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## A supplement to the knowledge of the Scaphidiinae of China

(Coleoptera: Staphylinidae)

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### Abstract

The present paper provides new records of Scaphidiinae from China and descriptions of the following new species: *Baeocera coalita* sp. n., *B. lasciva* sp. n., *B. proseminata* sp. n., *Scaphisoma dilatatum* sp. n., *S. neglectum* sp. n., *S. michaeli* sp. n., *S. prostratum* sp. n., *Scaphobaeocera fujiana* sp. n., and *S. amicalis* sp. n. Male genital characters are figures for all new species.

### Introduction

My recent reviews (LÖBL 1999 and 2000) of the Scaphidiinae of the People's Republic of China (below: China) contain data on 122 species. Since, I have described two additional Chinese species of Scaphidiinae (LÖBL 2001 and 2002). The material on which these papers were based came mainly from collections made in Yunnan and Sichuan. Scaphidiinae of the more eastern Chinese provinces remained until now largely under-represented in collections examined. It is therefore not surprising that new material of Scaphidiinae coming mainly from the Anhui, Fujian and Jiangxi provinces yield species new to science. In addition, it contains four species that are new to the fauna of China, and provides data that significantly extend the known distribution of several species. With the material published in the present paper the number of Scaphidiinae species reported from China raises to 137.

The studied material is deposited as follows: Muséum d'histoire naturelle Genève, Geneva (MHNG), Institute of Zoology, Chinese Academy of Sciences Beijing, Peking (ZIB), Naturhistorisches Museum Wien, Vienna (NHMW), Zoologisches Museum Berlin, Berlin (ZMB), and the private collections of M. SCHÜLKE, Berlin (PCMS) and A. PÜTZ, Eisenhüttenstadt (CPAP). The methods are as in LÖBL 2000 but the length ration of antennal segments is given for all species, and the male genitalia were not dissected in all specimens examined.

### Results

#### New records

##### *Baeocera cooperi* LÖBL

**Material examined.** South Anhui, Jiuhuashan, 700-900 m, 16-19.V.98, S. KURBATOV, 2♂, 2♀; Jiangxi, Jianggashan, 700-900 m, 26.V.-2.VI.98, S. KURBATOV, 1♂, 1♀; Jiangxi, Wuyi Shan, 5.VI.2001, Huanggashan, 27°84'N 117°76'E, ca 2000 m, *Cryptomeria-Stewartia-Rhododendron* litter, J. COOTER & P. HLAVÁĚ, 1♂, 1♀; Fujian, Wuyi Shan, Road to Guadun, 27°73'N 117°64'E, 1.VI.2001, mixed forest litter, 1300 m, J. COOTER, 2♂ 1♀ (all MHNG).

**Comments.** This species was recorded from Hong Kong and Zhejiang.

##### *Baeocera franzi* (LÖBL)

**Material examined.** North Fujian, near Wuyishan, about 500 m, litter, 22.V.98, S. KURBATOV, 1♂, 1♀ (MHNG).

**Comments.** This species described from Thailand is widely distributed in southern mainland China. It was not yet reported from Fujian.

*Baeocera kubani* LÖBL

**Material examined.** Jiangxi, Jianggangshan, 700-900m, 26.V.-2.VI.98, S. KURBATOV, 2♂, 1♀; Fujian, Wuyi Shan, 27°72'N 117°20'E, road to Masu, ca 8 km, 1000 m, 6.VI.2001, *Rhododendron* forest litter, J. COOTER, 1♂ (MHNG).

**Comments.** The description of this species was based on a single male found at 2800m altitude in the Jizu Mountains, Yunnan. The new material reported above comes from much lower altitudes, and far from the type locality. Nevertheless, no relevant character was found to separate the holotype from the Jiangxi and Fujian specimens.

*Baeocera longicornis* (LÖBL)

**Material examined.** Jiangxi, Jianggangshan, 700-900 m, 26.V.-2.VI.98, S. KURBATOV, 1♂, 2♀ (MHNG).

**Comments.** This species is widely distributed in southeast Asia. It was recorded previously from two Chinese provinces, Hong Kong and Yunnan.

*Baeocera takizawai* LÖBL

**Material examined.** Jiangxi, Jianggangshan, 700-900 m, 26.V.-2.VI.98, S. KURBATOV, 2♂, 2♀ (MHNG).

**Comments.** This species was known so far only from the Ryukyu Archipelago. New to China.

*Scaphisoma dumosum* LÖBL

**Material examined.** West Sichuan, Ganzi Tibetan Autonomous Prof., Luding Co., 7 km S of Luding, tributary of Dadu He, 29°53'15"N 102°12'78"E, 23.VI.1999, A. PÜTZ, 2♂ (PCAP, MHNG).

**Comments.** The species was known only from Yunnan.

*Scaphisoma geminatum* LÖBL

**Material examined.** Jiangxi, Jianggangshan, 700-900 m, 26.V.-2.VI.98, S. KURBATOV, 47 specimens (MHNG); Fujian, Wuyi Shan, road to Masu ca 8 km, 1000 m, 6.VI.2001, 27°72'N 117°20'E, *Rhododendron* dominant forest litter, J. COOTER, 9 spec. (MHNG); Fujian, Wuyi Shan, approx. 1150 m, Qiliqiao-Guadun road, 27°73'N 117°64'E, 1.VI.2001, mixed forest litter, J. COOTER & P. HLAVÁĚ, 1♂ (MHNG).

**Comments.** This species was known only from the north-eastern Indian Meghalaya and from the Chinese province Guangong.

*Scaphisoma migrator* LÖBL

**Material examined.** Border Shaanxi-Sichuan, Daba Shan pass, 20 km SSE Zhenping, 1700-1900 m, 31°44'N 109°35'E, 9. and 12.VII.2001, A. SMETANA (C96b), 3♂, 2♀ (MHNG); same but 1700-1800 m, mixed forest, moss, bark, sifted [C01-07C], M. SCHÜLKE, 7 spec. (PCMS, MHNG); same but 9-12.VII.2001, D. WRAZE [07], 21 spec. (PCMS, MHNG); South Shaanxi, Qinling Shan, pass on road Zhouzhi – Foping, 105 km SW Xi'an, N-slope, 1700 m, 33°46'N 107°58'E, 3.VII.2001, small creek valley, deciduous forest, sifted [C01-02] M. SCHÜLKE 2♂ (PCMS); West Hubei, Daba Shan, creek valley 8 km NW Muyuping, 31°29'N 110°22'E, 1550-1650 m, 18.VII.2001, deciduous forest, moss, sifted [C01-16A], M. SCHÜLKE, 8 spec. and same data but edge of creek, 1540 m, D. WRAZE [16], 7 spec. (PCMS); West Hubei, Daba Shan, pass east of Mt. Da Shennoglia, 12 km NW Muyuping, 31°30'N 110°21'E, 16 and 22.VI.2001, dry creek valley, mixed deciduous forest, dead wood, mushrooms, moss, 1950-2000 m, sifted [C01-13], M. SCHÜLKE, 1♂ (PCMS).

**Comments.** This species was reported from few localities in the Shaanxi and Sichuan provinces.

*Scaphisoma notatum* LÖBL

**Material examined.** West Hubei, Daba Shan, pass east of Mt. Da Shennoglia, 12 km NW Muyuping, 31°30'N 110°21'E, 16 and 22.VI.2001, dry creek valley, mixed deciduous forest, dead wood, mushrooms, moss, 1950-2000 m, sifted [C01-13], M. SCHÜLKE, 3♂, 3♀ (PCMS, MHNG); South Shaanxi, Daba Shan, NW pass 25 km NW Zhenping, 32°01'N 109°19'E, 2150 m, 11.VII.2001, young coniferous forest, moss, sifted [C01-09] M. SCHÜLKE, 1♀

(PCMS); border Shaanxi-Sichuan, Daba Shan, pass 20 km SSE Zheping, 1700-1800 m, 31°44'N, 109°35'E, 12.VII.2001, mixed forest, moss, bark, sifted [C01-07C], 2♂ M. SCHÜLKE (MHNG).

**Comments.** This species was known from north Pakistan, the Indian and Nepal Himalayas, Yunnan and Sichuan.

*Scaphisoma portevini* PIC

**Material examined.** South Anhui, Jiuhuashan, 700-900 m, 16-19.V.1998, A. KURBATOV, 3♂, 2♀ (MHNG).

**Comments.** This species is known from Korea, Japan and China. It was previously recorded from the Guanxi, Sichuan and Yunnan provinces.

*Scaphisoma pseudodelictum* LÖBL

**Material examined.** Jiangxi, Jianggangshan, 700-900 m, 26.V.-2.VI.98, S. KURBATOV, 1♂ (MHNG).

**Comments.** This species is known to occur in India, Thailand and China, yet for the latter country it was previously recorded only from Yunnan.

*Scaphobaeocera inexpectata* LÖBL

**Material examined.** South Anhui, Jiuhuashan, 700-900 m, 16.-19.V.98, S. KURBATOV, 2♂, 9♀; Jiangxi, Jianggangshan, 700-900 m, 26.V.-2.VI.98, S. KURBATOV, 1♂ (MHNG).

**Comments.** This species was described from Japan and later recorded from Far East Russia. New to China.

*Scaphobaeocera japonica* (REITTER)

**Material examined.** West Sichuan, Ya'an prefecture, Tianquan Co. Jiajin Shan, valley above Labahe, N.R.ST., 57km W Ya'an, 30°06'N 102°25'E, 1000 m, debris, bark and fungi, 12.VII.1999, 4♂, 6♀ M. SCHÜLKE (PCMS, MHNG); South Sichuan, Ya'an prefecture, Shimian Co. Xiaoxiang Ling, lateral valley above Nanya Cun nr. Caluo, 1250 m, bark, fungi, debris, 7. VII.1999, M. SCHÜLKE, 1♂, 6♀ (PCMS, MHNG).

**Comments.** This species was known only from Japan. New to China.

*Scaphobaeocera nobilis* LÖBL

**Material examined.** Fujian, Wuyi Shan, Qiliqiao – Guadun Road, 27°75'N 117°64'E, 1.VI.2001, 1000-1300 m, under bark of dead tree, J. COOTER, 1♂ (MHNG).

**Comments.** This species was known only from Bhutan, Thailand and Yunnan.

*Scaphobaeocera spinigera* LÖBL

**Material examined.** Fujian, Wuyi Shan, road to Guadun, 27°73'N 117°64'E, 1.VI.2001, mixed forest litter, 1300 m, J. COOTER, 1♂ (MHNG).

**Comments.** This is a widely distributed species known from Pakistan, India, Nepal, Thailand, and China. The previous Chinese records are from Hong Kong and Sichuan.

*Scaphobaeocera timida* LÖBL

**Material examined.** Jiangxi, Jianggangshan, 700-900 m, 26.V.-2.VI.98, S. KURBATOV, 1♂; West Hubei, Daba Shan valley 11km NW Muyuping, 31°30'N 110°22'E 1960 m, 18.VII.2001, A. SMETANA, 1♂, 1♀ (MHNG).

**Comments.** This species was so far known from the Himalayas, with the most eastern record coming from Bhutan. New to China.

*Scaphoxium intermedium* LÖBL

**Material examined.** South Anhui, Jiuhuashan, 700-900 m, 16.-19.V.98, S. KURBATOV, 1♂, 1♀ (MHNG).

**Comments.** The range of this species extends from northern India to China. The only previous Chinese record is based on a single male from Yunnan. The new record extends significantly the known range of the species.

*Scaphoxium singlanum* LÖBL

**Material examined.** South Anhui, Jiuhuashan, 700-900 m, 16-19.V.98, S. KURBATOV, 1♂ (MHNG).

**Comments.** This species was so far known only from one locality, at the southern slopes of the Darjeeling District in North India. New to China.

**New species**

*Baeocera coalita* sp. n.

(Figs. 1-3)

**Type material. Holotype** ♂: China, West Hubei, Daba Shan, creek valley 8 km NW Muyuping, 31°29'N 110°22'E, 1550-1650 m, 18.VII.2001, deciduous forest, moss (C01-16A), M. SCHÜLKE (ZMB).

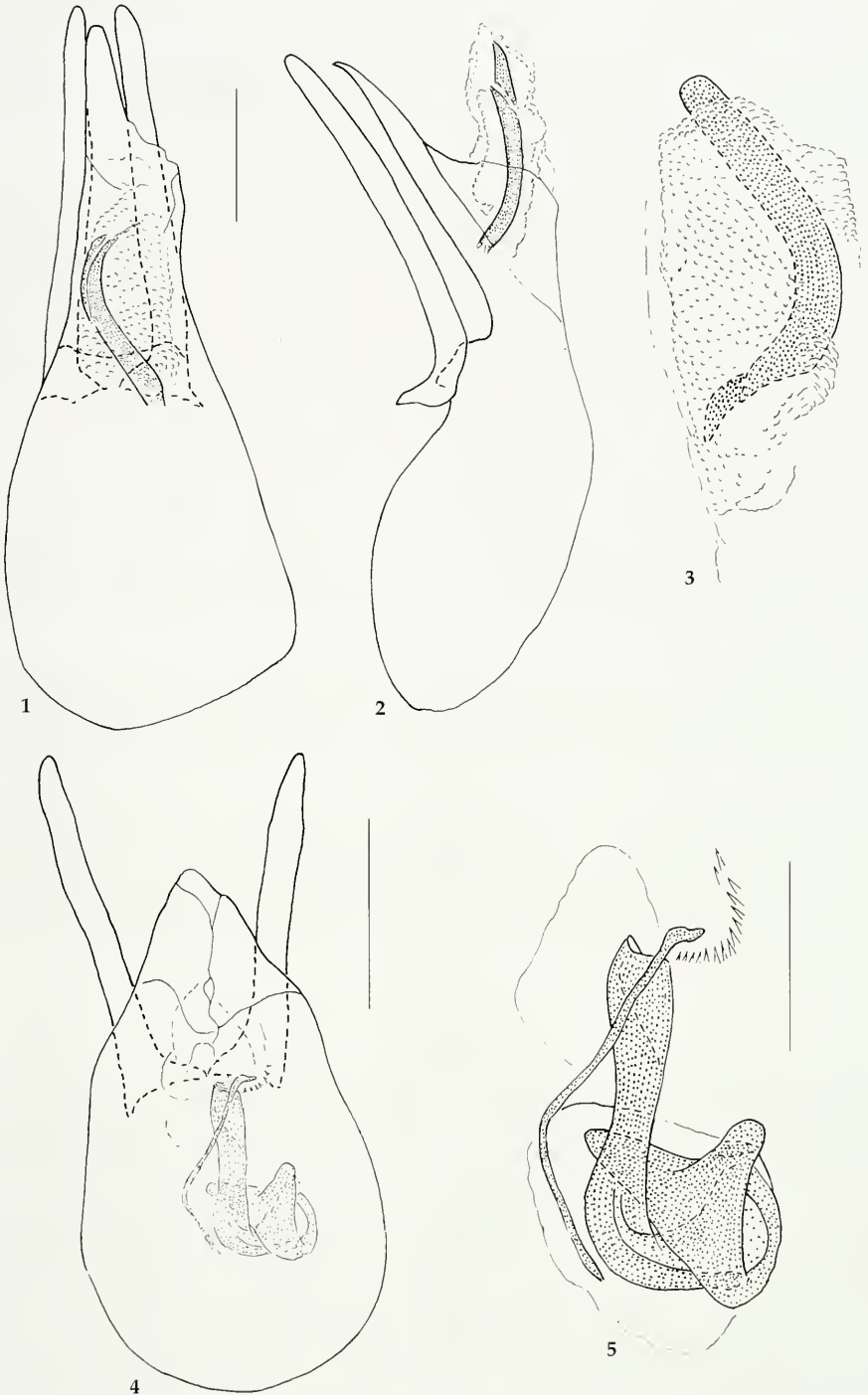
**Paratypes:** West Hubei, Daba Shan, mountain range NE Muyuping, pass 12 km N Muyuping, 31°32'N 110°26'E, 2380 m, 17.VII.2001, N-pass, N-slope with young deciduous forest, bank of small creek, moss, sifted (C01-15), M. SCHÜLKE, 1♂ (MHNG); South Shaanxi, Qinling Shan, pass on road Zhouzhi-Foping, 105 km SW Xi'an, N-slope, 1990 m, 33°44'N 107°59'E, 2-4.VII.2001, small creek valley, mixed deciduous forest, bamboo, small meadows, dead wood, fungi, sifted (C01-01), M. SCHÜLKE, 2♂, 5♀ (PCMS, MHNG).

**Description.** Length 1.55-1.60 mm. Dorsum of body black or reddish-black, pronotal base, and base, apices and adsutural areas of elytra usually lighter than centres of pronotal and elytral disc. Ventral side of body dark reddish-brown to black, abdominal apex, femora and tibiae ochreous, basal segments of antennae and tarsi lighter than tibiae, antennal segments V to XI brown. Length ratio of antennal segments as: III 8: IV 9: V 10: VI 8: VII 13: VIII 9: IX 14: X 13 XI 18 (holotype). Segments 3 and 4 narrow, segments V and VI equally wide, slightly wider than segment IV, segments VII, VIII and XI each about 2.5 times as long as wide, segment VII not widened at inner side; wider than segment VI. Contours of pronotum and elytra separately arcuate. Pronotum with lateral margins arcuate, lateral striae not visible in dorsal view, punctation very fine, hardly visible at 100 times magnification, microsculpture absent. Elytra with lateral margins weakly arcuate, lateral bead exposed only near base at dorsal view, sutural striae extending along base to form entire basal striae joined to lateral striae. Adsutural areas flat, narrow. Tip of scutellum exposed. Elytral punctation sparse and very fine, similar to pronotal punctation. Prohypomera impunctate. Mesepimeral ridge 2 to 2.5 times as long as interval to mesocoxa. Middle part of metasternum convex, impressed posteriorly, with fairly fine setiferous punctures at both sides of mesal area. Latero-anterior part of metasternum rather coarsely punctate, lateroposterior part of metasternum very finely punctate. Submesocoxal lines arcuate, coarsely punctate, submesocoxal areas 0.05 mm long. Metepisterna parallel-sided, with deep, broad and straight suture. Abdominal sternite 1 with basal punctures fairly coarse, not elongate, remaining abdominal punctation very fine and sparse. Tibiae straight.

**Male characters.** Segments 1 to 3 of protarsi distinctly widened, with tenant setae. Aedeagus (Figs 1 to 3) 0.48-0.52 mm long. Median lobe lacking prominent articular process, apical process somewhat shorter than basal bulb, oblique, tapering, bent at tip. Internal sac with fine, scale-like structures, flagellum almost evenly thick, almost evenly curved in lateral view, oblique basally and curved apically in dorsal view.

**Comments.** The species is a member of the *Baeocera brevicornis* group. It is very similar to the Himalayan *B. sordidoides* LÖBL and Japanese *B. sordida* LÖBL. These three species share most external diagnostic characters, in particular the very fine elytral punctation, while other members of the group possess distinct elytral punctation. *B. coalita* may be readily distinguished from *B. sordida* and *B. sordidoides* by the shape of the flagellum that is straight and not thickened basally, while it is curved and thickened basally in these two allied species. In the key to the Chinese *Baeocera* (LÖBL 1999) it would fall under the couplet 16 (to *B. sordidoides*) from which it may be distinguished also by the metasternal punctation.





**Figs. 1-3.** *Baocera coalita* sp. n., aedeagus in dorsal and lateral view (1,2), internal sac extruded, in detail (3). Scale bar = 0.1 mm.

**Figs. 4,5.** *Baocera lasciva* sp. n., aedeagus in dorsal view (4), internal sac in detail (5). Scale bars = 0.1 mm in Fig. 4, 0.05 mm in Fig. 5.

*Baeocera lasciva* sp. n.

(Figs 4, 5)

**Type material.** Holotype ♂: China, Fujian, Wuyi Shan near Guadun, 27°70'N 117°64'E, 1.VI.2001, mixed forest litter, 1150 m, J. COOTER (ZIP).

**Paratype:** same data as the holotype, 1♀ (MHNG).

**Description.** Length 1.22-1.29 mm. Body ochreous, femora about as body, apical abdominal segments, tibiae, tarsi and antennae lighter. Length ratio of antennal segments as: III 6: IV 8: V 10: VI 9: VII 11 VIII 9 IX 11: X 11: XII 12 (holotype). Segments 3 and 4 narrow, segments V and VI equally wide, slightly wider than segment IV, segments VII and VIII each about 3 times as long as wide, segment XII about twice as long as wide. Contours of pronotum and elytra separately arcuate. Pronotum with lateral margins arcuate, lateral striae not visible in dorsal view, punctuation very fine, hardly visible at 100 times magnification, microsculpture absent. Tip of scutellum exposed. Elytra with lateral margins arcuate, lateral bead not exposed at dorsal view, sutural striae extending along base to form entire basal striae joined to lateral striae. Adsutural areas flat, narrow. Elytral punctuation coarse and fairly dense, with intervals mostly about 2 to 3 times as large as puncture diameters, punctuation near elytral apices distinctly finer than on remainder of disc. Prohypomera impunctate. Mesepimeral ridge about twice as long as interval to mesocoxa. Middle part of metasternum hardly convex, with punctuation fairly fine and dense. Lateral parts of metasternum with punctuation coarse and very dense, most of punctures elongate and larger than puncture intervals. Submesocoxal lines weakly arcuate, submesocoxal areas hardly 0.03 mm long. Metepisterna fused. Abdominal sternite 1 with basal punctures coarse, slightly elongate, discal punctuation coarse, fairly dense, much sparser and slightly finer than punctuation on lateral parts of metasternum. Following sternites very finely punctate. Tibiae straight.

**Male characters.** Segments 1 to 3 of protarsi weakly widened, with tenant setae. Aedeagus (Figs 4, 5) 0.34 mm long. Median lobe with apical process gradually narrowed apically and weakly curved. Parameres narrow, slightly sinuate. Internal sac with lateral rod narrow, curved, crossing apical part of guide-sclerite. Guide-sclerite comparatively long, slightly narrowed in middle, touching area bearing row of fine denticles.

**Comments.** This species is a member of the *Baeocera lenta* group. It falls to the couplet 20 in the key of the *Baeocera* of China (LÖBL 1999) but differs drastically from the two included species, *B. longicornis* (LÖBL) and *B. pigra* (LÖBL), by the the internal sac of the aedeagus bearing a long, lateral rod. In addition, *B. lasciva* may be distinguished from *B. pigra* by the parameres that diverge apically, and from *B. longicornis* by the internal sac having a row of denticular structures.

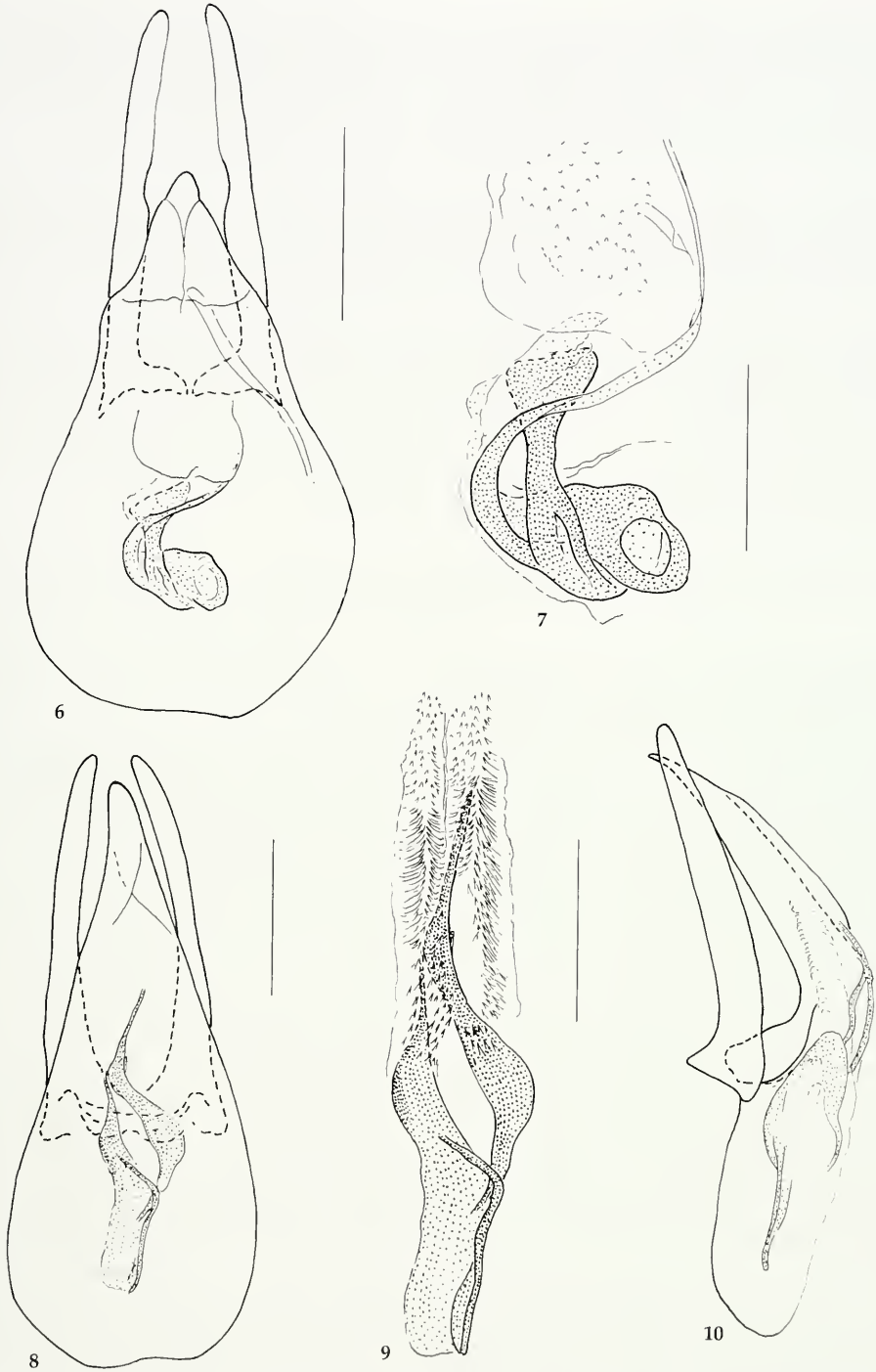
*Baeocera proseminata* sp. n.

(Figs 6, 7)

**Type material.** Holotype ♂: China, Fujian, Wuyi Shan, road to Guadun, 27°73'N 117°64'E, 1.VI.2001, mixed forest litter, 1300 m, J. COOTER (ZIB).

**Paratypes:** Fujian, Wuyi Shan, Qiliqiao-Guadun, 27°75'N 117°64'E, 1.VI.2001, mixed forest litter, ca 1200 m, J. COOTER & P. HLAVÁČ, 2♀ (MHNG).

**Description.** Length 1.25-1.30 mm. Body uniformly ochreous, apex of abdomen, antennae and tarsi lighter. Length ratio of antennal segments as: III 6: IV 8: V 10: VI 9: VII 12: VIII 9: IX 13: X 12: XI 15 (paratype, holotype has the antennae broken off). Contours of pronotum and elytra continuously arcuate. Pronotum as in *B. lasciva*. Exposed tip of scutellum distinct. Elytra with lateral margins straight in middle, lateral striae visible in dorsal view only near apices, adsutural areas slightly raised, sutural striae curved externally at base and extended about to basal mid-width, widely separated from lateral striae. Lateral striae curved at base to form very short basal striae. Elytral punctuation fairly fine and dense in basal two thirds of disc, consisting of punctures not clearly delimited, much smaller than puncture intervals; punctuation very fine and sparse in apical third of elytra. Prohypomera extremely finely punctate. Mesepimeral ridge about twice as long as interval to mesocoxa. Metasternum flat and impunctate in middle, impunctate centre delimited



**Figs. 6, 7.** *Bacocera proseminata* sp. n., aedeagus in dorsal view (6), internal sac in detail (7). Scale bars = 0.1 mm in Fig. 6, 0.05 mm in Fig. 7.

**Figs. 8-10.** *Scaphisoma dilatatum* sp. n., aedeagus in dorsal and lateral view (8, 10), internal sac in detail (9). Scale bars = 0.3 mm in Fig. 8, 0.2 mm in Fig. 9.

laterally and posteriorly by U-shaped row of fairly coarse punctures. Lateral parts of metasternum with punctuation fairly coarse, rather sparse, consisting of punctures partly elongate, smaller than puncture intervals. Submesocoxal lines arcuate, with coarse, not or weakly elongate marginal punctures; submesocoxal areas about 0.04 mm long. Metepisterna partly fused, with suture coarsely punctate, distinct posteriorly. Abdominal sternite 1 with basal punctures coarse and elongate, discal punctuation fine and sparse in middle, mostly very fine and similar to than of following sternites on lateral parts.

**Male characters.** Segments 1 to 3 of protarsi slightly widened, with tenant setae. Aedeagus (Figs 6, 7) 0.36 mm long, with process of median lobe tapering, obliquely inclined. Parameres long, almost straight, weakly narrowed in middle of inner side, at level of tip of median lobe. Internal sac with guide-sclerite conspicuously widened apically, flagellum narrow, membranes microdenticulate posterior to sclerite complex.

**Comments.** This species is a member of the *B. lenta* group and falls in the key to Chinese species of *Baeocera* (LÖBL 1999) under couplet 15, to *B. franzi* (LÖBL). Both, *B. franzi* and *B. proseinata* have the apical part of the elytra very finely punctate, the basal striae of the elytra not joined to the lateral striae, and the middle of the inner side of the parameres narrowed. The new species differs drastically from *B. franzi* by the internal sac of the aedeagus lacking a tuft of spines and by the guide-sclerite strongly widened apically. The shape of this sclerite is diagnostic for *B. proseinata*. In addition, *B. franzi* has the parameres wider and deeper notched in middle than *B. proseinata*.

### *Scaphisoma dilatatum* sp. n.

(Figs 8-10)

**Type material.** Holotype ♂: China, Yunnan, Lugu Lake – Luo Shui, 27°45'N 100°45'E, 8.-9.VII.1992, E. JENDEK (NHMW).

**Paratypes:** same data as holotype, 5♂, 3♀ (NHMW, MHNG).

**Description.** Length 2.7-2.8 mm. Body very dark-brown to black, apices of elytra and abdomen rufous. Femora and tibiae dark reddish-brown, tarsi and antennae light ochreous or light-brown. Length ratio of antennal segments as: III 6: IV 11: V 15: VI 26: VII 28: VIII 22: IX 27: X 27: XI 32 (holotype). Segment IV comparatively small, parallel-sided, almost 3 times as long as wide, segments V and VI each gradually widened apically, segment V 3 times as long as wide, segment VI slightly wider than segment V, about 4.5 times as long as wide, segment VII 4 times as long as wide, segment VIII about 3.5 times as long as wide, about as wide as apex of segment VI; segment XI 3.5 to 4 times as long as wide. Pronotum with lateral margins oblique near basal angles, evenly rounded anteriorly; lateral margin bead exposed except at angles. Pronotal punctuation dense and fairly fine, consisting of punctures not sharply delimited, smaller than puncture intervals, distinct at 12 times magnification. Tip of scutellum exposed. Elytra with lateral margins rounded in basal half, oblique apically, lateral margin bead exposed entirely or almost entirely in dorsal view. Apical margins truncate, denticulate. Inner apical angles about at same level as outer apical angles, sutural margin not raised, adsutural areas flat, each with single puncture row, sutural striae parallel to suture, curved at base externally to form basal striae extending up to humeral area. Lateral striae curved at base and shortly extended along base, not joined to basal striae. Elytral punctuation about as fine as and sparser than pronotal punctuation. Prohypomera smooth. Mesepimeral ridge as long as interval to mesocoxa. Metasternum lacking microsculpture, moderately convex in middle, flattened apicomeresally. Metasternal punctuation very fine and sparse on lateral parts, dense and comparatively coarse laterally and posteriorly smooth mesal surface. Submesocoxal lines arcuate, distinctly punctate. Submesocoxal areas about 0.08-0.09 mm long. Metepisterna below plan of metasternum, narrowed anteriorly, with suture slightly sinuate, curved posteriorly. Exposed abdominal segments with punctulate microsculpture hardly visible on 1. sternite. Sternite 1 with punctuation very fine and sparse laterally. Median area of sternite 1 with punctuation fairly coarse and dense, similar to that on medio-apical part of metasternum. Submetacoxal lines arcuate, coarsely punctate, joined by striae to pleural lines, submetacoxal areas 0.10-0.11 mm long. Protibiae and metatibiae straight, mesotibiae slightly curved.

**Male characters.** Segments 1 to 3 of protarsi strongly widened, with tenant setae, width of segment 1 about as two thirds of width of protibial apex. Segments 1 and 2 of mesotarsi distinctly widened. Lobe of



abdominal sternite 6 comparatively small, blunt, about 0.06-0.07 mm long. Aedeagus (Figs 8 to 10) 1.17-1.28 mm long. Median lobe with articular process very strongly sclerotized, not prominent apically. Apical process of median lobe about as long as basal bulb, tapering, inclined, with blunt apex at dorsal view, acute and weakly bent apex at lateral view. Inner sac with flagellum strongly sclerotized and bifid basally, flagellar arms strongly asymmetrical. Apical part of flagellum covered by spinose structures grouped to form two vesicles.

**Comments.** This species is a member of the *Scaphisoma subalpinum* group. It shares the unusual length ration of the antennal segments IV to VI with *S. antematatum* ACHARD, *S. opositum* LÖBL, *S. pseudantennatum* LÖBL and *S. acclivum* Löbl, its aedeagal characters indicate close relationships to *S. opositum* and *S. acclivum*. The new species may be easily distinguished from *S. opositum* by the large basal arms of the flagellum, the tip of the median lobe weakly bent and the articular process of median lobe strongly developed. In *S. acclivum* the flagellum is almost simple and the tip of the median lobe is truncate. The latter feature separates *S. acclivum* drastically from its allied. This new species would fall under the couplets 10 in my key to the Chinese *Scaphisoma* (to *S. opositum* if not contradicted by the length ration of basal bulb/apical process of the median lobe).

*Scaphisoma neglectum* sp. n.  
(Figs 11-13)

**Type material.** Holotype ♂: China, Beijing, (Peking), Dongling Mts, Xiaolongmen, Da Nan Gou, 1500 m, 39°96'N 115°43'E, 16.VI.2001, fungi under bark of dead, lying tree, J. COOTER (ZIB).

**Paratypes:** same data as holotype, 2♂, 12♀ (MHNG).

**Description.** Length 2.1-2.3 mm. Body black-brown to black. Elytral apices, apical margins of abdominal segments 1 to 5, abdominal apex and appendages lighter, usually ochreous. Length ration of antennal segments III to XI as: III 5: IV 9: V 11: VI 16: VII 21: VIII 18: IX 21: X 22: XI 27 (holotype). Segment IV narrow, about 3 times as long as wide, segment V slightly wider than segment IV, segment VI distinctly wider than segment V, about 4 times as long as wide, segment VII 3 times as long as wide, segment VIII about 3.5 times as long as wide, segment XI 4 times as long as wide. Pronotum and elytra lacking microsculpture. Pronotum with lateral margins arcuate in anterior half, oblique near base, lateral margin ridge not exposed in dorsal view, or hardly visible. Pronotal punctation fairly dense and coarse, consisting of well delimited punctures distinctly smaller than puncture intervals. Tip of scutellum exposed. Elytra with lateral margins rounded, lateral margin ridges hardly exposed in dorsal view, apical margins truncate, not denticulate, inner apical angle posterior level of outer apical angles, sutural margin not raised, adsutural areas flat, each with row of fine punctures, sutural striae parallel to sutural margin, curved anteriorly to form basal striae reaching about to outer third of basal width. Elytral punctation similar to pronotal or slightly sparser and hardly coarser. Hypomera, mesepisterna and metasternum lacking microsculpture. Mesepimeral ridge slightly longer than interval to mesocoxa. Lateral parts of metasternum very finely and sparsely punctate. Middle part of metasternum convex, with two shallow medio-apical impressions, impunctate medially, with coarse, dense punctures in and anterior impressions, and row of coarse punctures anterior intermetacoxal process. Submesocoxal lines arcuate, coarsely punctate. Submesocoxal areas 0.04-0.05 mm long. Metepisterna in plan with metasternum, wide, gradually narrowed anteriorly, suture oblique, slightly rounded near angles. Abdominal segments with punctulate microsculpture. First abdominal sternite very finely punctate laterally, coarsely punctate on middle. Following sternites very finely punctate. Submetacoxal lines arcuate, coarsely punctate, not extending along mesepimera. Submetacoxal areas 0.10-0.11 mm long. Tibiae straight.

**Male characters.** Segments 1 to 3 of protarsi and mesotarsi moderately widened, much narrower than tibial apex. Apical process of abdominal segment 6 subtriangular, about 0.10 mm long. Aedeagus (Figs 11 to 13) 0.65-0.75 mm long. Median lobe moderately sclerotized, with large basal bulb. Apical process not clearly delimited in dorsal view, weakly curved and gradually narrowed. Internal sac with long, straight flagellum becoming thicker basally, lacking additional rods. Spinous vesicle long and narrow, to larger part consisting of two rows of spines similar in size. Parameres straight except for weakly curved apex, at apex moderately widened.

**Comments.** This species is a member of the *Scaphisoma subalpinum* group and is obviously closely related to *S. castaneipenne* REITTER, *S. galloisi* ACHARD and *S. adnexum* LÖBL with which it shares most of the aedeagal characters. It differs from these species by the flagellar base that is thickened and stronger sclerotized at its (morphological) right side. In addition, *S. castaneipenne* and *S. galloisi* have the spinous vesicle of the internal sac significantly longer and narrower, while it is wider in *S. adnexum*. The new species may be easily distinguished from *S. adnexum* by its larger body size and the significantly longer antennae, in particular by the apical segment that is much longer than the penultimate segment. In *S. adnexum* the apical antennal segment is only slightly longer than penultimate segment. The new species differs externally from *S. castaneipenne* and *S. galloisi* by the weaker abdominal microsculpture and the antennal segment VI distinctly shorter than the segments IV and V combined.

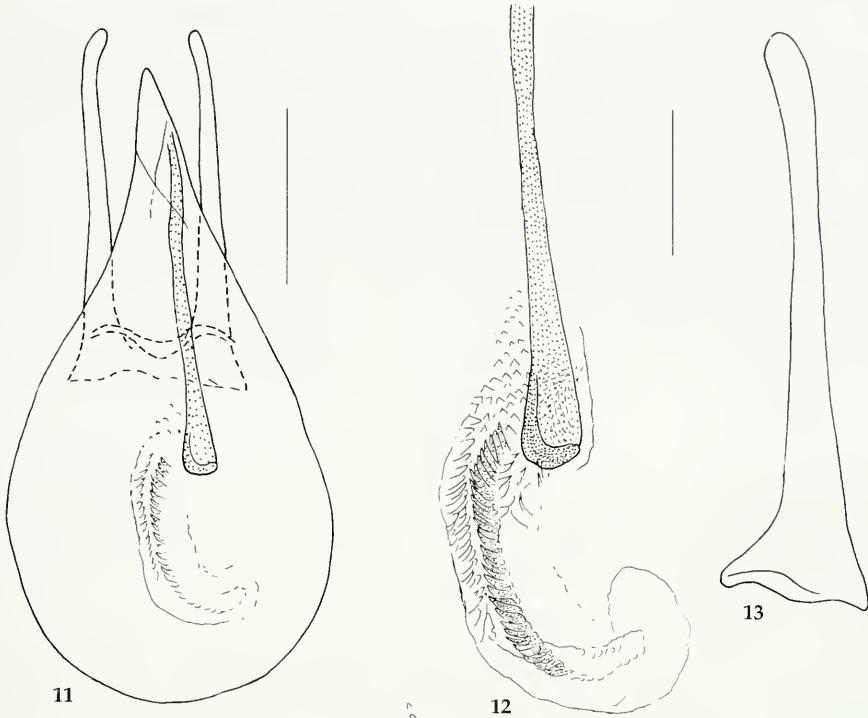
*Scaphisoma michaeli* sp. n.  
(Figs 14-17)

**Material examined.** Holotype ♂: China, South Shaanxi, Qinling Shan, pass on road Zhouzhi–Foping, 105 km SW Xi'an, N-slope, 1990 m, 33°44'N 107°59'E, 2./4.VII. 2001, small creek valley, mixed deciduous forest, bamboo, small meadows, dead wood, mushrooms [C01-01] M. SCHÜLKE (ZMB).

**Paratypes:** same data as holotype, 1♂, 4♀ (PCMS, MHNG).

**Description.** Length 2.0-2.3 mm. Body black, elytra with sharply delimited, yellow apical band. Apical band as long as third to two fifth of lateral length near lateral margin of elytron, irregularly narrowed toward sutural margin, about as long as one seventh to one sixth of sutural length near sutural margin. Anterior margin of yellow apical band sinuate. Apical abdominal segments and tarsi light ochreous, femora and tibiae dark-ochreous to dark-brown. Length ration of antennal segments III to XI as: III 5: IV 10: V 12: VI 12: VII 18: VIII 15: IX 18: X 18: XI 22 (holotype). Segment IV narrow, parallel-sided, about 3 times as long as wide, segments IV and V similar, distinctly wider than segment IV, each about 3 times as long as wide. Segments VII and XI each notably wider than segment VI, about 3 times as long as wide, segment VIII wider than segment VI, about 2.5 times as long as wide. Pronotum and elytra lacking microsculpture. Pronotum with evenly arcuate lateral margins, lateral bead not or hardly visible at dorsal view. Pronotal punctation sparse and very fine. Tip of scutellum exposed. Elytra moderately narrowed apically, with lateral margins rounded anteriorly, oblique in middle. Lateral margin bead exposed only near base. Apical margins truncate, finely denticulate near inner angles. Inner apical angles situated posterior level of outer apical angles. Sutural margin not raised. Adsutural areas slightly swollen posteriorly, flat anteriorly, each with dense row of fine punctures and scattered additional punctures. Sutural striae parallel except in apical fourth, curved anteriorly to form basal striae extended laterally and joined to lateral striae. Elytral punctation near base almost as fine as pronotal punctation, less fine and fairly dense on remaining surface, consisting of well delimited punctures much smaller than puncture intervals. Prohypomera smooth. Mesepimeral ridge slightly longer than interval to mesocoxae. Mesepisterna and lateral parts of metasternum with scattered, very fine punctation. Metasternum lacking microsculpture. Middle part of metasternum slightly convex, with two medio-apical impressions converging posteriorly. Most of metasternal centre punctate as lateral parts of metasternum, punctation in and near medio-apical impressions denser and coarser. Submesocoxal lines arcuate, with row of moderately coarse marginal punctures. Submesocoxal areas 0.04-0.06 mm long. Metepisterna flat, impressed below plan as metasternum, gradually narrowed anteriorly, with suture rounded near posterior angles, oblique anteriorly. First abdominal sternite lacking microsculpture, very finely and sparsely punctate on lateral parts, densely and rather coarsely punctate in middle. Sternite 1 with submetacoxal lines parallel, coarsely punctate, extending to lateral margin, submetacoxal areas 0.03 mm long. Following sternites and exposed tergites with punctulate microsculpture and very finely punctate. Tibiae straight.

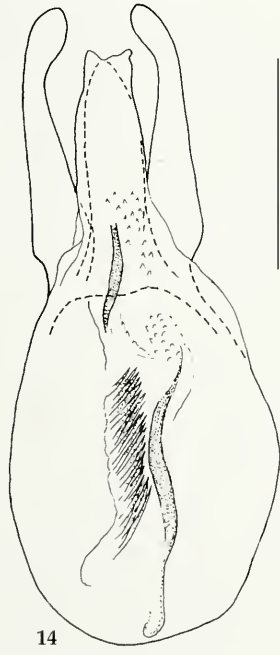
**Male characters.** Segments 1 to 3 of protarsi moderately widened, with tenant setae. Apical margin of abdominal sternite 6 angulate, not lobed. Aedeagus (Figs 14 to 16) 0.58-0.61 mm long. Median lobe symmetrical, strongly sclerotized. Articular process well developed. Apical process long, curved and tapering apico-ventrally (lateral view). Dorsal valve of apical process notched at apex. Internal sac complex, with one basolateral and one apicolateral rod, row of robust teeth and small scale-like and denticulate structures. Parameres notches laterobasally, narrowed posterior notch toward apical part, with apical part weakly curved and widened.



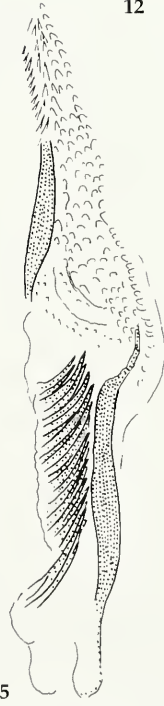
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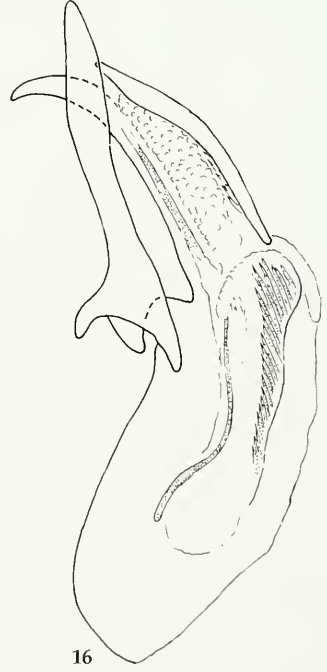
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**Figs. 11-13.** *Scaphisoma neglectum* sp. n., aedeagus in dorsal view (11), internal sac in detail (12), paramere in ventral view (13). Scale bars = 0.2 mm in Figs. 11, 0.1 mm in Fig. 12, 13.

**Figs. 14-16.** *Scaphisoma michaeli* sp. n., aedeagus in dorsal and lateral view (14, 16), internal sac in detail (15). Scale bars = 0.2 mm in Figs. 14, 0.1 mm in Fig. 15.



**Female characters.** Abdominal apex as Fig. 17, with pair of ventral sclerotized processes.

**Comments.** This species is obviously closely related with *Scaphisoma jado* LÖBL with which it shares the complete basal striae of the elytra, the reduced submetacoxal areas of the first exposed abdominal sternite, the shape of the median lobe, and the basolaterally notched parameres. The dorso-apical notch of the median lobe is likely a synapomorphy linking *S. jado* and *S. michaeli*, unknown from other members of the genus. These two species differ conspicuously by their colour pattern. In addition, *S. michaeli* may be distinguished from *S. jado* by the basal half of the internal sac of the aedeagus having a row of strongly sclerotized teeth, and by the abdominal apicoventral processes in female. In the key to Chinese *Scaphisoma* (LÖBL 2000) *S. michaeli* would fall to couplet 4 (*S. styloides* LÖBL). It may be easily distinguished from the latter species by its colour pattern, in particular the wide light apical part of elytra, the narrow submetacoxal areas and the antennal segment VI much longer than the segment V.

**Etymology.** The species is named in honour of its collector and my friend, Michael SCHÜLKE (Berlin).

*Scaphisoma prostratum* sp. n.

(Figs 18-20)

**Type material.** **Holotype** ♂: China, Jiangxi, Wuyi Shan, Huanggashan 2100, 27°83'N 117°76'E, 5.VI.2001, hardwood and bamboo litter, J. COOTER (ZIB).

**Paratypes:** same data as holotype, 1♂ (MHNG); same data but approx. 2000 m, *Cryptomeria-Stewartia-Rhododendron* litter, J. COOTER & P. HLAVÁČ, 1♂, 2♀ (MHNG).

**Description.** Length 1.7-1.8 mm. Head, pronotum, most of elytra, mesosternum, metasternum and basal sternites of abdomen uniformly dark reddish-brown to black. Elytral apices, hypomera, femora and tibiae lighter than pronotum, dark ochreous. Apical abdominal segments, tarsi and antennae light ochreous to yellowish. Length ration of antennal segments as: III 5: IV 11: V 16: VI 14: VII 17: VIII 14: IX 17: X 14: XI 20 (holotype). Segments IV to VI very narrow, segment V slightly wider than segment IV, segment VI slightly wider than segment V, about 5 times as long as wide; segments VII, VIII and XI each about 3.5 times as long as wide, segment VIII distinctly wider than segment VI. Pronotum with very fine, hardly visible microsculpture, lateral margins regularly arcuate, lateral margin bead exposed at dorsal view, discal punctation dense and rather fine, consisting of well delimited punctures. Apex of scutellum exposed. Elytra comparatively strongly narrowed apically, with lateral margins mostly oblique, rounded anteriorly, lateral margin bead exposed, apical margins truncate in middle part, finely denticulate near inner angles, inner apical angles situated posterior plan of outer apical angles, sutural margin not raised or raised in apical half, adsutural areas flat or slightly raised posteriorly, with single row of fine punctures, sutural striae diverging from apex to mid-length, parallel anterior mid-length, weakly curved at base, ending at side of pronotal lobe. Elytral punctation fairly coarse, much coarser than pronotal punctation, punctures much smaller than puncture intervals. Prohypomera smooth. Mesepimeral ridge almost twice as long as interval to mesocoxa. Metasternum lacking microsculpture, convex in middle, lacking medio-apical impressions. Metasternal punctation sparse and very fine laterally, sparse and fine on medio-anterior area, dense and fairly coarse on medio-apical area. Antemetacoxal puncture rows present, fine. Submesocoxal lines subtriangular, with coarse marginal punctures; submesocoxal areas 0.07 mm long. Metepisterna flat, impressed below plan of metasternum, moderately narrowed anteriorly, with suture rounded at angles, straight in middle. Abdominal segments with microsculpture consisting of transverse striae and waves, sternites very finely and sparsely punctate. Submetacoxal lines arcuate, coarsely punctate, submetacoxal areas 0.08 mm long.

**Male characters.** Segments 1 to 3 of protarsi and mesotarsi strongly widened, with tenant setae. Segment 1 of protarsi and mesotarsi slightly narrower than tibiae. Medio-apical lobe of abdominal sternite 6 about 0.10 mm long, strongly narrowed toward tip. Aedeagus (Figs 18 to 21) 1.0-1.03 mm long. Median lobe with large, weakly sclerotized basal bulb. Apical process weakly inclined, comparatively short, asymmetrical, with dorsal valves narrow, curved at apex. Internal sac complex, with single, large, trifid sclerite. Parameres widened ventrally (lateral view), curved and with irregular contours in dorsal view.



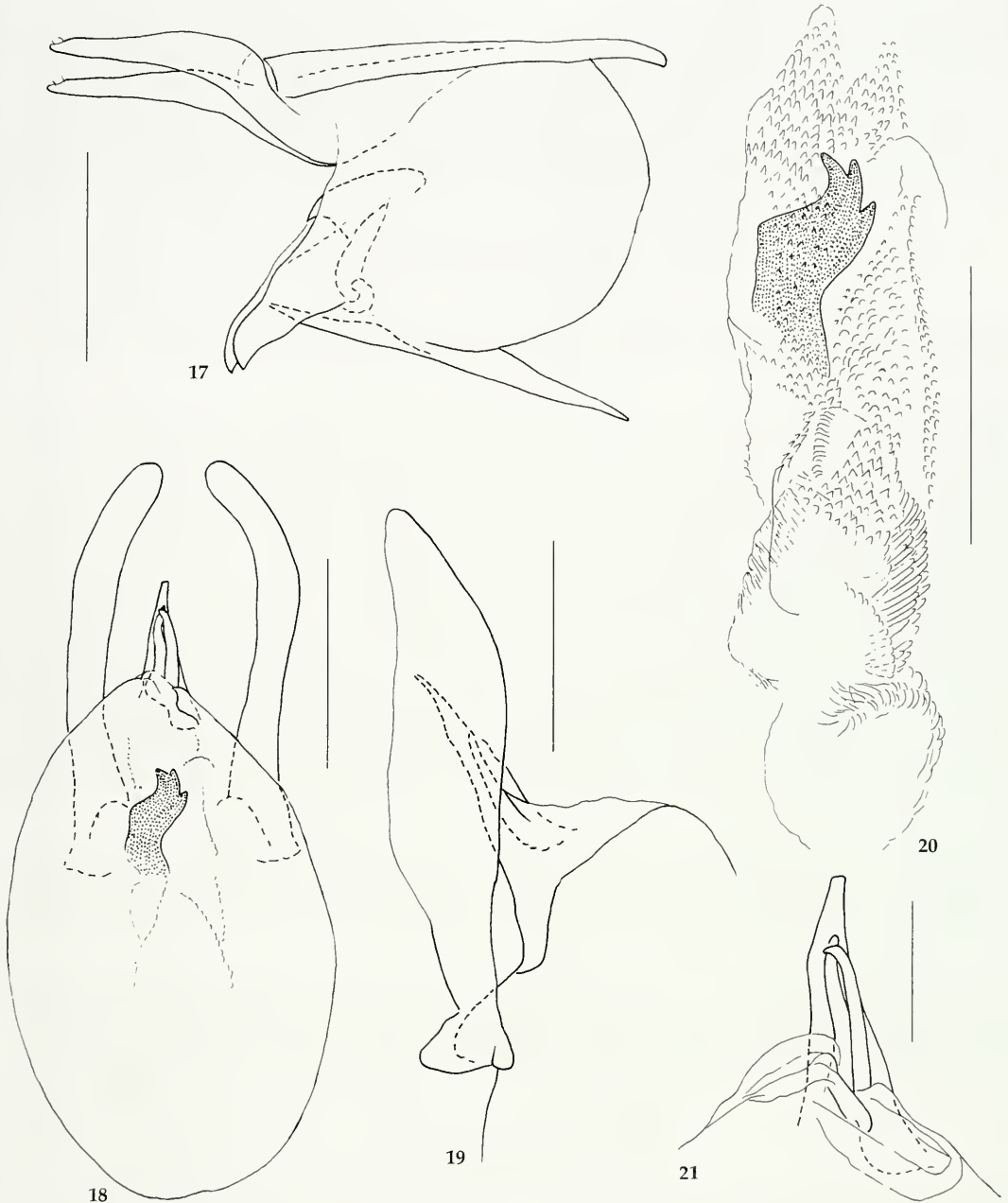


Fig. 17. *Scaphisoma michaeli* sp. n., female terminalia, lateral view. Scale bar=0.2 mm.

Figs. 18-21. *Scaphisoma prostratum* sp. n., aedeagus in dorsal view (18), apical part of median lobe and paramere in lateral view (19), internal sac in detail (20), apical part of median lobe in dorsal view (21). Scale bars =0.2 mm Figs. 19, 20, 0.3 mm in Fig. 18, 0.1 mm in Fig. 21.

**Comments.** This species is a member of the species rich *haemorrhoidale* group. Its aedeagal characters indicate relationships to *Scaphisoma negligens* LÖBL, *S. nebulosoides* LÖBL, *S. nefastum* LÖBL, *S. siamense* LÖBL, and *S. bispinosum* LÖBL. It differs from these species by the asymmetrical apical process of the median lobe of the aedeagus, and by the shape of the parameres. The parameres bear an inner lobe in *S. negligens*, *S. nebulosoides*, and *S. siamense* while they are strongly widened (lateral view) in *S. prostratum*. *Scaphisoma prostratum* would fall in the key to Chinese *Scaphisoma* (LÖBL 2000) to couplet 52, *S. fortipatum* CHAMPION. The latter species differs drastically from *S. prostratum* by its parameres sinuate, the dorsal valves of apical process of median lobe very short and symmetrical, and the internal sac lacking a robust sclerotized piece.

*Scaphobaeocera fujianana* sp. n.

(Figs 22-25 )

**Type material.** Holotype ♂: China, Fujian, Wuyi Shan, Qiligiao–Guadun Road, 1000-1300 m, 27°73'N 117°64'E, 1.VI.2001, under bark of dead tree, J. COOTER (ZIB).

**Description.** Length 1.35 mm, dorsoventral diameter 0.77 mm. Pronotum and elytra very dark, almost black, ventral sides of thorax and abdomen dark reddish-brown, appendages lighter, ochreous. Body microsculptured, hardly iridescent. Punctuation extremely fine on pronotum, lateral parts of metasternum and abdomen, distinct, very scattered on elytra. Length ratio of antennal segments as: III 4: IV 7: V 10: VI 5: VII 20: VIII 4: IX 21: X 18: XI 19. Segment III comparatively wide, slightly longer than wide, segment IV narrow, almost 3 times as long as wide, segment 5 widened apically, about as wide as segment III and about 3 times as long as wide; segment VI small, widened apically, slightly wider than segment V and slightly longer than wide, segment VII large, slightly wider than segment VI, about 5 times as long as wide, segment VIII subtriangular, conspicuously short, slightly longer than wide, segments IX and X similar to segment VII, segment XI wider, about 3 times as long as wide. Apical part of scutellum exposed. Elytra with parasutural striae hardly visible (at 200 times magnification). Prohypomera lacking longitudinal stria. Middle portion of metasternum flattened, lacking stria or impression, impunctate in centre, distinctly punctate and bearing short pubescence laterally and posteriorly smooth centre. Sides of metasternum microsculptured. Submesocoxal lines finely punctate, submesocoxal areas 0.02 mm long. Metepisterna flat, 0.05 mm wide in middle, very weakly narrowed anteriorly and posteriorly, with suture almost straight. Abdominal sternite 1 with basal punctures fine, extended to form short striae. Tibiae straight.

**Male characters.** Segments 1 to 3 of protarsi widened, with tenant setae. Aedeagus (Figs 22 to 25) 0.43 mm long. Median lobe lacking prominent articular process, with apical process tapering and moderately curved ventrally near tip. Flagellum abruptly bent near base, weakly sinuate posterior base, expanded at middle to form a flat tubercle. Parameres extending posterior tip of median lobe, abruptly widened posterior mid-length, near apex about twice as wide as at middle (lateral view).

**Comments.** This species may be easily distinguished from its congeners by the length ratio of the antennal segments, in particular by the very short, subtriangular segments VI and VIII. Its widened apical part of the parameres, internal sac lacking accessory sclerites and simple flagellum indicates relationship to *S. nobilis* LÖBL but it does not possess the clearly delimited basal bulb of this species.

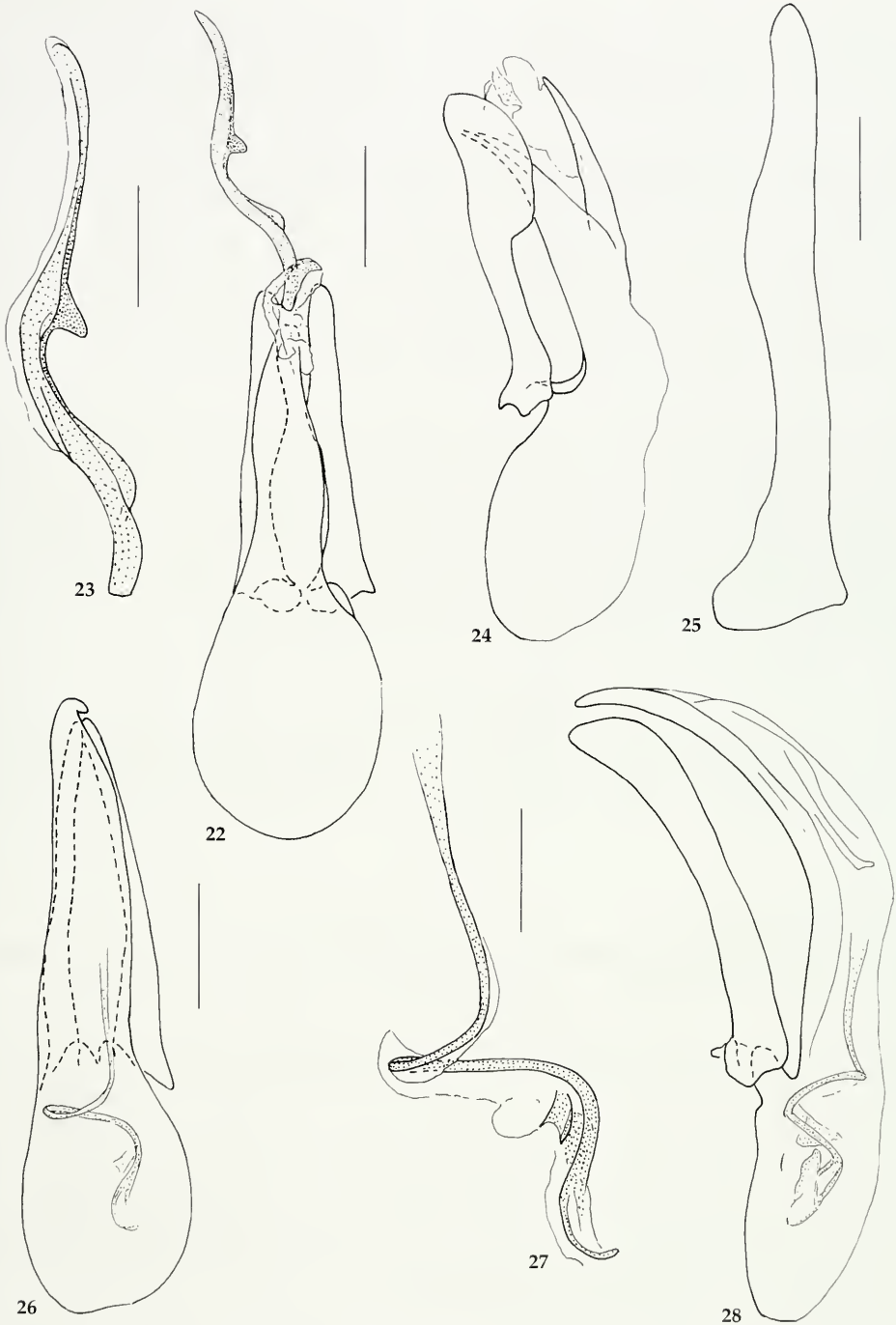
*Scaphobaeocera amicalis* sp. n.

(Figs 26-28)

**Type material.** Holotype ♂: China, Jiangxi, Jianggangshan, 700-900 m, 26.V.-2.VI.98, S. KURBATOV (MHNG).

**Paratype** ♂: with the same data as the holotype (MHNG).

**Description.** Length 1.20-1.30 mm, dorsoventral diameter 0.69-0.73 mm. Body very dark brown to almost black, apical abdominal segments and appendages ochreous, with distinct microsculpture. Length ratio of antennal segments III to XI as: III 5: IV 9: V 10: VI 9: VII 11: VIII 8: IX 11: X 11: XI 19 (holotype). Segment III narrow, segments IV to VI gradually, slightly thickened apically, almost of same size, segments VII and



Figs. 22-25. *Scaphobaocera fujiana* sp. n., aedeagus in dorsal view with extruded flagellum (22), aedeagus in lateral view, without flagellum (24), flagellum in detail (23), paramere in ventral view (25). Scale bars = 0.1 mm in Figs. 22, 0.05 mm in Figs. 23, 25.

Figs. 26-28. *Scaphobaocera amicalis* sp. n., aedeagus in dorsal and lateral view (26, 28), internal sac in detail (27). Scale bar = 0.1 mm in Fig. 26.

VIII each almost 3 times as long as wide, segments IX and X similar to segment VII, segment XI subparallel and almost twice as long as wide. Elytra weakly iridescent. Punctuation very fine on pronotum, lateral parts of metasternum and abdomen. Tip of scutellum exposed. Elytra with very fine parasutural striae. Elytral punctuation similar to pronotal anteriorly, becoming coarser posterior basal third. Prohypomera with distinct longitudinal striae. Middle portion of metasternum flattened, impunctate on anterior half, distinctly punctate and pubescent on posterior half. Sides of metasternum microsculptured. Submesocoxal lines finely punctate, submesocoxal areas 0.02 mm long. Metepisterna parallel-sided, 0.05 mm wide. Abdominal sternite 1 with basal punctures fine, extended by short striae. Tibiae straight.

**Male characters.** Segments 1 to 3 of protarsi strongly widened, with tenant setae. Aedeagus (Figs 26 to 28) 0.50-0.52 mm long. Median lobe with prominent articular process and comparatively small basal bulb. Apical process long, strongly bent and tapering in lateral view. Inner sac with narrow flagellum and small subbasal accessory sclerite. Flagellum incompletely looped, moderately widened basally and forming a hook-like process. Parameres not reaching up to tip of median lobe, slightly narrowed in middle part, expanded ventrally in apical part and slightly wider than at base.

**Comments.** The aedeagal characters of this species indicate relationships to *Scaphobaeocera uncata* LÖBL, *S. tenella* LÖBL, and *S. cyrta* LÖBL. While the median lobe lacks a prominent articular process in *S. cyrta*, the two remaining species possess the median lobe very similar to that in *S. amicalis*. *Scaphobaeocera tenella* is unique among these species by the strongly sinuate flagellum. *S. amicalis* differs notably from *S. uncata* by the parameres that are not widened apicodorsally. In addition, *S. amicalis* may be distinguished from *S. uncata* by the antennae, in particular by the much longer segment XI. This new species would fall in the key to Chinese *Scaphobaeocera* (LÖBL 1999) under the couplet 3 (to *S. pseudovalida* LÖBL), as *S. japonica* (REITTER) newly recorded from China in this paper. *S. pseudovalida* may be easily distinguished from both, *S. amicalis* and *B. japonica*, by the conspicuously large antennal segment VIII.

### Acknowledgements

My thanks are due to following friends and colleagues who provided material for the present study: J. COOTER (Heresford), S. KURBATOV (Moscow), H. SCHILLHAMMER (Vienna), M. SCHÜLKE (Berlin) and A. SMETANA (Ottawa).

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