

**On the *Baeocera monstrosa* group (Coleoptera: Staphylinidae: Scaphidiinae), with description of a new species from China**

**Poznámky k druhové skupině *Baeocera monstrosa* (Coleoptera: Staphylinidae: Scaphidiinae), s popisem nového druhu z Číny**

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**Coleoptera, Staphylinidae, Scaphidiinae, *Baeocera monstrosa* group, taxonomy, China**

**Abstract.** *Baeocera fujiana* sp. nov. from the Chinese Province of Fujian is described. This species is a member of the *Baeocera monstrosa* group defined by the male genital characters. The *B. monstrosa* group now comprises 17 species, all Asian in distribution. The shape of the parameres is especially useful for identification of members of this group.

INTRODUCTION

The species group *Baeocera monstrosa* was proposed for *Eubaeocera monstrosa* Löbl, 1971 and *E. paradoxa* Löbl, 1971 from Sri Lanka, and *Baeocera inaequicornis* Champion, 1927, from North India (Löbl 1971). The name *Eubaeocera* Cornell, 1967 was found to be invalid, and was placed in synonymy with *Baeocera* Erichson, 1845 (see Löbl 2018b). Subsequently, three previously described species, *Amalocera doriae* Pic, 1920, *Scaphisoma breveapicale* Pic, 1926, and *Scaphisoma productum* Pic, 1926, were recognized as being related to *B. monstrosa* (Löbl 1975, 1982), and the following ten new species were added to the group: *B. gilloghyi* (Löbl, 1973), *B. nakanei* (Löbl, 1968), *B. takizawai* Löbl, 1984, *B. roberti* Löbl, 1986 (a junior homonym, replaced by *robertiana* Löbl, 1990), *B. pubiventris* Löbl, 1990, *B. innocua* Löbl, 1990, *B. yunnanensis* Löbl, 1999, *B. alticola* Löbl, 2012, *B. fortis* Löbl, 2012, and *B. inoptata* Löbl, 2018a. These 16 species are known only from tropical and subtropical Asia, ranging from Sri Lanka and Kumaon to Japan, Taiwan and the Philippines. The group is defined by the aedeagal characters. The median lobe is very large, filling much of the abdominal cavity, asymmetrical, with the basal bulb strongly enlarged and weakly sclerotized compared to the apical process of the median lobe or to the parameres, its apical process is strongly sclerotized, short, inflexed, to part or completely overlapped by the basal bulb; the internal sac is complex, consisting of overlapping sclerotized pieces, spines, and membranous denticular and scale-like structures; the parameres are uneven, comparatively short, the left paramere usually bearing one or more lobes and/or denticles. Unlike the species-rich *B. brevicornis* and *B. curtula* groups, the aedeagi of species of the *B. monstrosa* group lack a flagellum and a flagellar guide sclerite. They also lack an extruded ejaculatory duct, which is present in members of the *B. lenta* and *B. ceylonensis* groups (see Löbl 1992).

While species of the *B. monstrosa* group are similar in external characters, their aedeagi provide conspicuous species-specific characters, and the shape of their parameres in particular is diagnostic. For practical identification, four types of parameres are distinguished:

- Both parameres are simple, lacking processes, lobes or denticles in *B. gilloghyi* and *B. pubiventris*.

- Both parameres are simple, the right paramere lacks a mesal process, the left paramere is expanded dorsally or denticulate in *B. fortis* and *B. innocua*.

- The right paramere is simple, lacking a process or denticles, posterior wide basal section, the left paramere is enlarged, lobed and/or bears one or more processes or denticles in *B. alticola*, *B. inoptata*, *B. nakanei*, *B. monstrosa*, *B. paradoxa*, *B. robertiana*, and *B. yunnanensis*.

- The right paramere is expanded mesally by a process or a lobe, or denticulate, posterior wide basal section, the left parameres is enlarged, lobed and/or bears one or more processes or denticles in *B. breveapicalis*, *B. doriae*, *B. inaequicornis*, *B. producta*, and *B. takizawai*.

An additional species with a simple right paramere and widened, lobed left paramere was collected by J. Klapperich in Fujian. It was found within old unidentified collections housed at the National Museum, Praha. Although only a single specimen is available, it has unambiguous diagnostic characters, and therefore it is considered worthwhile to describe it.

## MATERIAL AND METHODS

The material studied is deposited in NMPC (Národní Muzeum, Praha, Czech Republic).

The locality data are reproduced verbatim. Data from different labels are separated by a slash. The body length is measured from the anterior pronotal margin to the posterior inner angles of the elytra. The length/width ratios of the antennomeres are measured on a slide-mounted antenna. The sides of the aedeagus refer to their morphological side with the ostium situated dorsally, while it is in the resting position rotated 90°. The dissected body-parts are embedded in Euparal and fixed on a separate card on the same pin as the specimen.

## RESULTS

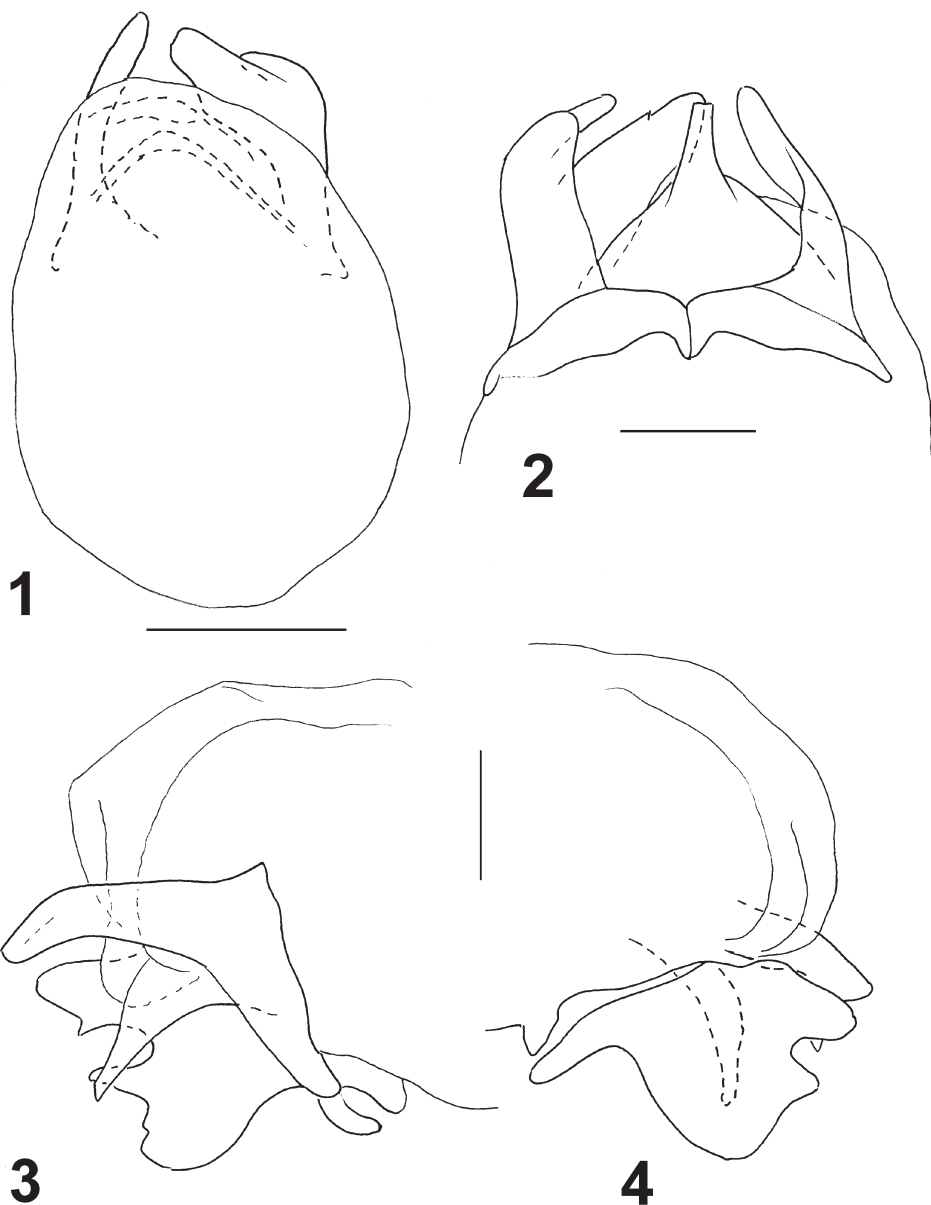
### *Baeocera fujiana* sp. nov.

(Figs 1–6)

**Type locality.** People's Republic of China, Fujian, Guadun [= Kuatun], 2300 m.

**Type material.** Holotype, male: Kuatun (2300m) 27,40n.Br. 117,40ö. L. J. Klapperich 28. 1. 1938 (Fukien) /coll. general National Museum Prague, Czech Republic (NMPC).

**Description.** Length 2.02 mm, width 1.45 mm. Head and body brown, very dark, with weak reddish lustre. Legs lighter, reddish brown, antennae ochraceous. Interocular interval twice eye-width (dorsal view). Length/width ratios of antennomeres as: III 20/9: IV 30/9: V 37/9: VI 23/13: VII 46/18: VIII 42/14 (antennomeres IX to XI have been broken off and are missing). Lateral contours of pronotum and elytra almost contiguous. Dorsum of body not microsculptured. Pronotum with lateral margins evenly rounded, lateral margin carinae hardly visible in dorsal view, punctation irregular, visible at 16 times magnification, punctures shallow, puncture intervals about two to four times as large as puncture diameters. Exposed part of scutellum small, triangular. Elytra with lateral margins oblique, posterior widest point, lateral margin carinae concealed in dorsal view, sutural striae curved along basal margins to form complete basal striae joined to lateral striae, adsutural areas flat, each with a dense puncture row; discal punctation coarser than pronotal punctation, consisting of rather well delimited punctures, puncture intervals mostly about 3 to 4 times as large as puncture diameters. Hind wings well developed. Mesepimera about 4 times as long as wide and 5 times as long as intervals to



Figs 1–4. *Baeocera fujiana* sp. nov.: 1 – aedeagus in dorsal view, scale = 0.2 mm; 2 – apical part of the median lobe and parameres, in ventral view, scale = 0.1 mm; 3 – apical part of the median lobe and parameres, left side, scale = 0.1 mm; 4 – apical part of the median lobe and parameres, right side, scale = 0.1 mm.

Obr. 1–4. *Baeocera fujiana* sp. nov.: 1 – aedeagus dorzálně, měřítko = 0,2 mm; 2 – apikální část mediálního lobu a paramery, ventrální pohled, měřítko = 0,1 mm; 3 – apikální část mediálního lobu a paramery, pohled zleva, měřítko = 0,1 mm; 4 – apikální část mediálního lobu a paramery, pohled zprava, měřítko = 0,1 mm.

mesocoxae. Metaventrite with dense mesal U-shaped puncture row consisting of punctures about as large as punctures margining submesocoxal lines; punctuation of remaining surface very fine and sparse; submesocoxal lines convex, submesocoxal areas about 0.03 mm long, as seventh of shortest intervals to metacoxae, with puncture rows extended laterally to about mid-length of metepimera. Metanepisterna flat, at widest point 0.13 mm, narrower anteriorly. Tibiae straight. Apical tergites with punctulate microsculpture. Propygidium with dense and coarse punctuation. Punctuation on pygidium sparse, finer than on propygidium. Ventrite I with row of basal punctures interrupted in middle, punctures slightly elongate, remaining punctuation irregular, sparse, coarse except near lateral margins. Ventrites II and III with dense and rather coarse punctuation.

**Male characters.** Protarsomeres 1 to 3 moderately widened, narrower than apices of pro-tibiae. Mesotarsomeres 1 slightly widened. Aedeagus (Figs 1–6) 0.59 mm long. Basal bulb in dorsal view oval, completely overlapping apical process of median lobe and overlapping large parts of parameres. Apical process of median lobe moderately inflexed, gradually narrowed, with tip acute in lateral view, truncate in ventral view. Right parameres simple, with moderately bent and widened apical section. Left parameres strongly widened, lobed, with notched and denticulate apical margin. Internal sac with large mesal rod joined to proximal sclerites; membranous spine-like and denticular structures present on lateral part of internal sac and around apical part of mesal rod.

**Differential diagnosis.** Four members of the *B. monstrosa* group have been described or reported from China: *B. breveapicalis* (Pic, 1926), *B. gilloghyi* (Löbl, 1973), *B. pubiventris* Löbl, 1990 and *B. yunnanensis* Löbl, 1999. The new species has elytra with complete basal striae (i.e. joined to lateral striae) as in *B. breveapicalis*, while the other three species have the basal striae of the elytra only reaching to the humeral areas, not joined to lateral striae. *Baeocera fujiana* may be easily distinguished from *B. breveapicalis* by the shape of the parameres and internal sac, notably by the right paramere lacking prominent process (see Löbl 1975: 269, fig. 1 and Löbl 1999: 732, fig. 63). The aedeagal characters suggest relationships of *B. fujiana* to *B. nakanei*, though the shape of the right parameres with a large prominent lobe is diagnostic for the new species. These two species may be also easily distinguished by the size of their antennomeres, especially by the antennomeres VI which are about as long as the antennomeres IV in *B. nakanei*, while in the new species they are notably shorter than antennomeres IV (see Ogawa & Löbl 2013: 314, fig. 68, 320).

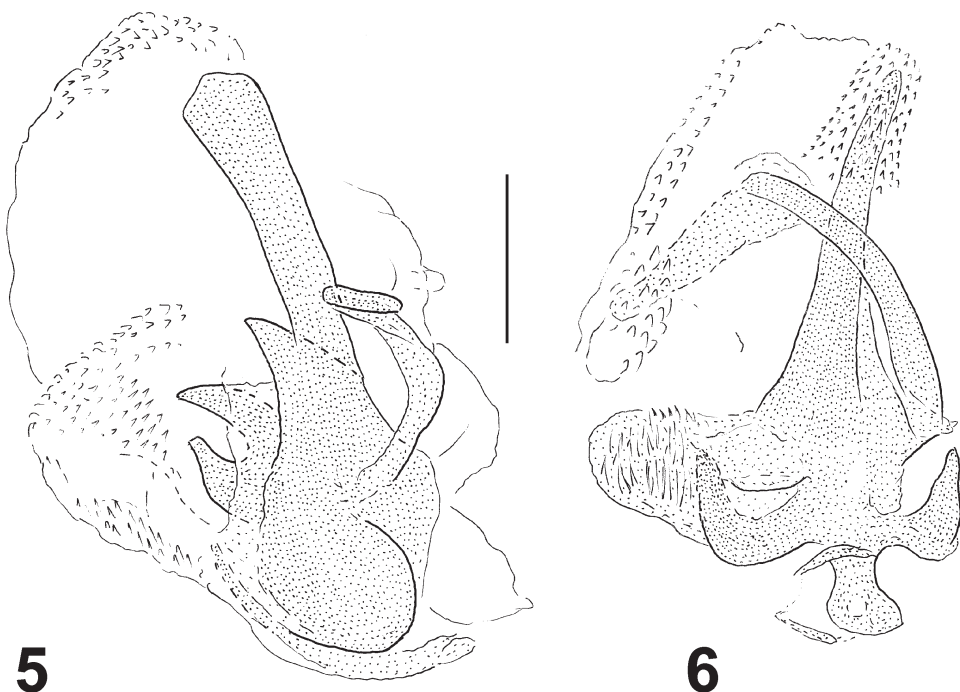
**Distribution.** People's Republic of China: Fujian.

**Etymology.** The species epithet is a Latinized adjective derived from the name of the province of Fujian.

**ACKNOWLEDGEMENTS.** My cordial thanks go to Jiří Hájek (National Museum, Praha) who made the material available for study.

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Figs 5–6. *Baeocera fujiana* sp. nov.: 5 – internal sac, lateral view – left side; 6 – internal sac, lateral view – right side; scale = 0.1 mm.

Obr. 5–6. *Baeocera fujiana* sp. nov.: 5 – vnitřní vak, laterální pohled – zleva; 6 – vnitřní vak, laterální pohled – zprava; měřítko = 0,1 mm.

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## SOUHRN

Nový druh podčeledi Scaphidiinae (Coleoptera: Staphylinidae), *Baeocera fujiana* sp. nov., je popsán z čínské provincie Fu-ťien. Tento druh patří do druhové skupiny *Baeocera monstrosa*, která nyní zahrnuje 17 asijských druhů. Skupina je definovaná znaky na samčích genitáliích, které jsou v článku diskutované. Pro praktické určování je především důležitý tvar asymetrických paramer.