

ARTIGO / ARTÍCULO / ARTICLE

Contribution to the knowledge of genus *Orphinus* Motschulsky, 1858 from India (Coleoptera: Dermestidae: Megatominae).

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Abstract: The following new species belonging to the nominotypical subgenus *Orphinus* (Coleoptera: Dermestidae: Megatominae) from India are described, illustrated and compared with related species: *Orphinus* (*Orphinus*) *crassus* sp. nov. (Tamil Nadu), *Orphinus* (*Orphinus*) *cardamom* sp. nov. (Kerala), *Orphinus* (*Orphinus*) *vattiari* sp. nov. (Kerala). The species *Orphinus horni* Pic, 1927 syn. nov., is newly synonymized with *Orphinus minor* Arrow, 1915. The species *Orphinus* (*Faloorphinus*) *yeti* Háva, 2008 is newly recorded from Meghalaya. A key to the known species from India is presented.

Key words: Coleoptera, Dermestidae, Megatominae, *Orphinus*, Taxonomy, new species, description, India.

Resumen: Contribución al conocimiento del género *Orphinus* Motschulsky, 1858 en India (Coleoptera: Dermestidae: Megatominae). Se describen las siguientes nuevas especies de India pertenecientes al subgénero nominotípico *Orphinus* (Coleoptera: Dermestidae: Megatominae): *Orphinus* (*Orphinus*) *crassus* sp. nov. (Tamil Nadu), *Orphinus* (*Orphinus*) *cardamom* sp. nov. (Kerala), *Orphinus* (*Orphinus*) *vattiari* sp. nov. (Kerala), y se ilustran y comparan con especies relacionadas. Se sinonimiza la especie *Orphinus horni* Pic, 1927 syn. nov. con *Orphinus minor* Arrow, 1915. La especie *Orphinus* (*Faloorphinus*) *yeti* Háva, 2008 es citada por primera vez de Meghalaya. Se presenta una clave de las especies conocidas de India.

Palabras clave: Coleoptera, Dermestidae, Megatominae, *Orphinus*, Taxonomía, nuevas especies, descripción, India.

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Introduction

The genus *Orphinus* Motschulsky, 1858 (Coleoptera: Dermestidae: Megatominae) currently includes nearly 100 species worldwide (Háva 2015a, b, c; Herrmann & Háva 2015), while 16 species are known from India (Veer 2011; Háva 2015). A new species was recently published by Háva & Kadej (2016) with key to all known Indian species. The present article deals with three new species collected by Czech entomologists in India.

Material and methods

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.

Holotypes are provided with red, printed labels showing the text: "HOLOTYPE name of species sp. nov. Jiří Háva det. 2016".

The following abbreviations refer to the collections, in which the examined materials are deposited:

JHAC: Jiří Háva, Private Entomological Laboratory & Collection, Únětice u Prahy, Prague-west, Czech Republic. MNHN: Muséum National d'Histoire Naturelle, Paris, France.

Results

Genus *Orphinus* Motschulsky, 1858

Subgenus *Falsoorphinus* Pic, 1931

Orphinus (Falsoorphinus) yeti Háva, 2008 (Figs. 1-2)

Material examined. NE India, Meghalaya, 1 km E of Tura, 500 m, 25°30'N 90°14'E, 2.V.2002, M. Trýzna leg., 3♂♂, 2♀♀, (JHAC).

Distribution. Species known from Nepal and India: Assam, new for Meghalaya.



Figs. 1-2. - *Orphinus (Falsoorphinus) yeti* Háva, 2008 from India: Meghalaya. 1.- Habitus, dorsal aspect; 2. - Antennae.

Subgenus *Orphinus* s. str.

Orphinus (Orphinus) minor Arrow, 1915

Orphinus minor Arrow, 1915: 440.

Orphinus horni Pic, 1927: 247 **syn. nov.**

Type material. Syntype (♂) labelled: "Anuradhapura, W. Horn, 1899" / Type [small handwritten label] / TYPE [red printed label] / "Orphinus Horni Pic" [hand written label], (MNHN).

Material examined. India, Andhra Pradesh, 35 km SE Rajahmundry, Kottipale, bank of Godavari riv., 23-24.II.1994, Z. Kejval leg., 1♂, (JHAC); India, Madhy pradesh, hilly area near town, south of Jabalpur, No. 291, beaten material, 1.IV.1967, Gy. Topál leg., 1♀, (JHAC).

Remarks. According to the study of the type material, the species *O. horni* described by Pic (1927) is considered as a junior synonym of *O. minor*, described by Arrow (1915).

Orphinus (Orphinus) crassus sp. nov. (Figs. 3-5)

Type material. Holotype (♂): S. India, Tamil Nadu, Nilgiri Hills, 15 km S of Kotagiri, Kunchappanai env., ca. 900 m, beaten from blossom tree, 20-23.V.1999, 76°56'E 11°22'N, Z. Kejval & M. Trýzna leg., (JHAC).

Description.

Male. Body oval, TL 1.95 mm, EW 1.35 mm. Head, pronotum and elytra black, shiny, without patterns (Fig. 3), black on venter. Head coarsely punctate with long, suberect, black setation. Palpi brown; setation on mentum denser. Eyes small, with black microsetae. Ocellus on front present. Antennae brown with black setae, with 11 antennomeres, antennal club with 2 antennomeres, terminal antennal segment circular (Fig. 4). Pronotum black, disc finely punctate, densely foveolate posteriorly, with long, suberect, black setae. Scutellum black, triangular, without setation. Elytra foveolate; humerus with one small bump; elytral surface with long, suberect black setation; cuticle black with reddish pattern (Fig. 3). Epipleuron black, anteriorly broad, finely punctate, with short, black setation. Legs dark brown with dark brown setation. Mesosternum coarsely punctate laterally, otherwise finely punctate, covered by long, recumbent, black setation. Abdominal visible ventrites black, with long, recumbent, black setation. Male genitalia (Fig. 5).

Female. Unknown.

Differential diagnosis. See the following key.

Etymology. Named according to grossly punctate elytra.



Figs. 3-5.- *Orphinus (Orphinus) crassus* sp. nov: 3.- Habitus dorsal aspect. 4.- Antennae. 5.- Male genitalia.

***Orphinus (Orphinus) cardamom* sp. nov.** (Figs. 6-8)

Type material. Holotype (♂): S India, [Kerala] Cardamom hills, 15 km SW of Munnar, Kallar Valley, 1000 m, 6-18.XII.1993, 76°58'E 10°02'N, Z. Kejval & D. Boukal leg., (JHAC).

Description.

Male. Body oval, TL 2.10 mm, EW 1.37 mm. Head and pronotum black, shiny, elytra brown without pattern (Fig. 6), black on venter. Head coarsely punctate with long, erect, yellow setation. Palpi brown; setation on mentum denser. Eyes small, with yellow microsetae. Ocellus on front present. Antennae brown with yellow setae, with 11 antennomeres, antennal club with 2 antennomeres, terminal antennal segment circular (Fig. 7). Pronotum black, disc finely punctate, densely foveolate posteriorly, with long, erect, yellow setae. Scutellum black, triangular, without setation. Elytra finely punctate; humerus with one small bump; elytral surface with long, erect yellow setation; cuticle brown without pattern. Epipleuron brown, anteriorly broad, finely punctate, with short, yellow setation. Legs dark brown with yellow setation. Mesosternum coarsely punctate laterally, otherwise finely punctate, covered by long, recumbent, yellow setation. Abdominal visible ventrites black, with long, recumbent, yellow setation. Male genitalia (Fig. 8).

Female. Unknown.

Differential diagnosis. See the following key.

Etymology. Toponymic, named after the type locality, Cardamom hills.



Figs. 6-8. - *Orphinus (Orphinus) cardamom* sp. nov. 6.- Habitus, dorsal aspect. 7.- Antennae. 8.- Male genitalia.

***Orphinus (Orphinus) vattiar* sp. nov.** (Figs. 9-11)

Type material. Holotype (♂): S-India, Kerala, Cardamom hills, 10 km SW of Munnar, Vattiar, 1000 m, 5.-17.XII.1993, 77°01'E 10°02'N, D. Boukal & Z. Kejval leg., (JHAC).

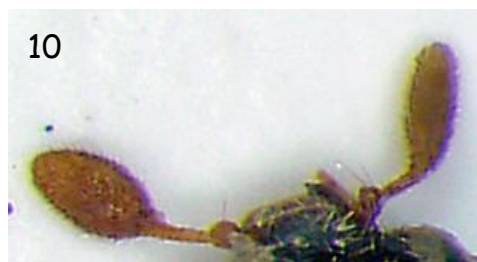
Description.

Male. Body parallel and oval, TL 2.12 mm, EW 1.27 mm. Head and pronotum black, shiny, elytra black with brown apical third (Fig. 9), dark brown on venter. Head coarsely punctate with long, erect, yellow setation. Palpi brown; setation on mentum denser. Eyes small, with yellow microsetae. Ocellus on front present. Antennae brown with yellow setae, with 11 antennomeres, antennal club with 2 antennomeres, terminal antennal segment circular (Fig. 10). Pronotum black, disc finely punctate, densely foveolate posteriorly, with long, erect, yellow setae. Scutellum black, triangular, without setation. Elytra finely punctate; humerus with one small bump; elytral surface with long, erect yellow setation; cuticle black with brown apical third. Epipleuron black, anteriorly broad, finely punctate, with short, yellow setation. Legs dark brown with yellow setation. Mesosternum coarsely punctate laterally, otherwise finely punctate, covered by long, recumbent, yellow setation. Abdominal visible ventrites dark brown, with long, recumbent, yellow setation. Male genitalia (Figs. 11).

Female. Unknown.

Differential diagnosis. See the following key.

Etymology. Toponymic, named after Vattiar, the type locality.



Figs. 9-11. *Orphinus (Orphinus) vattiar* sp. nov. 9.- Habitus, dorsal aspect. 10.- Antennae. 11.- Male genitalia.

Supplemented key to *Orphinus* species from India by Háva & Kadej (2016)

- | | |
|--|---|
| 1. Male antennal terminal segment long and suboval..... | <i>Falsoorphinus</i> (2) |
| - Male antennal terminal segment spherical rather than suboval..... | <i>Orphinus</i> s. str. (3) |
| 2. Integument unicolorous - light brown with unicoloured setae..... | <i>O. (F.) kejvali</i> Háva, 2006 |
| - Elytral integument bicoloured with patches..... | <i>O. (F.) yeti</i> Háva, 2008 |
| 3. Dorsal elytral integument unicolorous..... | 4 |
| - Dorsal elytral integument bicolorous..... | 9 |
| 4. On the dorsum unicolorous setation..... | 5 |
| - On the dorsum bi-colourous setation..... | 7 |
| 5. Integument black..... | 6 |
| - Integument brown, setation dark brown or black..... | <i>O. (O.) fulvipes</i> (Guérin-Ménéville, 1838) |
| - Pronotum black, elytra brown; setation yellow..... | <i>O. (O.) cardamom</i> sp. nov. |
| 6. Elytra finely punctate; setation yellow..... | <i>O. (O.) minor</i> Arrow, 1915 |
| - Elytra grossly punctate; setation black..... | = <i>O. (O.) horni</i> Pic, 1927 syn. nov.
<i>O. (O.) crassus</i> sp. nov. |
| 7. General setation black with one small spot of white setation near epipleuron..... | <i>O. (O.) malabarensis</i> Pic, 1916 |
| - General setation white or brown..... | 8 |
| 8. Setation brown with two, narrow, transverse bands of white setation..... | <i>O. (O.) tabitha</i> Arrow, 1915 |
| - Setation white with two spots of black setation..... | <i>O. (O.) nilgiriensis</i> Arrow, 1915 |
| 9. Elytra black with brown apical third..... | <i>O. (O.) vattiar</i> sp. nov. |
| - Anterior elytral fascia broad..... | 10 |
| - Anterior elytral fascia narrow..... | 14 |
| 10. Elytral fascia dark brown or orange..... | 11 |
| - Anterior russet band is present from lateral margin to sutura (covering the humerus, and touching the suture), the second subapical russet band is present in 1/3 of total length..... | <i>O. (O.) bezdeki</i> Háva & Kadej, 2016 |
| 11. Elytral fascia dark brown..... | 12 |
| - Elytral fascia orange..... | 13 |
| 12. Anterior transverse band from lateral margin to suture (touching the suture); pronotum without dark discal spot..... | <i>O. (O.) atrofasciatus</i> Pic, 1916 |
| - Anterior transverse fascia from lateral margin to suture (but not touching the suture); pronotum with dark discal spot..... | <i>O. (O.) notaticollis</i> Pic, 1916 |
| 13. Each elytron with one, broad, transverse, orange fascia not reaching to suture and small orange apical spot..... | <i>O. (O.) sikkimensis</i> Háva & Herrmann, 2004 |
| - Each elytron with anterior orange, isolated, transverse fascia and large orange isolated apical spot..... | <i>O. (O.) hartmanni</i> Háva, 2001 |
| 14. On the elytra one anterior band and one apical spot present..... | 15 |
| - On the elytra only one narrow, subbasal transverse orange-reddish fascia..... | <i>O. (O.) unifasciatus</i> Háva, 2006 |
| 15. Anterior reddish fascia distinctly not reaching suture, apical reddish spot not reaching the apices of elytra..... | <i>O. (O.) biflexus</i> (Reitter, 1881) |
| - Anterior reddish fascia reaching suture, apical spot reddish and filling almost whole apical area..... | <i>O. (O.) jucundus</i> Arrow, 1915 |

List of *Orphinus* species from India

Genus <i>Orphinus</i> Motschulsky, 1858	<i>O. (O.) crassus</i> sp. nov.
Subgenus <i>Faloorphinus</i> pic, 1931	<i>O. (O.) fulvipes</i> (Guérin-Méneville, 1838)
<i>O. (F.) kejvali</i> Háva, 2006	<i>O. (O.) hartmanni</i> Háva, 2001
<i>O. (F.) yeti</i> Háva, 2008	<i>O. (O.) jucundus</i> Arrow, 1915
Subgenus <i>Orphinus</i> s. str.	<i>O. (O.) malabarensis</i> Pic, 1916
<i>O. (O.) atrofasciatus</i> Pic, 1916	<i>O. (O.) minor</i> Arrow, 1915
<i>O. (O.) bezdeki</i> Háva & Kadej, 2016	= <i>O. (O.) horni</i> Pic, 1927 syn. nov.
<i>O. (O.) biflexus</i> (Reitter, 1881)	<i>O. (O.) nilgiriensis</i> Arrow, 1915
<i>O. (O.) cardamom</i> sp. nov.	<i>O. (O.) notaticollis</i> Pic, 1916
	<i>O. (O.) sikkimensis</i> Háva & Herrmann, 2004
	<i>O. (O.) tabitha</i> Arrow, 1915
	<i>O. (O.) unifasciatus</i> Háva, 2006
	<i>O. (O.) vattiani</i> sp. nov.

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References

- ARROW, G.J. 1915. Notes on the Coleopterous family Dermestidae, and descriptions of some new forms in the British Museum. *The Annals and Magazine of Natural History* (8)15: 425-451.
- HÁVA, J. 2015a. *World Catalogue of Insects. Volume 13. Dermestidae (Coleoptera)*. Leiden/Boston: Brill, xxvi + 419 pp.
- HÁVA, J. 2015b. Three new species of *Orphinus* Motschulsky, 1858 from Thailand (Coleoptera: Dermestidae: Megatominae). *Arquivos Entomolóxicos* 13: 225-229.
- HÁVA, J. 2015c. A contribution to knowledge of the genus *Orphinus* Motschulsky, 1858 from the Philippines (Coleoptera: Dermestidae: Megatominae). *Folia Heyrovskyana, Series (A)* (2014) 22(2-4): 1-8.
- HÁVA, J. & KADEJ, M. 2016. A new species of *Orphinus* Motschulsky, 1858 (Coleoptera, Dermestidae, Megatominae), with a key to species from India. *Journal of Asia-Pacific Entomology* 19: 525-529.
- HERRMANN, A. & HÁVA, J. 2015. *Orphinus (Orphinus) viktorai* sp. nov., a new beetle species from Malaysia (Coleoptera: Dermestidae: Megatominae). *Folia Heyrovskyana* 23: 18-20.
- PIC, M. 1927. Nouveaux Coléoptères exotiques. *Entomologische Mitteilungen, Berlin-Dahlem* 16: 246-255.
- VEER, V. 2011. *Biodiversity of dermestid beetles (Coleoptera: Dermestidae) from India, with identification key to adults of Indian genera and description of a new subspecies*, pp. 495-522. In: TYAGI B. K. & VEER V. (eds.): *Entomology: Ecology*. Scientific Publishers (India), xvii + 522 pp.