

A description of *Orphinus (Orphinus) takedai* sp. nov. from Japan (Coleoptera: Dermestidae: Megatominae: Megatomini)

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Abstract. A new species *Orphinus (Orphinus) takedai* sp. nov., is described, illustrated and compared with all other species of that genus occurring in Japan, a list of them is provided.

INTRODUCTION

The genus *Orphinus* Motschulsky, 1858 consists of 2 subgenera: *Curtorphinus* Pic, 1954 and *Orphinus* (s. str.). It contains roundabout 200 different species, so far only 9 of those are recorded from Japan (Háva 2020, 2021a,b, 2022a,b, 2023a), whereas all species occurring in Japan belong to the subgenus *Orphinus* (s. str.). Recently a new species was collected in that country, and herewith described. It was detected between the unidentified material sent to the first author.

MATERIAL AND METHODS

The specimens were stored for 7 days in a solution of 1% pepsin in hydrochloric acid to free them roughly from protein tissues, thus making the extremities of the body moveable. The abdomen was disconnected from the body and glued upside-down onto the same cardboard plate, just behind the beetle. Before this, the genitals were excluded and then cleaned with a fine needle in a drop of 99% 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 diglycerin (the liquid solution becomes permanently solid after a few minutes). Photos of the body and the abdomen were taken with a digital SLR camera Sony alpha 35, connected with an objective Nikon CF N Plan Achromat 4x 160/- and extension rings; for the photos of the genitalia and antenna a Bresser Junior USB-Handmikroskop at 200x magnification was used. Because of the low depth of field all photos were taken as layered images, afterwards combined on a PC by using the stacking program CombineZP. Nomenclature and systematics in this paper follow Háva (2023b).

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.

Specimens of the species described here are provided with a red, printed label with text as follows: „HOLOTYPE [or PARATYPE] *Orphinus (Orphinus) takedai* sp. nov., A. Herrmann & J. Háva det. 2023”.

TAXONOMY

Orphinus (Orphinus) takedai sp. nov. (Figs. 1-4)

Type material. Holotype (♂): Japan, Okayama-ken, Maniwa-shi, Hiruzen, [FIT] 8-21.VII.2012, Akihiko Watanabe leg.; 4 paratypes: 1 (♂) Japan, Okayama-ken, Takahasi-shi, Nakaicho, Nishigata, 4.VI.2022, Masaki Takeda leg.; 1 (♀) Japan, Okayama-ken, Takahasi-shi, Nakaicho, Nishigata, 20.VI.2021, Hiroki Takeda leg.; 1 (♂) Japan, Hyogo Pref., Sanda City, Oiso, 28.VI.2008, T.Yoshida leg.; 1 (♀) Japan, Hokkaido Pref., Sapporo City, Mt. Teine-san, 21.-22.VII.2017, T.Yoshida leg. [Holotype and paratype specimens are deposited in the collection of the first author].

Remark: the holotype misses the tarsi of the right middle leg and also of both front legs, one male paratype misses the whole front part of its body (pronotum and head) completely.

Description. Male body measurements of the holotype (mm): TL 2.5, EW 1.6; color of the body shiny black to deep brown, longish oval, elytral and pronotal surface covered with thin brown setae, the setae scales are slightly erected, the cuticle is clearly visible between them; eyes big with hardly visible microsetae. Ocellus distinctly present on frons. Pronotum broadest at its hind edges, narrowed to the front, middle of the hind margin proceeded towards the scutellum, lateral margins not visible from above. Scutellum small, nearly triangular; elytra as well as head and pronotum distinctly punctated. Antennae consist of 11 antennomeres; antennal shaft light brown with a brown basal segment; antennal club 3-segmented, blackened towards its end, its final segment completely dark and as long as the whole shaft (Fig. 2). Abdominal ventrites I-V with similar punctuation and setation as in the elytra (Fig. 4). Legs brown, with a row of light brown spines at their lateral edges. Aedeagus as in Fig. 3.

Sexual dimorphism. Female habitually similar to male, but last antennal segment much shorter, only as long as the two preceding segments combined.

Variation. Body size TL 2.3-3.1 mm.

Differential diagnosis. Because of the morphological characters the new species belongs to the subgenus *Orphinus* Motschulsky, 1858. It differs from all other *Orphinus* known from Japan by the combination of entirely black elytra with an elongated last segment of the

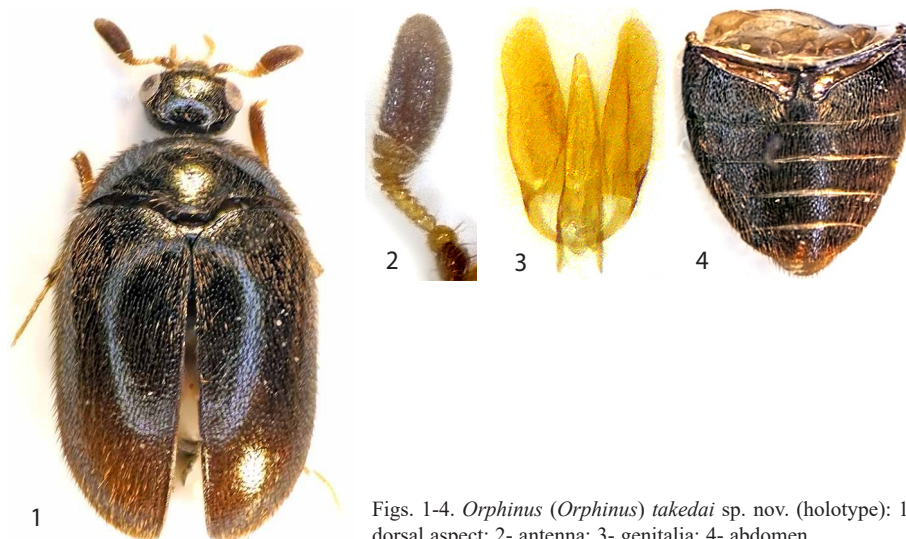
antenna (all other black species have a circular antenna club).

Etymology. The species name is dedicated to the entomologist Hiroki Takeda from Japan, the collector of a specimen belonging to the type series.

Distribution. So far known only from Japan.

LIST OF JAPANESE *ORPHINUS* SPECIES

- Orphinus (Orphinus) aethiops* Arrow, 1915
Orphinus (Orphinus) bipunctatus (Matsumura & Yokoyama, 1928)
Orphinus (Orphinus) fasciatus (Matsumura & Yokoyama, 1928)
Orphinus (Orphinus) fulvipes (Guérin-Ménéville, 1838)
Orphinus (Orphinus) japonicus Arrow, 1915
Orphinus (Orphinus) kamezawai Kitano & Háva, 2018
Orphinus (Orphinus) motykai Háva, 2020
Orphinus (Orphinus) okinawanus Háva, 2006
Orphinus (Orphinus) quadrimaculatus (Matsumura & Yokoyama, 1928)
Orphinus (Orphinus) takedai sp. nov.



Figs. 1-4. *Orphinus (Orphinus) takedai* sp. nov. (holotype): 1- habitus, dorsal aspect; 2- antenna; 3- genitalia; 4- abdomen.

REFERENCES

- HÁVA J. 2020: Study of the genus *Orphinus* Motschulsky, 1858. Part 1 - descriptions of six new species and neotype designation from the Afrotropical Region (Coleoptera: Dermestidae: Megatominae). *Folia Heyrovskyana, Series A* 28(2): 8-17.
- HÁVA J. 2021a: Study of the genus *Orphinus* Motschulsky, 1858. Part 2 - species from the Palaearctic Region (Coleoptera: Dermestidae: Megatominae). *Studies and Reports, Taxonomical Series* 17(1): 13-24.

- HÁVA J. 2021b: Study of the genus *Orphinus* Motschulsky, 1858. Part 3 - species from the Australian Region (Coleoptera: Dermestidae: Megatominae). *Folia Heyrovskyana, Series A* 28(2): 26-30.
- HÁVA J. 2022a: Study of the genus *Orphinus* Motschulsky, 1858. Part 4 - species from the Oriental Region (Coleoptera: Dermestidae: Megatominae). *Folia Heyrovskyana, Series A* 29(1): 13-61.
- HÁVA J. 2022b: Study of the genus *Orphinus* Motschulsky, 1858. Part 5 - descriptions of new species and two new synonymy (Coleoptera: Dermestidae: Megatominae). *Folia Heyrovskyana, Series A* 29(2): 25-33.
- HÁVA J. 2023a: Study of the genus *Orphinus* Motschulsky, 1858. Part 6 - description of a new species from Vietnam with new nomenclatural acts (Coleoptera: Dermestidae: Megatominae). *Folia Heyrovskyana, Series A* 31(1): 18-20.
- HÁVA J. 2023b: *Dermestidae World (Coleoptera)*. - World Wide Web electronic publication (open in 2004): <http://www.dermestidae.wz.cz> (version 2018, update April 2023)

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