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Contributions to the knowledge of the "*Staphylinus*-complex" of China. Part 12. *Miobdelus egregius* SMETANA (Coleoptera: Staphylinidae: Staphylinini)

A. SMETANA

Abstract

The remarkable sexual dimorphism in the coloration of the body in *Miobdelus egregius* SMETANA, 2001 (Coleoptera: Staphylinidae: Staphylinini) is described and illustrated. The description of the species is accordingly modified and new distributional records of the species are added. Sexual dimorphism in Staphylininae is briefly discussed.

Key words: Coleoptera, Staphylinidae, Staphylininae, Staphylinini, *Miobdelus egregius*, Palearctic Region, China, taxonomy, sexual dimorphism, geographical distribution.

Introduction

This paper, which is part of a series treating the members of the *Staphylinus*-complex (SMETANA & DAVIES 2000) of China, deals with the remarkable sexual dimorphism of *Miobdelus egregius* that affects the coloration of the body. Sexual dimorphism of this kind is quite rare in members of the subfamily Staphylininae, particularly in those of the tribe Staphylinini.

Results

Miobdelus egregius SMETANA

Miobdelus egregius SMETANA, 2001a: 176.

COMMENTS: *Miobdelus egregius* was described in my review of the genus (SMETANA 200la) from two male specimens of bright metallic green head and pronotum, collected at Emei Shan in 1996. While working on the review, I set aside a series of seven specimens from Emei Shan as a possible new species, refraining from describing it, because all seven specimens were females. The heads and pronota of these specimens were pale purplish metallic.

In the material received recently from Michael Schülke, Berlin, there was a series of *Miobdelus* specimens from Qionghai Shan, Sichuan, collected by S. Murzin. Five of these specimens had bright metallic green head and pronotum, while the color of the head and pronotum of the remaining eight specimens was purplish metallic. Closer examination of the specimens resulted in the discovery that the specimens with metallic green head and pronotum were all males, while the specimens with purplish metallic head and pronotum were all females. The entire series was obviously taken from the same set of pitfall traps, and therefore from the same habitat. It was logical to assume that these differently colored specimens very likely belong to the same species, and it also made me to go back to the specimens from Emei Shan, mentioned above. And, sure enough, the seven female specimens of the potentially new species turned out to be taken from the same pitfall traps, and therefore from the same habitat, from which the two bright metallic green male specimens of the original series of *M. egregius* came. As a next step, the males from

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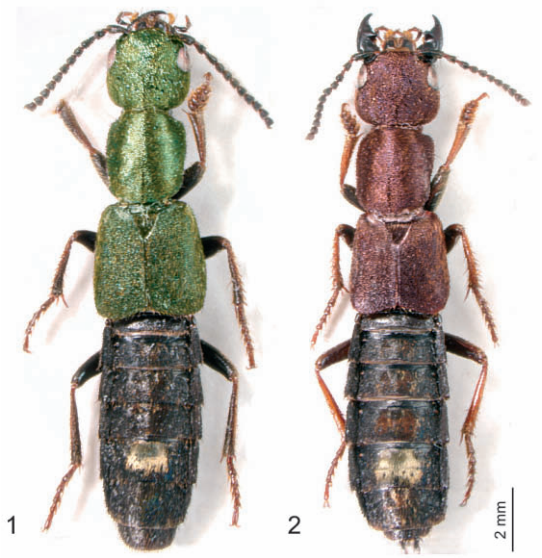
Qionglai Shan were dissected and their aedoeagi were found to be absolutely identical with those of the two males of the type series of *M. egregius*. Based on these facts, two conclusions were drawn: 1) that the populations from Emei Shan and Qionglai Shan are identical, and 2) that *M. egregius* displays sexual dimorphism in the coloration of the body. The first finding confirmed my suspicion (SMETANA 2001a) that *M. egregius* may not be endemic to Emei Shan, based on the fact that it possesses fully developed wings. The second finding uncovered a case of remarkable sexual dimorphism in the body color of a member of the tribe Staphylinini. The possibility that the different coloration may be a result of *post mortem* exposure to chemicals in the pitfall traps, can be safely eliminated, because all specimens were exposed equally, and the color difference is consistent with the sex of the specimens.



Figs. 1–2: Habiti of *Miobdelus egregius*; 1) male; 2) female.

DESCRIPTIVE COMMENTS: The description of the body coloration of *M. egregius* should be modified as follows: Entirely black, head and pronotum more or less bright metallic green or darker green, elytra bluish-green or greenish-blue (male); or entirely black, head and pronotum with pale to dark purplish metallic lustre, elytra with vague purplish sheen (female) (Figs. 1–2). The study of the additional material also discovered distinct variability in the coloration of the appendages, as well as in the coloration of the tomentose spots on the abdominal tergites of *M. egregius*. The antennae are always uniformly black in the males, whereas in the females the bases of the three basal segments are often rufobrunneous. The legs, both in the males and females, are usually dark, either entirely piceous-black, or the tibiae and particularly the tarsi are to various degree paler, or the legs are rarely entirely rufobrunneous. The patch of tomentose pubescence in the middle of the sixth (fourth visible) tergite is usually yellowish or yellowish-grey in both sexes, but rarely it is rather rusty, particularly in specimens with rufobrunneous legs; however, a yellowish-grey patch was also found in one male specimen with rufobrunneous legs. There seems to be hardly any doubt that all studied specimens are conspecific; however, the pronounced variability in the color of the appendages and in the color of the patch of tomentose pubescence on abdominal tergites is somewhat surprising.

RECOGNITION: When using the most recent key to the *Miobdelus* species of mainland China (SMETANA 2005), there is no problem with identification of the green males, irrespective of the

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color of the legs. The females would key out to *M. montivagus*, but they may be easily distinguished by the color of the fore body. The female specimens with rufobrunneous legs resemble specimens of *M. heinzi* SMETANA, 2001, but specimens of *M. heinzi* may be easily distinguished by the longer antennae and by the narrower pronotum that is indefinitely paler laterally and basally. The female specimens with dark legs resemble specimens of *M. purpurascens*, but specimens of *M. purpurascens* differ by the absence of the patch of pale tomentose pubescence in the middle of the fourth visible abdominal tergite, and by the longer antennae.

NEW RECORDS:

CHINA: [Sichuan]: Emei Shan, 3000 m, 29°32'N 103°21'E, 17.–19.VII.1996 [C66], leg. A. Smetana, J. Farkač and P. Kabátek, 7 ♀♀ (Smetana collection); Qionghai Mts., 3300–3500 m, 20 km W Qiao Qi, 55 km N Baoxing, 21.–22.VI.2003, leg. S. Murzin, 5 ♂♂, 8 ♀♀ (Schülke and Smetana collections); same, but 3000 m, 8.–10.VII.2003, 1 ♀ (Schülke collection); Erlangshan Mts., E Luding, 2600–2700 m, 14.–15.VI.2003, leg. S. Murzin, 1 ♀ (Schülke collection); (Wenchuan), Jiuding Shan, W slope, valley 5 km N Wenchuan, 3300 m, 31°28'N 103°41', 16.VII.1998, conif.forest, leg. M. Janata, 1 ♀ (Schülke collection).

Conclusion

More or less inconspicuous sexual dimorphism occurs commonly in species of many genera of most subtribes of Staphylinini and affects such characters as the degree of the dilatation of the protarsal segments, length of the antennal segments, the development of mandibular teeth, e.g., in *Ocypus* (*Pseudocypus*) *picipennis* FABRICIUS, 1792 (see SMETANA 2003: Figs. 1–4), the size of the head, etc.

Conspicuous sexual dimorphism, affecting the color and/or shape of various body parts seems to be more common in the tribe Xantholinini. The markedly differently colored males and females of the Nearctic *Oxybleptes kiteleyi* SMETANA, 1982, or the markedly differently developed body parts in the species of the subgenus *Timagenes* SMETANA, 1982 of the Nearctic genus *Habrolinus* CASEY, 1906 may be mentioned here (see SMETANA 1982, 1988 for details). Within the tribe Staphylinini, conspicuous sexual dimorphism is known in some taxa in the subtribe Quediina, such as the sexually dimorphic labial palpus in *Quedius* (*Microsaurus*) *liang* SMETANA, 1995, or the differently colored female of *Quedius* (*Microsaurus*) *myau* SMETANA, 1999 (see SMETANA 1995, 2001b for details). The sexual dimorphism in body color of *M. egregius* seems to be, to the best of my knowledge, unique within the subtribe Staphylinina.

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