# Study of the genus *Orphinus* Motschulsky, 1858. Part 5 - descriptions of new species and two new synonymy (Coleoptera: Dermestidae: Megatominae)

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Abstract. The following new Orphinus Motschulsky, 1858 species are described, illustrated and compared: O. (O.) callidus sp. nov. (India: Sikkim), O. (O.) kaliki sp. nov. (China: Sichuan), O. (O.) ondreji sp. nov. (Thailand), O. (O.) paralellus sp. nov. (India: Sikkim), O. (O.) alesi sp. nov. (Vietnam), O. (O.) vicinus sp. nov. (India: West Bengal). Two new synonyms are proposed: Orphinus Motschulsky, 1858 (= Falsoorphinus Pic, 1931 syn. nov.) and Orphinus subgenus Curtophinus Pic, 1954 (= Jiriella Kitano, 2013 syn. nov.), two species are newly combined O. brunneus (Háva & Kadej, 2014) comb. nov., O. thailandicus (Háva, 2012) comb. nov.

#### INTRODUCTION

The dermestid genus *Orphinus* Motschulsky, 1858 currently contains four subgenera *Curtophinus* Pic, 1954, *Falsoorphinus* Pic, 1931 (see the article), *Orphinus* s. str. and *Picorphinus* Háva, 2008 with 190 species worldwide (Háva 2015, 2020, 2021a,b, 2022a,b). In the present article are described 6 new species collected in China, India, Philippines, Thailand and Vietnam and proposed two new synonyms.

### 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:

TL total length - linear distance from anterior margin of pronotum to apex of elytra.

EW elytral width - maximum linear transverse distance.

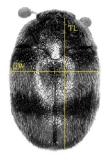
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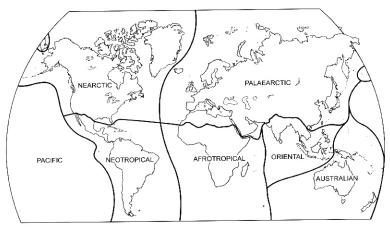
JHAC Private Entomological Laboratory & Collection, Jiří Háva, Únětice u Prahy, Prague-West, Czech Republic;

NMED Naturkundemuseum, Erfurt, Germany.

Specimens of the presently described species are provided with red, printed labels with the text as follows: "HOLOTYPE [or PARATYPE, respectively] name of taxon sp. nov. Jiří Háva det. 2022".

Geographic Regions follow the Palaearctic Catalogue (Map. 1).





Map. 1. The limits of the geographic Regions.

### **TAXONOMY**

## Genus Orphinus s. str. Motschulsky, 1858

Orphinus Motschulsky, 1858: 48. = Falsoorphinus Pic, 1931: 4 syn. nov.

**Remarks.** The subgenus *Orphinus* characterised by circular terminal antennomere, subgenus *Falsoorphinus* characterised by longly-oval terminal antennomere, but for some species it is difficult to determine the boundary of this character on the terminal antennomere, other morphological characters are the same for both subgenera (Fig. A). Within the variability of this character, I determine the subgenus *Falsoorphinus* syn. nov. as new junior synonym of *Orphinus* s. str.

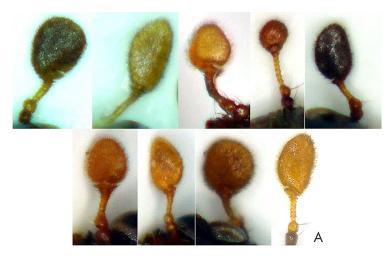


Fig. A. Variability of male terminal antennomeres.

Following species are transferred from the subgenus Falsoorphinus to subgenus Orphinus s. str.: barthelemyi Kadej, Aston, Háva & Herrmann, 2015; burmanicus Háva, 2013; chinensis Háva, 2004; coratensis Háva, 2022; kejvali Háva, 2006; meiyingae Herrmann, Háva & Zhang, 2011; motykai Háva, 2020; mroczkowskii Háva & Kadej, 2006; okinawanus Háva, 2006; ovalis (Arrow, 1915); pseudoovalis Háva, 2004; quadrimaculatus (Matsumura & Yokoyama, 1928); rogueti Herrmann & Háva, 2018; turnai Háva, 2021; weigeli Herrmann, Háva & Kadej, 2014; yeti Háva, 2008.

# Orphinus subgenus Curtophinus Pic, 1954

Curtophinus Pic, 1954: 11. = Jiriella Kitano, 2013: 477 syn. nov.

**Remarks.** According to all morphological characters the genus *Jiriella* Kitano, 2013 is identical with subgenus *Curtophinus*. The genus *Jiriella* is a new junior synonym of *Curtophinus*.

Following species are newly transferred from the genus *Jiriella* to subgenus *Curtophinus*: brunneus (Háva & Kadej, 2014) (= *J. brunnea*) **comb. nov.**, thailandicus (Háva, 2012) (= *O. thailandicus*) **comb. nov.** 

The following other species belonged to subgenus *Curtophinus: bicolor* (Pic, 1954), *cooteri* Kadej & Háva, 2015, *nitidus* Arrow, 1915.

## **Palaearctic species**

# Orphinus (Orphinus) kaliki sp. nov.

(Figs. 1-3)

**Type material.** Holotype (♀): "China centralis, Szechwan, Chung Kung", (JHAC).

**Description.** Female. Body oval, TL 2.8 mm, EW 1.7 mm. Head, pronotum, scutellum dark brown and elytra brown with one light brown transverse fascia, shiny (Figs. 1-2), dark brown on venter. Head coarsely punctate with long, recumbent, brown setation. Palpi brown; setation on mentum denser. Eyes large, with yellow microsetae. Ocellus on front present. Antennae light brown with yellow setae, with 11 antennomeres, antennal club dark brown, with 2 antennomeres, terminal antennomere circular (Fig. 3). Pronotum dark brown, disc finely punctate, densely foveolate posteriorly, with long, recumbent, brown setation. Scutellum dark brown, triangular, without setation. Elytra brown with light brown transverse fascia in anterior half, finely punctate; humerus with one small bump; elytral brown surface with long, recumbent brown setation, light brown fascia with yellow setation. Epipleuron brown, anteriorly broad, coarsely punctate, with short, brown setation. Legs brown with yellow setation. Mesosternum coarsely punctate laterally, otherwise finely punctate, covered by short, recumbent, yellow setation. Pygidium dark brown to black, with yellow setation. Visible abdominal ventrites dark brown, with short, recumbent, yellow setation.

Male. Unknown.

**Differential diagnosis.** The new species externally similar to O. (O.) bezarki Háva, 2022 (Thailand) but differs from it by the structure of antennae and arrangement of elytral fascia.

Etymology. Dedicated in memoriam to my friend and colleague in Dermestidae Vladimír Kalík (\*1918-†2010).



Figs. 1-3. Orphinus (O.) kaliki sp. nov.: 1-habitus, dorsal; 2-habitus, dorso-lateral; 3-antenna.

# Orphinus (Orphinus) callidus sp. nov.

(Fias. 4-6)

**Type material.** Holotype (♀): "India - Sikkim, Khecheopari Lake, 21.6.-26.6.2003, E. K. lgt.", (JHAC).

**Description.** Female. Body oval, TL 2.5 mm, EW 1.7 mm. Head dark brown, pronotum brown and orange, scutellum dark brown and elytra brown with one transverse orange fascia, shiny (Figs. 4-5), dark brown on venter. Head coarsely punctate with long, recumbent, yellow setation. Palpi brown; setation on mentum denser. Eyes large, with yellow microsetae. Ocellus on front present. Antennae light brown with yellow setae, with 11 antennameres, antennal club with 2 antennomeres, terminal antennomere circular (Fig. 6). Pronotum brown with two orange spots, laterally slightly brown, disc finely punctate, densely foveolate posteriorly, with long, recumbent, yellow setation. Scutellum dark brown, triangular, without setation. Elytra brown with orange transverse fascia in anterior half, finely punctate; humerus with one small bump; elytral surface with long, recumbent brown setation, orange fascia with yellow setation. Epipleuron brown, anteriorly broad, coarsely punctate, with short, brown setation. Legs brown with yellow setation. Mesosternum coarsely punctate laterally, otherwise finely punctate, covered by short, recumbent, yellow setation. Pygidium brown to black, with black setation. Visible abdominal ventrites brown, with short, recumbent, yellow setation.

Male. Unknown.

Differential diagnosis. The new species externally similar to O. (O.) bezarki Háva, 2022 (Thailand) but differs from it by the structure of antennae and arrangement of elytral fascia; from species O. (O.) horaki Kitano & Háva, 2013 differs by the missing apical spot; from O. (O.) holzsuchi Kadej & Háva, 2015 differs by the orange pronotum and structure of antennae.

**Etymology.** Name is taken from Latin *callidus* (it means "smart").



Figs. 4-6. Orphinus (O.) callidus sp. nov.: 4-habitus, dorsal; 5-habitus, dorso-lateral; 6-antenna.

## **Oriental species**

# Orphinus (Orphinus) vicinus sp. nov.

(Figs. 7-9)

**Type material.** Holotype (♀): "India, West Bengalen Distr., Darjeeling, Kalimpong Khani-Busty, 900 m, 23.v.1991", (JHAC).

**Description.** Female. Body oval, TL 2.7 mm, EW 1.8 mm. Head black, pronotum orange, scutellum dark brown and elytra black with one transverse orange fascia and orange apical part, shiny (Figs. 7-8), black on venter. Head coarsely punctate with long, recumbent, yellow setation. Palpi brown; setation on mentum denser. Eyes large, with yellow microsetae. Ocellus on front present. Antennae light brown with yellow setae, with 11 antennomeres, antennal club with 2 antennomeres, terminal antennomere circular (Fig. 9). Pronotum orange, disc finely punctate, densely foveolate posteriorly, with long, recumbent, yellow setation. Scutellum dark brown, triangular, without setation. Elytra black with orange transverse fascia in anterior half and orange apical part, finely punctate; humerus with one small bump; elytral surface with long, recumbent brown setation, orange parts with yellow setation. Epipleuron brown and orange, anteriorly broad, coarsely punctate, with short, brown setation. Legs dark brown with yellow setation. Mesosternum coarsely punctate laterally, otherwise finely punctate, covered by short, recumbent, yellow setation. Pygidium brown to black, with black setation. Visible abdominal ventrites dark brown to black, with short, recumbent, yellow setation.

Male. Unknown.

**Differential diagnosis.** The new species externally similar to species O. (O.) jurciceki Háva, 2013 and to O. (O.) horaki Kitano & Háva, 2013, but differs from them by the structure of antennae and arrangement of elytral spots.

**Etymology.** Name is taken from Latin vicinus (it means "neighbor").



Figs. 7-9. Orphinus (O.) vicinus sp. nov.: 7-habitus, dorsal; 8-habitus, dorso-lateral; 9-antenna.

# Orphinus (Orphinus) paralellus sp. nov. (Figs. 10-12)

**Type material.** Holotype (♀): "Thailand, Soppong-Pai, 1800 m, 1-6.5.1991, Pacholatko leg.", (JHAC).



Figs. 10-12. Orphinus (O.) paralellus sp. nov.: 10-habitus, dorsal; 11-abdomen; 12-antenna.

**Description.** Female. Body parallel, TL 2.6 mm, EW 1.4 mm. Head, pronotum, scutellum and elytra brown, shiny (Figs. 10), dark brown on venter. Head coarsely punctate with long, recumbent, light brown setation. Palpi brown; setation on mentum denser. Eyes large, with yellow microsetae. Ocellus on front present. Antennae light brown with yellow setae, with 11 antennomeres, antennal club with 2 antennomeres, terminal antennomere large and circular (Fig. 12). Pronotum dark brown, disc finely punctate, densely foveolate posteriorly, with long, recumbent, light brown setation. Scutellum dark brown, triangular, without setation. Elytra brown, finely punctate; humerus with one small bump; elytral surface with long, recumbent light brown setation. Epipleuron brown, anteriorly broad, coarsely punctate, with short, light brown setation.

Legs brown with yellow setation. Mesosternum coarsely punctate laterally, otherwise finely punctate, covered by short, recumbent, yellow setation. Pygidium brown, with light brown setation. Visible abdominal ventrites brown, with short, recumbent, yellow setation (Fig. 11).

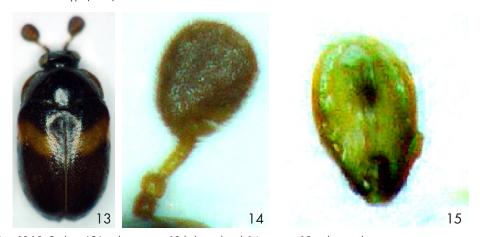
Male. Unknown.

**Differential diagnosis.** The new species differs from other known species by the unicolorous, long, parallel form of body and structure of female antennae.

**Etymology.** Named according to parallel body.

# Orphinus (Orphinus) ondreji sp. nov. (Figs. 13-15)

**Type material.** Holotype (♂): "Thailand, Soppong-Pai, 1800 m, 1-6.5,1991, Pacholatko leg.", (JHAC). Paratype (1 ♀): same data as holotype (JHAC).



Figs. 13-15. Orphinus (O.) ondreji sp. nov.: 13-habitus, dorsal; 14-antenna; 15-male genitalia.

**Description.** Male. Body oval, TL 2.0 mm, EW 1.2 mm. Head dark brown, pronotum dark brown, scutellum dark brown and elytra dark brown with light brown apical part and yellow anterior spot, shiny (Fig. 13), dark brown on venter. Head coarsely punctate with long, recumbent, yellow setation. Palpi brown; setation on mentum denser. Eyes large, with yellow microsetae. Ocellus on front present. Antennae light brown with yellow setae, with 11 antennomeres, antennal club with 2 antennomeres, terminal antennomere large and circular (Fig. 14). Pronotum dark brown, disc finely punctate, densely foveolate posteriorly, with long, recumbent, yellow setation. Scutellum dark brown, triangular, without setation. Elytra dark brown in anterior half with one yellow spot, light brown in posterior half, finely punctate; humerus with one small bump; elytral surface with long, recumbent brown setation, yellow fascia with yellow setation. Epipleuron brown, anteriorly broad, coarsely punctate, with short, brown setation. Legs brown with yellow setation. Mesosternum coarsely punctate laterally, otherwise finely punctate, covered by short, recumbent, yellow setation. Pygidium brown to black, with black setation. Visible abdominal ventrites brown, with short, recumbent, yellow setation. Male genitalia (Fig. 15).

**Female.** Externally similar to male, but terminal antennomere is small.

**Differential diagnosis.** The new species externally very similar to O. (O.) yunnanus Háva, 2004 but differs from it by the structure of antennae and male genitalia.

**Etymology.** Patronymic, dedicated to my friend Ondřej Daněk (Únětice, Czech Republic).

# Orphinus (Orphinus) alesi sp. nov. (Figs. 16-19)

**Type material.** Holotype (♂): "C-Vietnam, Thua Thien-Hue Pr., Phu Loc, Bach Ma, NP, 1250-1400 m, 16°11′39′′N, 107°51′12′′E, 5-9.v.2019, A. Weigel lgt.", (NMED). Paratypes: (15 ♂♂): same data as holotype (10 NMED, 5 JHAC).

**Description.** Male. Body oval, TL 2.1 mm, EW 1.4 mm. Head, pronotum, scutellum black and elytra black with one transverse orange fascia and orange apical spot, matt (Figs. 16-17), black on venter. Head finely punctate with short, recumbent, grey setation. Palpi brown; setation on mentum denser. Eyes extremely very large, with yellow microsetae. Ocellus on front present. Antennae light brown with black setae, with 11 antennomeres, antennal club with 2 antennomeres, terminal antennomere large slightly triangular (Fig. 18). Pronotum black, disc finely punctate, densely foveolate posteriorly, with short, recumbent, grey setation. Scutellum black, triangular, without setation. Elytra black with orange transverse spot in anterior half and orange apical spot, finely punctate; humerus with one small bump; elytral surface with long, recumbent brown setation, orange parts with yellow setation. Epipleuron brown and orange, anteriorly broad, coarsely punctate, with short, brown setation. Legs black, with yellow setation. Mesosternum coarsely punctate laterally, otherwise finely punctate, covered by short, recumbent, grey setation. Pygidium brown to black, with brown setation. Visible abdominal ventrites dark brown to black, with short, recumbent, grey setation. Male genitalia (Fig. 19).



Figs. 16-19. Orphinus (O.) alesi sp. nov.: 16-habitus, dorsal; 17-habitus, dorso-lateral; 18-antenna; 19-male genitalia.

Female. Unknown.

Variability. Body TL 1.9-2.6 mm, EW 1.2-1.6 mm.

**Differential diagnosis.** The new species externally similar to O. (O.) horaki Kitano & Háva,

2013 and O. (O.) jendeki Háva, 2022 but differs from them by the structure of antennae and arrangement of elytral spots

**Etymology.** Patronymic, dedicated in memoriam to my friend †Aleš Smetana (Canada), specialist in Staphylinidae.

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