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A contribution to knowledge of Dermestidae (Coleoptera) from China

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Abstract. *Thorictodes dartevelli* John, 1961 is recorded from Yunnan and *Thorictodes erraticus* Champion, 1922 from Tibet, both for the first time. *Attagenus vagepictus* Fairmaire, 1889 is illustrated and recorded from Tibet. *Evorinea smetanai* sp. nov., *Orphinus* (*Falsoorphinus*) *meiyingae* sp. nov., *Orphinus* (*Orphinus*) *xianae* sp. nov. and *Orphinus* (*Orphinus*) *beali* sp. nov. are described and compared with related species.

INTRODUCTION

The genus *Orphinus* contains about 80 known species worldwide (Háva 2003, 2010); from China, so far only six species have been recorded. In the present paper the authors describe three more Chinese species of *Orphinus*, all of them being new to science. As to *Evorinea* only one of the ten world members of this genus, *Evorinea indica*, has been still recorded from this big country (Háva 2003, 2010). Now an eleventh species has been revealed and is described here as new to science and to China. Five species of the genus *Thorictodes* are known worldwide (Háva 2003, 2010); with *Thorictodes dartevelli* and *Thorictodes erraticus,* the present paper reports two additional representatives of the genus within China. The present article follows the papers about Dermestidae from China published by Háva (2004, 2005). The Chinese fauna of Dermestidae was formerly documented in several articles (Wu 1937, Li 1992, Hua Li-Zhong 2002).

MATERIAL AND METHODS

Some selected beetles deposited in the collection of the Institute of Animal and Plant Quarantine (Chinese Academy of Inspection and Quarantine) in Beijing, all belonging to the family *Dermestidae*, were examined. Among this material, four new species as well as some new records for the fauna of China were revealed. We follow the systematics of Dermestidae proposed by Háva (2004) and Lawrence & Slipinski (2005). The distribution of Dermestidae is taken from Háva (2007, 2010).

The following abbreviations refer to the collections where the examined material is deposited:

AHEC private collection of Andreas Herrmann, Stade, Germany;

CAIQ Institute of Animal and Plant Quarantine (Chinese Academy of Inspection and Quarantine), Beijing, China;

JHAC Private Entomological Laboratory & Collection, Jiří Háva, Prague-west, Czech Republic.

The size of the beetles and of their body parts can be useful in species recognition, so 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.

The specimens of the described species are provided with a red, printed label showing the following text: „[HOLOTYPUS or PARATYPUS] [name of the new taxon] sp. nov., A. Herrmann, J. Háva & S. Zhang det. 2011".

DESCRIPTIONS

Subfamily Trinodinae
Tribe Trinodini

Evorinea smetanai sp. nov.
(Figs 1 a-c)

Type material. Holotype (♂): „China: Wanding, Yunnan Province, from storehouse, April 1988 leg. Xia Chuanguo", (CAIQ). Paratypes (25 spec.): with the same data (AHEC, CAIQ, JHAC).

Description. Body small and oval, entirely black to dark brown, more or less shiny (Fig. 1a). Body measurements (in mm): TL 1.4, PL 0.3, PW 0.7, EL 1.2, EW 1.0. Head coarsely punctate, sparsely covered with long, erected brown hairs; the puncture is partly indistinct and somewhat blurred. Palpi light brown. Eyes large with hardly visible, short and erected microsetae. Ocellus present on frons. Antennae yellow, 11-segmented, the last two segments forming a distinct club covered sparsely by light brown pubescence; the terminal segment much larger than the penultimate one (Fig. 1b), light brown. Pronotum shiny, sparsely and coarsely punctured (some finer punctures are intermixed), covered sparsely with erected, long brown hairs; density of punctures and pubescence increases towards the lateral margins; pronotal lateral margins smooth, untoothed; prominent sublateral carina on each side, subparallel to lateral margin. Scutellum triangular, without any pubescence or punctuation, black and shiny. Elytra shiny dark brown to black, covered sparsely by long, erected brown hairs, puncture similar to the pronotum, lateral margins smooth, untoothed; humeri with a small distinct bump (Fig. 1a). Epipleura darkish brown, sparsely punctured, without pubescence. Legs totally light brown, sparsely covered with suberected, short light brown hairs. Mesosternum

darkish, sparsely punctuate, with a few recumbent brown hairs. Abdominal sternites brown, finely punctuate, sparsely covered with recumbent light brown hairs.
Female in habitus similar to male.

Variation in size. TL 1.4-1.6, EW 1.0-1.3.

Differential diagnosis. The new species differs from the other Chinese species of this genus, *Evorinea indica,* by the shape of the genitalia and antenna. The aedeagus is more narrow, the parameres are somewhat parallel and flattened towards their end, bear several long hairs and are larger in relation to the aedeagus (Fig. 1c). The final antennal segment is long-oval (rounded oval in *E. indica*), the preceding two segments are more narrow in relation to their length and less distinctly separated from the final one. Furthermore the club is bigger in relation to the shaft.

Ethymology. The name of the new species is dedicated to Aleš Smetana (Ottawa, Canada) an excellent and well known specialist in Staphylinidae.

Subfamily Megatominae
Tribe Megatomini

Orphinus (*Falsoorphinus*) *meiyingae* sp. nov.
(Figs 2 a-c)

Type material. Holotype (♂): „China: Beijing, Chaoyang Dist., National Agriculture Exhibition Center, under bark in spider web, IV-1986 leg. Y. Liu & S. Zhang", (CAIQ). Paratypes: (2 ♂♂, 2 ♀♀): with the same data (AHEC, CAIQ).

Description. Body small and prolate, head and pronotum shiny black to brown, elytra brownish and more or less dull (Fig. 2a). Body measurements (in mm): TL 2.6, PL 0.6, PW 1.1, EL 2.0, EW 1.5. Head coarsely punctate, sparsely covered with long, suberected dark hairs; the puncture is partly indistinct and somewhat blurred. Palpi light brown. Eyes large with short, dark and erected microsetae. Ocellus distinctly present on frons. Antennae light brown, the shaft with a few strong and erected brown hairs, 11-segmented, the last two segments forming a distinct club covered densely by light brown pubescence; the terminal segment extremely large and somewhat parallel, much longer than the whole shaft (Fig. 2b). Pronotum shiny, sparsely and coarsely punctured, covered sparsely with suberected, long and dark hairs; density of punctures and pubescence increases towards the lateral margins; pronotal lateral margins smooth, untoothed. Scutellum almost triangular, without distinct pubescence; black and dull, with very coarse and blurred punctuation. Elytrae dull and brownish, covered sparsely by quite long, suberected dark brown hairs, puncture similar to the pronotum, lateral margins smooth, untoothed; humeri with a small bump; the elytra are lightened by a big slanted and indistinct fascia located on the anterior third, intensified by the bright inner wings shining through the cuticle of the elytra (Fig. 2a). Epipleura darkish brown, coarsely punctured, without pubescence. Legs totally light brown, sparsely covered with suberected, short light brown hairs. Mesosternum darkish, coarsely punctuate, with a few recumbent brown hairs. Abdominal sternites light brown, coarsely punctuate, sparsely covered with recumbent brown hairs.

Female in habitus quite similar to male, but the fascia is more distinct and the antenna differs considerably by a much smaller size and also by shape of the club.

Variation in size. TL 2.5-2.7, EW 1.5-1.6.

Differential diagnosis. The new species differs from the other known Chinese species of the subgenus *Falsoorphinus* by the shape of the antenna club (Fig. 2b) and fascia of the elytra (Fig. 2a); the differences from all other Orphinus species are given by the characteristics of the subgenus.

Ethymology. The name of the new species is dedicated to the coleopterist Meiying Lin from Beijing, China. She helped the authors very much with translation and contacts; without her help and assistance this work wouldn't have been possible at all.

***Orphinus* (*Orphinus*) *beali* sp. nov.**

(Figs 3 a-c)

Type material. Holotype (♂): „China: Gengma, Yunnan Province, from storehouse, V-1981 leg. Liu Yongping", (CAIQ). Paratypes (60 spec.): with the same data (AHEC, CAIQ, JHAC).

Description. Body small and prolate, entirely black to dark brown, more or less shiny (Fig. 3a). Body measurements (in mm): TL 2.4, PL 0.6, PW 1.3, EL 1.9, EW 1.6. Head coarsely punctate, sparsely covered with long, suberected light brown hairs; the puncture is partly indistinct and somewhat blurred. Palpi light brown. Eyes large with hardly visible, short and erected microsetae. Ocellus present on front. Antennae yellow, the shaft with a very few thin and short erected yellow hairs, 11-segmented, the first segment darkened towards the head, the last two segments forming a distinct club covered densely by short yellow pubescence; the terminal segment extremely large and somewhat circular, nearly as long as the whole shaft (Fig. 3b). Pronotum shiny, sparsely and finely punctured, covered sparsely with recumbent bright hairs; density of puncture and pubescence increases towards the lateral margins; pronotal lateral margins smooth, untoothed, visible from above. Scutellum triangular, without distinct pubescence; black and dull, with very coarse and blurred punctuation. Elytra black to dark brown, covered sparsely by quite thin, recumbent bright hairs, with coarse and quite dense punctures, lateral margins smooth, untoothed; humeri with a small bump (Fig. 3a). Epipleura black, coarsely punctured, showing similar pubescence as in the elytra. Legs totally light brown, sparsely covered with recumbent, short light brown hairs. Mesosternum almost black, coarsely punctuate, with a few recumbent light brown hairs. Abdominal sternites darkish brown, coarsely punctuate, covered with recumbent light brown hairs.

Female in habitus quite similar to male, but the antenna differs by a much smaller club**.**

Variation in size. TL 2.3-3.2, EW 1.5-1.8.

Differential diagnosis. The new species looks quite similar to *Orphinus* **(***Orphinus***)** *fulvipes* (Guérin-Méneville, 1838), but its antennal club is much bigger and its genitalia broader. From the other known Chinese species of the subgenus *Orphinus* s. str. it differs in the unicolored black elytra without any fasciae or spots; the difference from all other Chinese *Orphinus* species is given by the circular shape of the antennal club, which is characteristic of all members of this subgenus.

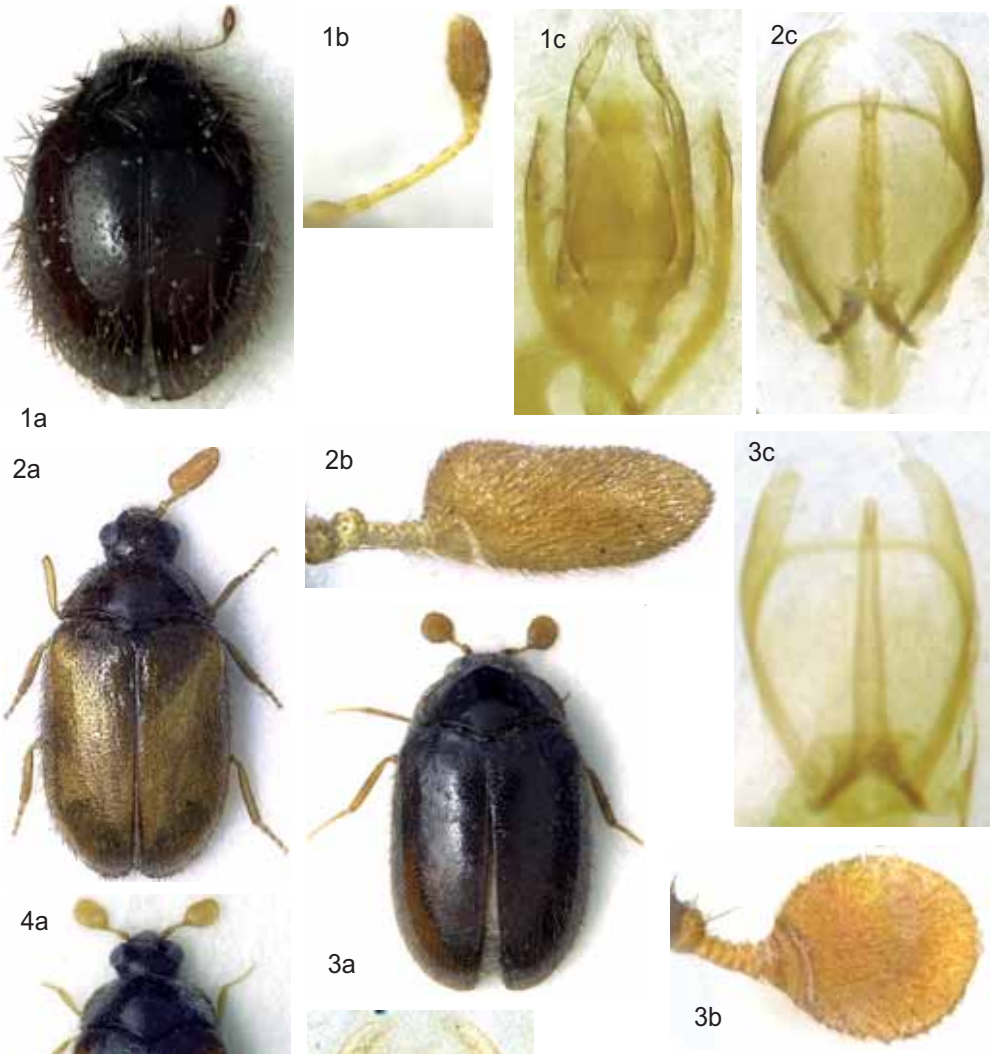

Fig. 1. *Evorinea smetanai* sp. nov., characters of the male: a- habitus (dorsal aspect); b- antenna; c- genitalia (ventral aspect).
Fig. 2. *Orphinus* (*Falsoorphinus*) *meiyingae* sp. nov., characters of the male: a- habitus (dorsal aspect); b-antenna; c- genitalia (ventral aspect).
Fig. 3. *Orphinus* (*Orphinus*) *beali* sp. nov., characters of the male: a- habitus (dorsal aspect); b- antenna; c- genitalia (ventral aspect).
Fig. 4. *Orphinus* (*Orphinus*) *xianae* sp. nov., characters of the male: a- habitus (dorsal aspect); b- antenna; c- genitalia (ventral aspect).

Fig. 5. Species of the genus *Thorictodes* recorded from China: a- *Th. brevipennis* Zhang & Liu, 1986; b- *Th. dartevelli* John, 1961; c- *Th. erraticus* Champion, 1922; d- *Th. heydeni* Reitter, 1875.

Fig. 6. *Attagenus vagepictus*, characters of the male: a- habitus (dorsal aspect); b- antenna; c- aedeagus.

Ethymology. The name of the new species is dedicated to the coleopterist Richard Beal from Arizona, USA, an excellent and well known specialist in Dermestidae.

Orphinus (*Orphinus*) *xianae* sp. nov.

(Figs 4 a-c)

Type material. Holotype (♂): labeled „China: Beijing, Outdoors, under bark, v-1986 leg. Y. Liu & S. Zhang", (CAIQ). Paratypes: (2 ♂♂, 2 ♀♀) with the same data (AHEC, CAIQ).

Description. Body small and somewhat prolate, head and pronotum shiny black to brown, elytra brownish and more or less dull (Fig. 4a). Body measurements (in mm): TL 2.1, PL 0.5, PW 1.0, EL 1.8, EW 1.2. Head coarsely punctate, sparsely covered with long, suberected light brown hairs; the puncture is partly indistinct and somewhat blurred. Palpi light brown. Eyes large with hardly visible, short and erected microsetae. Ocellus distinct and present on frons. Antennae yellow, the shaft with a very few thin and short erected yellow hairs, 11-segmented, the first segment slightly darkened towards the head, the last two segments forming a distinct club covered densely by short yellow pubescence; the terminal segment extremely large and somewhat circular, longer than the whole shaft (Fig. 4b). Pronotum shiny, sparsely and coarsely punctured, covered sparsely with recumbent bright hairs; density of punctures and pubescence increases towards the lateral margins; pronotal lateral margins smooth, untoothed, visible from above. Scutellum triangular, without distinct pubescence; black and dull, with very coarse and blurred punctuation. Elytra dull and brownish, covered sparsely by quite thin, recumbent bright hairs, puncture similar to the pronotum, lateral margins smooth, untoothed; humeri with a small bump; each elytron is lightened by a yellow-brown, large slanted fascia located on the anterior third, not reaching the suture; furthermore by a big circular spot of the same colour at the apex. Instead of the fascia the spot touches the lateral margin of the elytra (Fig. 4a). Epipleura darkish brown, coarsely punctured, showing similar pubescence as in the elytra. Legs totally light brown, sparsely covered with recumbent, short light brown hairs. Mesosternum almost black, coarsely punctuate, with a few recumbent light brown hairs. Abdominal sternites darkish brown, coarsely punctuate, covered with recumbent light brown hairs.

Female in habitus quite similar to male, but the antenna differs in the much smaller club.

Variation in size. TL 2.0-2.2, EW 1.1-1.2.

Differential diagnosis. The new species differs from the other known Chinese species of the subgenus *Orphinus* s.str. by the fascia of the elytra (Fig. 4a); the difference from all other Chinese *Orphinus* species is given by the circular shape of the antennal club, which is characteristic of all members of this subgenus.

Etymology. The name of the new species is dedicated to the entomologist Xian Zhou from Beijing, China. She helped the authors very much with translation and contacts; without her help and assistance this work wouldn't have been possible at all.

NEW RECORDS

Attagenus vagepictus Fairmaire, 1889
(Figs 6 a-b)

Material examined: China: Xizang (Tibet), from storehouse, 1987, Shen Xianglin leg., 7 spec., (AHEC, CAIQ).

Distribution. Species known from China: Tibet, Guangxi, Sichuan.

Thorictodes dartevelli John, 1961

Material examined: China: Xiaguan, Yunnan Province (South China), collected from storehouse, 20.ix.1980 leg. Liu Yongping, 3 spec., (AHEC, CAIQ).

Distribution. Species known from England (intr.); Congo; India (intr.), new species to China: Yunnan.

Thorictodes erraticus Champion, 1922

Material examined: China: Linzhi, Tibet, 1987 leg. Prof. Chen Qizong, 1 spec., (AHEC).

Distribution. Species known from India: Uttar Pradesh, new species to China: Tibet.

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