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A revision of the genus *Baeocera* in Japan, with a new genus of the tribe Scaphisomatini (Coleoptera, Staphylinidae, Scaphidiinae)

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Abstract

The Japanese species of the genus *Baeocera* Erichson, 1845 are reviewed and a new genus *Baeoceroxidium* is established for *Baeocera micros* (Achard, 1923) and members of the *Baeocera pilifera* species group. The female genitalia are used for the first time in *Baeocera* for both, as species specific characteristics and to indicate relationships. *Amaloceroschema* Löbl, 1967 is placed in synonymy with *Baeocera.*

Key words: Scaphidiinae, *Baeocera*, Japan, new genus, *Baeoceroxidium*, female genitalia including soft anatomy of the genital tract, new combinations

Introduction

The Scaphisomatini genus *Baeocera* Erichson, 1845, comprises 259 species worldwide (Löbl 2012b). Within the genus, over 25 species groups were recognized, all based on male genitalia (Löbl 1971, 1979, 1984a, 1984b, 1990, 1992; Löbl & Stephan 1993). Löbl & Leschen (2003) pointed out difficulties in defining the genus by morphological characteristics, because of paraphyly. Subsequently, Leschen & Löbl (2005) provided a phylogeny of Scaphisomatini, based on morphological characteristics, and separated *Baeocera mussardi* Löbl, 1971 for which they established a new genus, *Kasibaeocera* Leschen & Löbl, 2005. As result, *Baeocera* was thought to be monophyletic. In addition, Leschen & Löbl (2005) defined the *Baeocera* group comprising ten genera, supported by the following synapomorphies, five of which are reversed in *Baeocera*: maxillary palpomere IV aciculate; eyes entire; prothoracic corbiculum present; procoxal cavities setose; mesocoxal lines parallel to coxa; mesocoxal lines punctuate; scutellum concealed in dorsal view; hind coxae contiguous.

The Japanese species of *Baeocera* may be readily distinguished from the remaining Japanese scaphidiines by the following characteristics in combination: profemur with ctenidium, pronotum with anterior bead, corbiculum present, body not compressed laterally, antennomeres III and IV cylindrical, mesepimeron distinct. The latest review of the Japanese *Baeocera* was given by Löbl (1984b), but he did not treat in detail all species and some of them remained unplaced in species groups. Currently, ten species of the genus are reported from Japan and these were assigned to the following five groups: *B. brevicornis* (Löbl, 1971), *B. curtula* Achard, 1923, *B. lenta* (Löbl, 1971), *B. monstrosa* (Löbl, 1971) and *B. satana* Nakane, 1963.

The present study is to a large extent based on female genitalia, examined in *Baeocera* for the first time. The new sets of characteristics support most of the groups based on male genitalia. An additional group including *Baeocera frater* (Löbl, 1969) and its allied are recognized and defined. In addition, study of the aberrant Japanese *Baeocera micros* (Achard, 1923), and of members of the *Baeocera pilifera* Löbl, 1984 group, provides evidence that these species differ from *Baeocera* in a number of characteristics currently used as generic. A new genus, *Baeoceroxidium*, is therefore established to accommodate these species. The remaining Japanese species of *Baeocera*, and *Baeoceroxidium micros*, are redescribed and their distribution is documented with new records. A key for the actual nine Japanese species of *Baeocera* is provided. The mouthparts and the aedeagus of the Nearctic *Baeocera falsata* Achard, 1920, the type species of the genus, are illustrated for comparative reasons.

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