along shaft
- 2(5) antennae with 11 antennomeres
- 3(4) antennae longly pectiniform; tibiae with long broad lateral carina *Volvicornis* Háva & Kalík, 2004
- 4(3) antennae not pectiniform; tibiae without lateral carina *Phradonoma* Jacquelin du Val, 1859
- 5(2) antennae with 10 antennomeres *Orbeola* Mulsant & Rey, 1868
- 6(1) anterior tibiae without spines along shaft, antennae with 10 antennomeres *Paratrogoderma* Scott, 1926

Distribution. The genus is known from Middle East and Afrotropical Region.



Figs. 1-4. *Orbeola hirsutulum* (Reiche in Mulsant & Rey, 1868): 1- habitus, dorsal aspect; 2- antenna; 3- anterior tibia (spines); 4- male genitalia.

SPECIES BELONGING TO GENUS *ORBEOLA*

***Orbeola hirsutulum* (Reiche in Mulsant & Rey, 1868) comb. nov.**

Trogoderma (*Orbeola*) *hirsutulum* Reiche in Mulsant & Rey, 1868: 134.

Phradonoma hirsutulum: Winkler, 1926: 679.

Material examined: 10 specimens from Israel, Syria, United Arab Emirates and Yemen, (JHAC); Oman mer., Al-Muohsavi, 16°53.00', 53°47.42', 9.3.2019, Orszulik lgt., 1 ♀, (JHAC). New to Oman.

Distribution: Israel, Saudi Arabia, Syria, Turkmenistan, United Arab Emirates, Yemen, Oman.

***Orbeola endroedyi* (Háva, 2003) comb. nov.**

Phradonoma endroedyi Háva, 2003b: 33.

Paratrogoderma endroedyi: Háva & Poussereau, 2019: 56.

Material examined: Holotype, (HNHM) from Ghana, 1 spec. from Senegal, (BMNH), 1 spec., from Burkina Faso, (JHAC).

Distribution: Burkina Faso, Ghana, Senegal.

***Orbeola haemorrhoum* (Gerstäcker, 1871) comb. nov.**

Trogoderma haemorrhoum Gerstäcker, 1871: 45.

Phradonoma haemorrhoum: Kalík, 1965: 219.

Paratrogoderma haemorrhoum: Háva, 2008: 45.

Material examined: 25 specimens from Kenya and Eritrea, (JHAC).

Distribution: Congo, Kenya, Eritrea, Tanzania: Zanzibar, Uganda.

***Orbeola reunionica* (Háva & Poussereau, 2019) comb. nov.**

Paratrogoderma reunionica Háva & Poussereau, 2019: 56.

Material examined: Holotype, (MNHN) and 1 Paratype, (JHAC) from Reunion.

Distribution: Reunion.

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