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ON THE SYNONYMY OF *ANTHOBIUM FUSCULUM* ERICHSON, 1839 (COLEOPTERA: STAPHYLINIDAE: OMALIINAE)

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Shavrin A.V. 2013. On the synonymy of *Anthobium fusculum* Erichson, 1839 (Coleoptera: Staphylinidae: Omaliinae). *Acta Biol. Univ. Daugavpil., 13(1): 137 - 141.*

The following synonymies are established: *Anthobium fusculum* (Erichson, 1839) = *Lathrimaeum cachemiricum* Coiffait, 1982: 150 **syn. nov.**, = *Deliphrosoma ivanovi* Shavrin, 2012: 17 **syn. nov.**, = *Deliphrosoma kirgizica* Shavrin, 2012: 19 **syn. nov.** *Anthobium fusculum* is recorded for Kazakhstan, Kyrgyzstan, Tajikistan and India (Kashmir) for the first time.

Key words: Palaearctic, *Anthobium*, *Deliphrosoma*, taxonomy, new synonyms.

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INTRODUCTION

Recently I described two species of the genus *Deliphrosoma* Reitter, 1909 from Middle Asia (Shavrin, 2012). As it turned out, these species are conspecific with *Anthobium fusculum* Erichson, 1839, which is highly variable habitually, but is characterized by the shape and internal structure of the aedeagus.

According to Zerche (1991), the characters distinguishing the two closely related genera *Deliphrosoma* and *Anthobium* Leach, 1819 are very indistinct. Generally, they are separated only by the different body shape (large and flattened in *Deliprosoma*, small and convex in *Anthobium*). Other distinguishing characters such as the distance between the base of the antenna and the anterior margin of the eyes, and the presence or absence of a U-shaped notch near the base of antenna only apply to European species (Zanetti, 1987; 2012). The resulting taxonomic confusion is demonstrated by the case of *Deliphrosoma prolongatum* (Rottenberg, 1873), which was included in the genus *Lathrimaeum* (=*Anthobium*) by Lohse (1964) and Tóth (1982), although it had been regarded as a member of *Deliphrosoma* by Reitter (1909) or *Arpedium* (*Deliphrosoma*) by Scheerpeltz (1938).

Members of the two genera are distinguished by their habitats: while species of the genus *Anthobium* inhabit lower elevations (with a few exceptions), species of the genus *Deliphrosoma* are predominantly found near snow in alpine and subalpine habitats.

It is to be hoped that the phylogenetic affiliations of the two genera will be resolved by molecular studies in the future.

MATERIAL AND METHODS

Abbreviations: CS – private collection of A.V. Shavrin, Daugavpils, Latvia; CZ –

private collection of A. Zanetti, Verona, Italy; NMPC – National Museum, Prague, Czech Republic (M. Fikáček, J. Hájek); NMW – Naturhistorisches Museum Wien, Vienna, Austria (H. Schillhammer); ZIN – Zoological Institute, St.-Petersburg, Russia (S.V. Andreeva, B.A. Korotyaev).

The morphological studies were carried out using Zeiss Discovery V8 and V12 stereomicroscopes. A digital camera (Sony Alpha DSLR-A300) was used for the photographs.

Type and historic labels are shown within parentheses and separated by a comma, different lines in labels of the type and historical material are separated by '|'. Explanations of the type labels are given in angle brackets < >, necessary notes within the label are shown in square brackets [ ].

RESULTS

***Anthobium fusculum* (Erichson, 1839)**
(Figs. 1–6)
Lathrimaeum fusculum Erichson, 1839: 626
Olophrum fusculum: Redtenbacher, 1857: 249
Lathrimaeum (*Lathrimaeum*) *fusculum*: Scheerpeltz, 1961: 79
Lathrimaeum cachemiricum Coiffait, 1982: 150 **syn. nov.**
Deliphrosoma ivanovi Shavrin, 2012: 17 **syn. nov.**
Deliphrosoma kirgizica Shavrin, 2012: 19 **syn. nov.**
For other references see Herman, 2001: 232

Type material examined. *L. cachemiricum*: holotype, female: 'Inde, Cachemire, Zagipal | près Pahalgam, 3500-3600 m | Franz leg.', 'TYPE' <red printed label>, '*Lathrimaeum* [handwritten] | *cachemiricum* [handwritten] | H. COIFFAIT ~~det.~~ 19 [printed] 79 [handwritten]' (NMW).
D. ivanovi: holotype, male: 'Kazakhstan, Karatau Mt. | Zhamantas riv. N43º52`05`` | E68º 11`55``, 731 m, | 10.V.2010 Ivanov A. V. leg.', preparation of aedeagus in Canada balsam, 'HOLOTYPUS | *Deliphrosoma* | *ivanovi* sp.n. | Shavrin A.V. det. 2012' <red printed label> (CS).
D. kirgizica: holotype, male: 'Kirgizia | Bishkek | 28.10.93 | Ovchinnikov' <in Cyrillic, handwritten>, preparation of aedeagus [without apex of left paramere] in Canada balsam, 'HOLOTYPUS | *Deliphrosoma* | *kirgizica* sp.n. | Shavrin A.V. det. 2012' <red printed label> (CS).

Additional material. GERMANY: 1 spec.: Fürstenberg (ZIN); 1 male: same data (NMW); 1 spec.: Mecklenburg (ZIN); **CZECH REPUBLIC:** 1 female: Boh[emia] (NMPC); **AUSTRIA:** 1 m#: Salzburg; 1 male: Salzburg, Umgebung (NMW); 1 male: Umgb. Kufstein, Ti[rol]. Strupi (NMW); 1 male: Koschuta Alp., Car[inthia]. Strupi (NMW); **ITALY:** 1 male: Fenestrelle, Ganglb[auer]. 1908 (NMW); **TURKEY:** 3 spec.: Turkey, Erzurum, Cop-Gec. 19.5.1989, 2300 m, leg. A. Riedel (CZ); **KYRGYZSTAN:** 1 spec.: Tyan-Shan, slope of Fergansky Range, vall. riv. Maili Gu, under bark, 22.4.[19]92, leg. [A.Yu.] Solodovnikov (CZ).

Remarks. The species was described from Germany (type locality: 'Mark Brandenburg') by Erichson (1839). It was recorded from some countries of Europe, European part of Russia and Caucasus (Armenia) (Herman, 2001; Smetana, 2004), for several provinces of Turkey (Assing, 2004, 2006, 2007, 2013) and for Uzbekistan, Greater Chimgan (Zerche, 1991).

A. cachemiricum was described based on a female from Kashmir, India. Recently I studied the type in the collection of the NMW and did not find any morphological differences between them and specimens from the Middle Asia and Europe, suggesting that *A. cachemiricum* is conspecific with *A. fusculum*.

D. ivanovi and *D. kirgizica* were described based on one male each, from Kazakhstan (Karatau Mt.) and Kyrgyzstan (Bishkek) respectively. A comparison of the types of these names with material of *A. fusculum* from various regions revealed that the characters pointed out in the original descriptions, including the aedeagus, fall within the range of intraspecific variation of *A.*

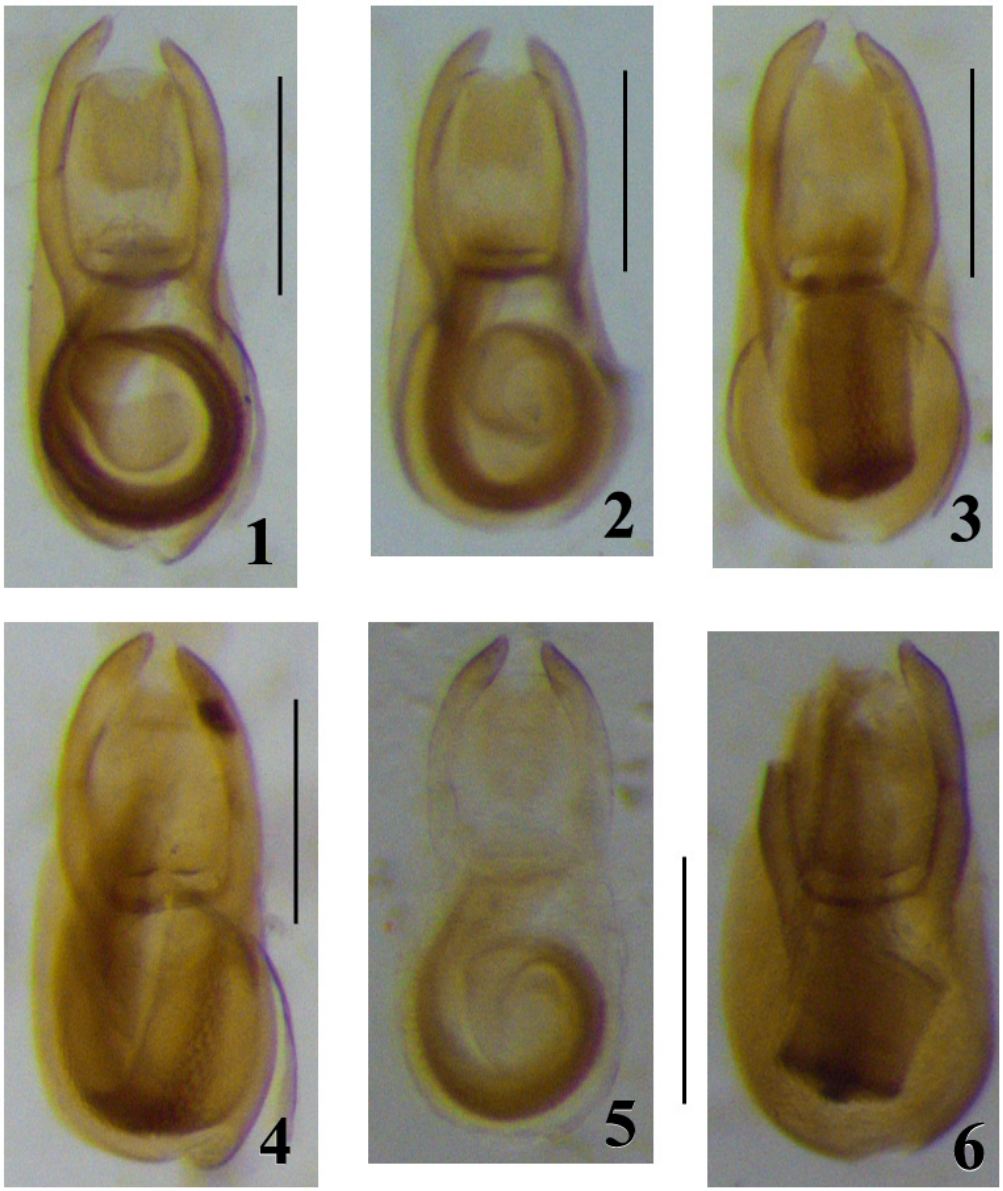

Fig. 1–6. Aedeagus of *Anthobium fusculum*: 1 – Austria: Koschuta, 2 – Italy: Fenestrelle, 3 – Austria: Kufstein, 4 – Austria: Salzburg, 5 – Kazakhstan: Karatau Mt., 6 – Kyrgyzstan: Bishkek. Scale bar 0.2 mm.

fusculum. Similarly, the female of *Deliphrosoma* sp. from Hissar Mts. (Tajikistan), which was reported by Shavrin (2012), also relates to *A. fusculum*. Additionally, two males of *A. fusculum* from Osch (Kyrgyzstan) are deposited in private collection of V. Assing (Assing, pers. comm.).

The description and figure of habitus of *A. melanochromum* Iablokov-Khnzorian, 1961 which was described in Armenia (Iablokoff-Khnzorian, 1961) is very similar to *A. fusculum*, however, for the confirmation of synonymy it is necessary to examine the type material.

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