

Linzer biol. Beitr.	43/1	291-310	25.7.2011
---------------------	------	---------	-----------

Six new species and additional records of Aleocharinae from China (Coleoptera: Staphylinidae: Aleocharinae)

V. ASSING

Abstract: Six species from China are described and illustrated: *Silusa excisa* nov.sp. (Sichuan), *S. mandibulata* nov.sp. (Yunnan), *Tropimelytron sinuosum* nov.sp. (Yunnan), *Bellatheta diacangica* nov.sp. (Yunnan), *Platyola geostiboides* nov.sp. (Yunnan), and *Anomognathus serratus* nov.sp. (Zhejiang). Additional records of eight species of Aleocharinae from Yunnan and Zhejiang are reported. *Atheta excaecata* ASSING 2009 is moved to the genus *Oroekklima* PACE 1999. Lectotypes are designated for *Leptusa bodemeyeri* EPPELSHEIM 1883 and *Thectura armata* SHARP 1888. Improved illustrations of *Silusa sichuanensis* PACE 2004 and *Tropimelytron viaticum* (PACE 1998) are provided; the previously unknown male sexual characters of *Oroekklima excaecata*, *Silusa bodemeyeri* (EPPELSHEIM 1883), and the sexual characters of *Anomognathus armatus* (SHARP 1888) are figured. Previous records of *Silusa bodemeyeri* from China are based on misidentifications.

Key words: Coleoptera, Staphylinidae, Aleocharinae, Silusini, Athetini, Oxypodini, Palaearctic region, China, Yunnan, Sichuan, Zhejiang, taxonomy, new species, new combination, lectotype designation, new records.

Introduction

Until recently, the staphylinid fauna of China had received relatively little attention. This is particularly true of the Aleocharinae, the most speciose of all staphylinid subfamilies. However, owing to increased collecting activity, numerous species have been described in the past two decades (e.g., ASSING 2006, 2009; PACE 1993, 1998a-c, 2004a-b).

The present paper is primarily based on material collected in Yunnan in 2009 by Michael Schülke (Berlin) and David Wrase (Berlin); additional material came from Andreas Pütz (Eisenhüttenstadt), Johannes Huschke (Herford), and Aleš Smetana (Ottawa).

Material and methods

The material referred to in this study is deposited in the following public and private collections:

MHNG Muséum d'Histoire naturelle, Genève (G. Cuccodoro)

NHMW Naturhistorisches Museum Wien (H. Schillhammer)

cAss..... author's private collection
 cPüt..... private collection A. Pütz, Eisenhüttenstadt
 cSch..... private collection M. Schülke, Berlin
 cSme..... private collection A. Smetana, Ottawa

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena) with a drawing tube. For the photographs a digital camera (Nikon Coolpix 995) was used.

Head length was measured from the anterior margin of the clypeus to the posterior margin of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra, and aedeagus length from the base of the capsule to the apex of the ventral process. The parameral side of the median lobe of the aedeagus is referred to as the ventral, the opposite side as the dorsal aspect.

New species and additional records

Silusa smetanai PACE 1998

Type material examined: Holotype ♀: "China, Sichuan, Gongga Shan, above Camp 3, 3050 m, 22.VII.1994, A. Smetana [C18] / Holotypus *Silusa smetanai* m., det. R. Pace 1996 / *Silusa smetanai* sp. n. det. R. Pace 1996" (MHNG).

Comment: The original description is based on a single female from "China, Sichuan, Gongga Shan, above camp 3, 3050 m" (PACE 1998a). Since *Silusa* species are reliably identified only based on the male sexual characters, the identity of *S. smetanai* remains doubtful. PACE (2004a) reported a male from Sichuan without illustrations of the sexual characters and without specifying the depository. This specimen was found neither in the Smetana collection nor at the MHNG. The holotype is of darker coloration and somewhat larger than the specimens of the following species.

Silusa leptusoides PACE 2004

Material examined: China: 7 exs., Yunnan, Nujiang Lisu Pref., Gaoligong Shan, 21 km NW Liuku, "Cloud pass", 25°58'N, 98°41'E, 3150 m, shrubs, *Vaccinium*, bamboo, litter sifted, 2.IX.2009, leg. Wrase (cSch, cAss).

Comment: The original description is based on a holotype and five paratypes from two localities in Sichuan (PACE 2004a). The above specimens represent the first record from Yunnan.

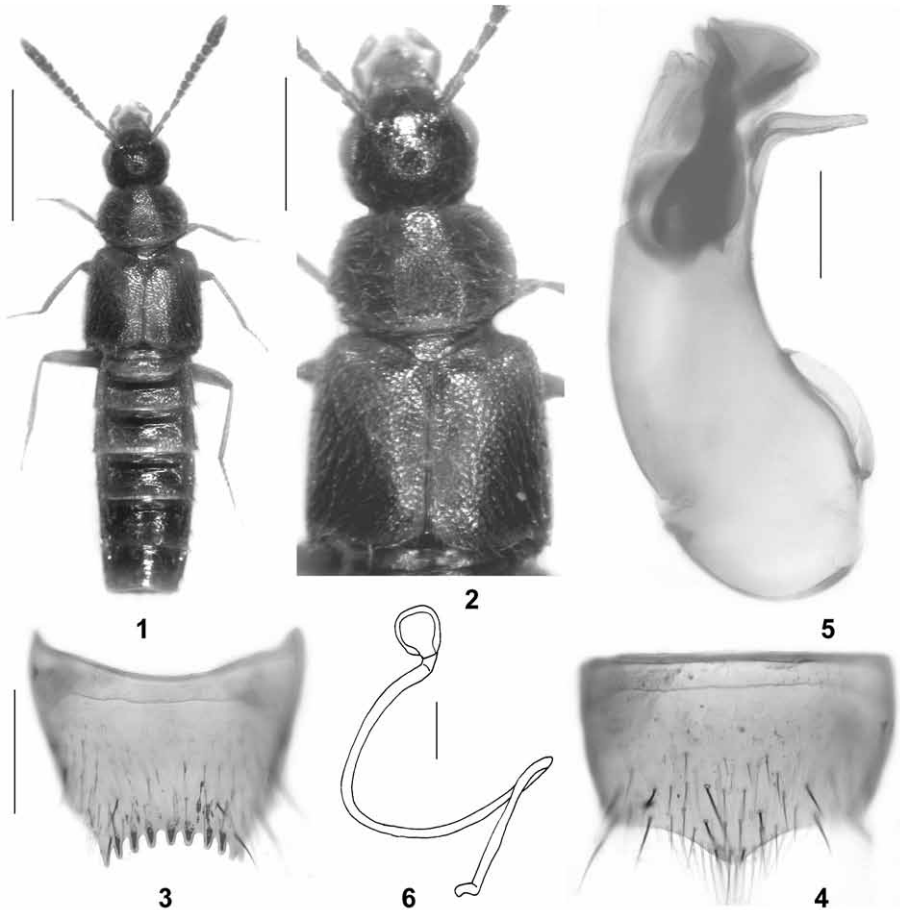
Silusa sichuanensis PACE 2004 (Figs 1-6)

Type material examined: Holotype ♂: "China: W Sichuan, 20 km N Sabdê, 3200 m, 29°35'N 102°23'E, 15.VII.1998, A. Smetana [C83 / 1998 China Expedition, J. Farkaš, D. Král, J. Schneider & A. Smetana / Holotypus *Silusa sichuanensis* m. det. R. Pace 1999 / *Silusa sichuanensis* sp. n. det. R. Pace 1999" (MHNG).

Additional material examined: China: 1♂, 1♀, N-Yunnan, Zhongdian Co., 48 km N Zhongdian, 28°16.6'N, 9°45.7'E, 3220 m, creek valley, devastated primary forest, dead wood, moss, mushrooms, 21.VIII.2003, leg. M. Schülke (cSch, cAss).

Comment: According to the original description, which is based on a male holo-

type and eight paratypes from "West Sichuan, 20 km N Sabdê" (PACE 2004a), the body length is 2.9 mm. An examination of the holotype and the above material from Yunnan, however, revealed that the species is distinctly larger (3.5-4.0 mm). Also, the pronotum has a coarsely punctate transverse impression posteriorly (neither mentioned nor illustrated in the original description of *S. sichuanensis*), and the coloration is rather different: head blackish; pronotum brown with narrowly yellowish margins; elytra yellowish, with the region behind scutellum and the postero-lateral angles extensively infusate (brown); abdomen reddish, with the median portion of tergites III-IV, most of tergites V-VI, and anterior half of tergite VII blackish; legs and maxillary palpi yellowish; antennae brown, with the basal three antennomeres reddish. For illustrations of the material from Yunnan see Figs 1-6.



Figs 1-6: *Silusa sichuanensis* PACE (Yunnan): (1) habitus; (2) forebody; (3) male tergite VIII; (4) male sternite VIII; (5) median lobe of aedeagus in lateral view; (6) spermatheca. Scale bars: 1: 1.0 mm; 2: 0.5 mm; 3-4: 0.2 mm; 5-6: 0.1 mm.

***Silusa excisa* nov.sp.** (Figs 7-12)

Type material: **Holotype** ♂: "China: Sichuan, Qingcheng Shan, 65 km NW Chengdu, 103.33 E, 30.53 N, 18.V./3.-4.VI.1997, 8 km W Taiping, 800-1000 m, leg. A. Pütz / Holotypus ♂ *Silusa excisa* sp. n. det. V. Assing 2010" (cPüt). **Paratypes:** 3 ♀♀: same data as holotype (cPüt, cAss); 1 ♀: "China: Sichuan (17), Qingcheng Shan, NW Chengdu, 650-700 m, 30.53.57 N, 103.32.23 E, 3./4.06.1997, M. Schülke / *Silusa bodemeyeri* (E.), det. R. Pace 1999" (cSch).

Description: Body length 3.0-3.5 mm. Habitus as in Fig. 7. Coloration: head blackish-brown to blackish; pronotum and elytra yellowish-red to dark-reddish, with the postero-lateral portion of the elytra extensively infusate; abdomen with segments III-V or III-VI dark-reddish and the remainder infusate, except for the yellowish to reddish posterior margins of the segments; legs reddish with the femora somewhat darker; antennae reddish-brown, with the basal three antennomeres reddish.

Head (Fig. 8) weakly transverse; punctation dense, moderately fine, and defined, somewhat sparser in median and in anterior dorsal portion; interstices without distinct microsculpture. Eyes large and convex, longer than postocular portion in dorsal view. Antennae approximately 0.8 mm long; antennomere IV approximately as long as wide; V-X gradually increasing in width; preapical antennomeres approximately twice as wide as long.

Pronotum (Fig. 8) approximately 1.5 times as wide as long and 1.4 times as wide as head; maximal width in the middle; lateral margins very weakly sinuate in posterior half, posterior angles almost rectangularly marked; near posterior margin with long transverse impression with numerous coarse punctures; punctation of remainder of dorsal surface fine, much finer than that of head, and dense; pubescence long, fine, and suberect; interstices without distinct microsculpture.

Elytra (Fig. 8) long and broad, approximately 1.15 times as long as pronotum; posterior margin strongly sinuate near postero-lateral angle; punctation coarse and very dense. Hind wings fully developed. Metatarsomere I approximately as long as II.

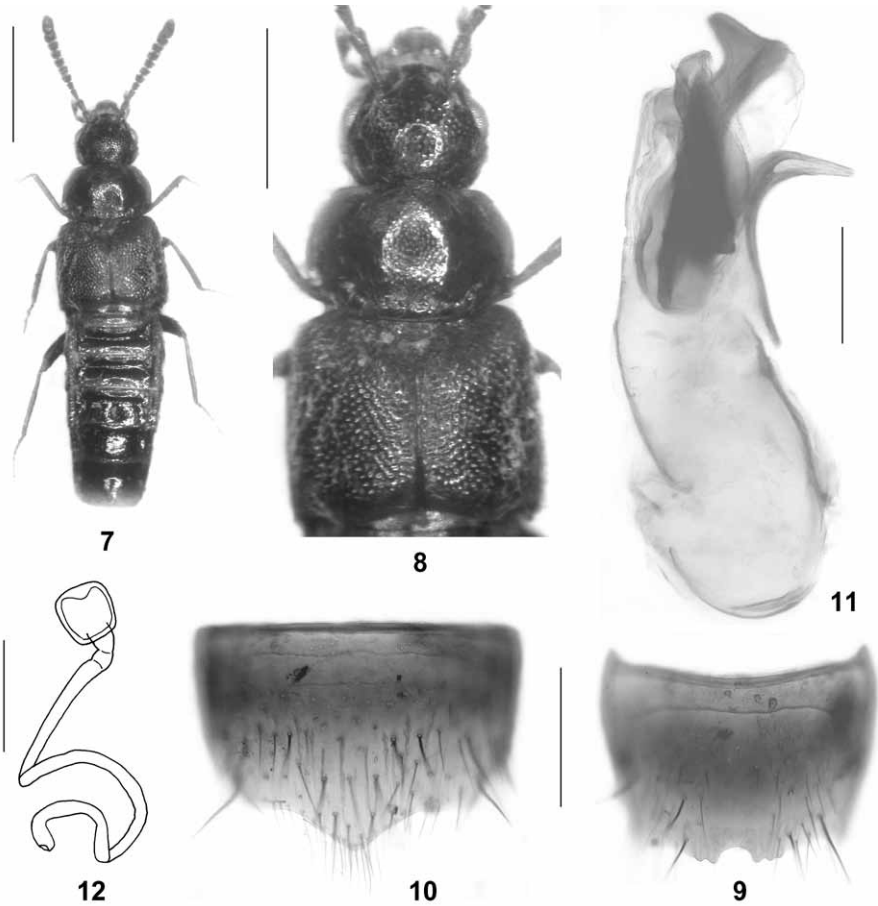
Abdomen anteriorly with moderately sparse, posteriorly with very sparse punctation; interstices glossy; posterior margin of tergite VII with palisade fringe.

♂: tergite VII posteriorly with small median tubercle; posterior margin of tergite VIII in the middle excised, on either side of this excision serrulate (Fig. 9); sternite VIII strongly transverse, posterior margin strongly produced in the middle (Fig. 10); median lobe of aedeagus 0.41 mm long, with apical internal structures of distinctive shape (Fig. 11).

♀: posterior margin of tergite VIII weakly convex; posterior margin of sternite VIII weakly produced in the middle; spermathecal capsule with very long and slender proximal portion (Fig. 12).

Ety m o l o g y: The name (Latin, adjective) refers to the characteristic shape of the posterior margin of the male tergite VIII.

C o m p a r a t i v e n o t e s: Ten species of *Silusa* are currently known from China (SMETANA 2004, PACE 2004a), the vast majority of which were described or recorded from there by PACE (1998a, 2004a). *Silusa excisa* is distinguished from them particularly by the male primary and secondary sexual characters, as well as by the shape of the spermatheca. For illustrations of the genitalia of most previously described species see PACE (1998a, 2004a). *Silusa aliena* BERNHAUER 1916, of which no illustrations of the genitalia are available, has the head and the pronotum distinctly microsculptured (BERNHAUER 1916).



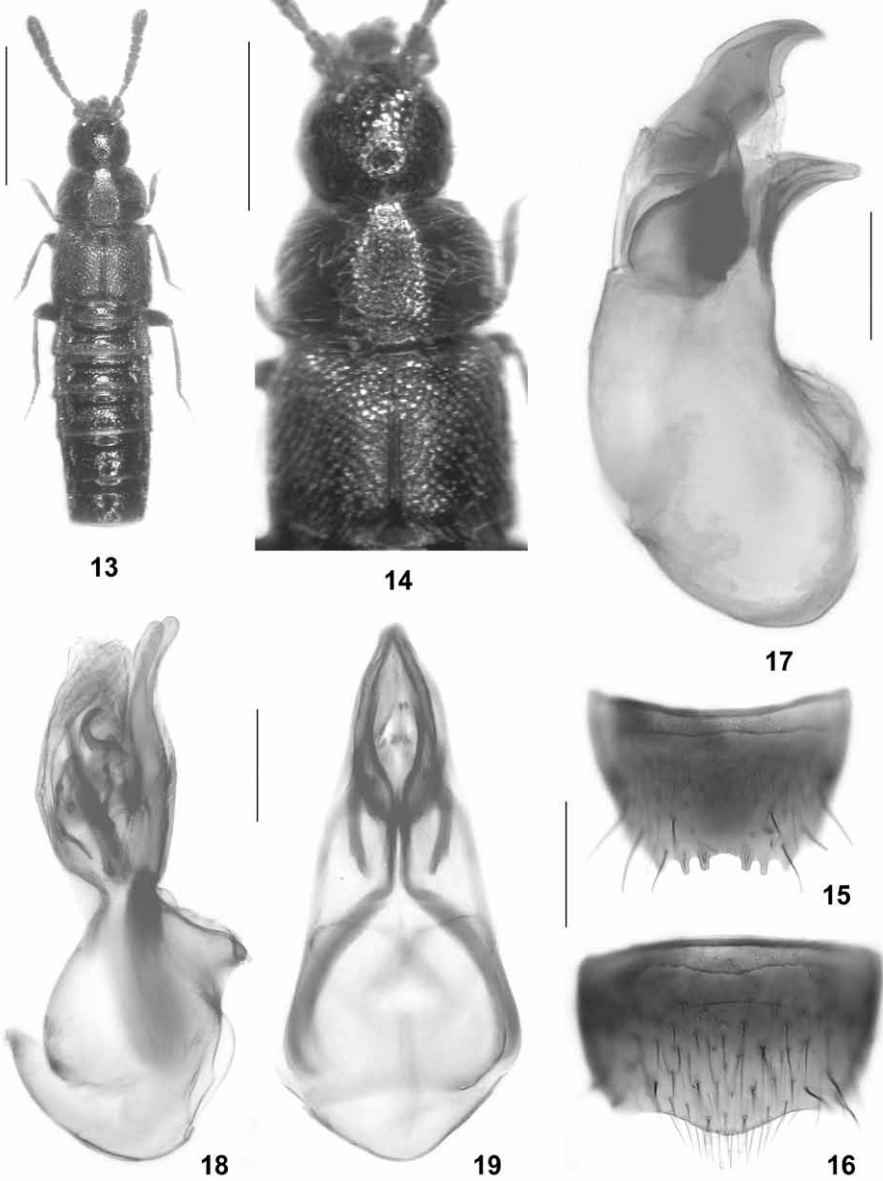
Figs 7-12: *Silusa excisa* nov.sp.: (7) habitus; (8) forebody; (9) male tergite VIII; (10) male sternite VIII; (11) median lobe of aedeagus in lateral view; (12) spermatheca. Scale bars: 7: 1.0 mm; 8: 0.5 mm; 9-10: 0.2 mm; 11-12: 0.1 mm.

Distribution and natural history: The type specimens were collected in two localities to the northwest of Chengdu (Sichuan) at altitudes of 650-1000 m.

***Silusa mandibulata* nov.sp.** (Figs 13-17)

Type material: Holotype ♂: "China: Shaanxi, Daba Shan, NW pass 25 km NW Zhenping, 32°01'N / 109°19'E, 2150 m, 11.VII.2001, A. Smetana [C99] / Holotypus ♂ *Silusa mandibulata* sp. n. det. V. Assing 2010" (cAss).

Description: Body length 3.4 mm. Habitus as in Fig. 13. Coloration: head blackish; pronotum reddish-brown; elytra red, with the postero-lateral portion of the elytra indistinctly and diffusely infuscate; abdomen blackish, with segments III-IV dark-brown and the apex reddish; legs reddish with the femora slightly darker; antennae reddish-brown, with the basal three antennomeres reddish.



Figs 13-19: *Silusa mandibulata* nov.sp. (13-17) and *Oroekklinia excaecata* (ASSING) (18-19): (13) habitus; (14) forebody; (15) male tergite VIII; (16) male sternite VIII; (17-18) median lobe of aedeagus in lateral view; (19) median lobe of aedeagus in ventral view. Scale bars: 13: 1.0 mm; 14: 0.5 mm; 15-16: 0.2 mm; 17-19: 0.1 mm.

Head (Fig. 14) weakly transverse; punctation dense, rather coarse, and defined, somewhat sparser in anterior dorsal portion; interstices without distinct microsculpture. Eyes moderately large and weakly convex, slightly longer than postocular portion in dorsal view. Antennae stout and approximately 0.9 mm long; antennomere IV weakly transverse; V-X gradually increasing in width; preapical antennomeres nearly twice as wide as long.

Pronotum (Fig. 14) approximately 1.4 times as wide as long and 1.4 times as wide as head; maximal width slightly before the middle; lateral margins not sinuate in posterior half, posterior angles obtusely marked; near posterior margin with weakly pronounced, short transverse impression without conspicuously coarse punctures; punctation of remainder of dorsal surface defined and slightly finer than that of head; pubescence long, fine, and suberect; interstices without distinct microsculpture.

Elytra (Fig. 14) approximately as long as pronotum; posterior margin moderately sinuate near postero-lateral angle; punctation coarse and very dense; interstices without microsculpture and glossy. Hind wings present. Metatarsomere I somewhat longer than II.

Abdomen anteriorly with moderately dense, posteriorly with sparse punctation; interstices glossy; posterior margin of tergite VII with palisade fringe.

♂: tergite VII at posterior margin with small median tubercle; posterior margin of tergite VIII with three pronounced tooth-like processes on either side (Fig. 15); sternite VIII moderately transverse, posterior margin convexly produced in the middle (Fig. 16); median lobe of aedeagus 0.38 mm long, with apical internal structures of distinctive shape (Fig. 17).

♀: unknown.

E t y m o l o g y : The name (Latin, adjective) refers to the shape of the apical internal structures of the aedeagus, which somewhat resemble mandibles.

C o m p a r a t i v e n o t e s : This species is readily distinguished from all other *Silusa* species known from China by the shape of the male tergite VIII and particularly by the characteristic shape of the apical internal structures of the aedeagus. For illustrations of the genitalia of most previously described species see PACE (1998a, 2004a). *Silusa aliena* BERNHAUER 1916, of which no illustrations of the genitalia are available in the literature, has the head and the pronotum distinctly microsculptured (BERNHAUER 1916).

D i s t r i b u t i o n a n d n a t u r a l h i s t o r y : The type locality is situated in the Daba Shan, Shaanxi province, at an altitude of 2150 m.

***Silusa bodemeyeri* (EPPELSHEIM 1883) (Figs 54-56)**

Leptusa bodemeyeri EPPELSHEIM 1883: 252 ff.

T y p e m a t e r i a l e x a m i n e d : Lectotype ♂ [somewhat damaged], present designation: "♂ / Bodemeyeri mihi, Hungar. mer. Merkl. / Bodemeyeri Eppelsh. Wien. ent. Zeit. II. 1883. p. 252 / Typus / *Silusa bodemeyeri* (Epp.), det.: Ádám 2006 / Lectotypus ♂ *Leptusa bodemeyeri* Eppelsheim, desig. V. Assing 2011 / *Silusa bodemeyeri* (Eppelsheim), det. V. Assing 2011" (NHMW). **Paralectotypes**: 1 ex. [with most of abdomen missing]: "♂ / Bodemeyeri mihi, Hungar. mer. Merkl. / *Silusa præs uniplicata* / *Cotypus* / *Silusa bodemeyeri* (Epp.), det.: Ádám 2006" (NHMW); 1 ♀: "Szekul / Bodemeyeri mihi, Hungar. mer. v. Bodemeyer. / Typus / *Silusa bodemeyeri* (Epp.), det.: Ádám 2006" (NHMW).

C o m m e n t : The original description is based on few syntypes ("in wenigen Stücken"), among them at least one male and one female, collected by von Bodemeyer "bei Locaia und Szekul in Südungarn" (EPPELSHEIM 1883), localities today situated in Romania. The species was subsequently moved to the genus *Silusa* ERICHSON 1837 bei SCHEERPELTZ (1966). Three syntypes - a male, a female, and a specimen with most of the abdomen missing - were located in the collections of the NHMW. The male is designated as the lectotype. Its primary and secondary sexual characters are illustrated in Figs 54-56.

An examination of the above type material revealed that *S. bodemeyeri* is a micropterous species with a habitus and short elytra (approximately 0.8 times as long as pronotum) that distinctly resemble those of some micropterous *Leptusa* species. Until a few years ago, *S. bodemeyeri* had been recorded only from the southern Carpathians, where it is evidently endemic. Nevertheless, this species was recently reported from Sichuan and Hongkong by PACE (1998a, 2004a). There is little doubt that these records are based on misidentifications. The male from Sichuan was collected by M. Schülke, but it was not found in his collection. However, two female *Silusa* specimens identified by R. Pace in 1999 as *S. bodemeyeri* are deposited in the collection of M. Schülke. Both of them are macropterous and they clearly do not refer to *S. bodemeyeri*. Moreover, they are distinguished from each other by so many prominent characters that they undoubtedly belong to different species. One of them (undissected) is conspecific with the holotype of *S. excisa*; the other belongs to a species of uncertain identity. Consequently, *S. bodemeyeri* is deleted from the list of Chinese Staphylinidae.

***Tropimelytron viaticum* (PACE 1998) (Figs 24-27)**

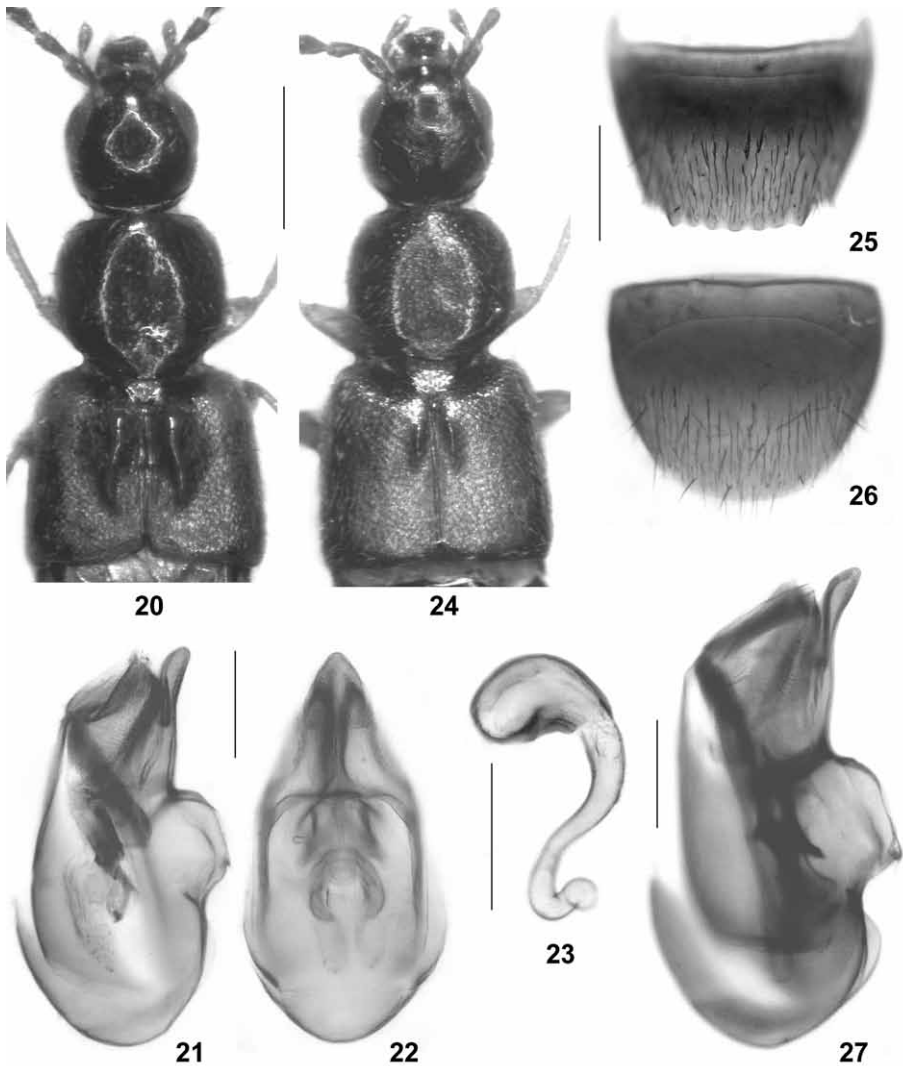
Pelioptera (Tropimelytron) viatica PACE 1998c: 938.

T y p e m a t e r i a l e x a m i n e d : Holotype ♀: "China, Sichuan, Gongga Shan, above Camp 3, 3050 m, 22.VII.1994, A. Smetana [C18] / Holotypus *Pelioptera viatica* m., det. R. Pace 96" (MHNG). Paratypes: 1 ♂: "China, Sichuan, Gongga Shan, Lake abv. Camp 2, 2750 m, 24.VII.1994, A. Smetana [C20]" (MHNG); 1 ♀: "China, Sichuan, Gongga Shan, abv. Camp 3, 3300-3350 m, 23.VII.1994, A. Smetana [C19]" (MHNG); 3 ♀♀: "China, Sichuan, Gongga Shan, above Camp 2, 2700 m, 26.VII.1994, A. Smetana [C26]" (MHNG).

C o m m e n t : The original description, which lacks any information whatsoever on the modifications of the male elytra, is based on eleven type specimens from the Gongga Shan in Sichuan (PACE 1998c), eight of them deposited in the MHNG. Remarkably, the holotype is a female.

The male elytra are characterized by the presence of a short straight sutural carina on either side of the suture, close to the scutellum; these carinae barely reach the middle of the suture (Fig. 24). The pronotum is of similar shape in males and females. The male tergite VII has a smooth and distinct median tubercle near the posterior margin. The male tergite and sternite VIII are shaped as in Figs 25-26. The median lobe of the aedeagus is 0.46 mm long (Fig. 27).

299



Figs 20-27: *Tropimelytron sinuosum* nov.sp. (20-23) and *T. viaticum* PACE, paratype (24-27): (20, 24) forebody; (21, 27) median lobe of aedeagus in lateral view; (22) median lobe of aedeagus in ventral view; (23) spermatheca; (25) male tergite VIII; (26) male sternite VIII. Scale bars: 20, 24: 0.5 mm; 25-26: 0.2 mm; 21-23, 27: 0.1 mm.

***Tropimelytron sinuosum* nov.sp.** (Figs 20-23, 33-35)

Type material: Holotype ♂: "China: Yunnan, Baoshan Pref., Gaoligong Shan, 32 km SE Tengchong, 2150-2250 m, 24°51'-53'N, 98°45'E, devast. prim. and second. forest, litter, dead wood, mushrooms sifted, 26.VIII.2009, leg. M. Schülke [CH09-08/09] / Holotypus ♂ *Tropimelytron sinuosum* sp. n. det. V. Assing 2010" (cAss). Paratypes: 2 ♀♀: same data as holotype (cSch); 1 ♂, 1 ♀: "China (Yunnan) Pu'er Pref., Ailao Shan, 37 km NW Jingdong,

24°45'12"N, 100°41'24.5"E, 2300 m (devastated forest remnant, litter/moss/grass roots sifted, 13.IX.2009, D. W. Wrase [48]) (cSch, cAss); 1 ♀: "China: Yunnan, Lincang Pref., Wuliang Shan, old pass road, W side, 24°42'58.6"N, 100°29'52.0"E, 2200 m, small creek valley with primary forest remnant, litter & debris sifted, 12.IX.2009, M. Schülke [CH09-47]" (cSch).

Description: Body length 3.0–4.0 mm. Coloration: head, pronotum, and abdomen (except for the paler apex) blackish; elytra yellowish, with the scutellar region and the postero-lateral angles diffusely and more or less extensively infusate, rarely most of elytra dark; legs yellowish; antennae blackish-brown.

Head (Fig. 20) approximately as wide as long; punctation sparse and extremely fine, barely noticeable; interstices with very shallow microsculpture, glossy. Eyes large, approximately twice as long as postocular region in dorsal view. Antenna slender; antennomere IV weakly transverse; V–X gradually and weakly increasing in width; X approximately 1.5 times as wide as long; XI approximately as long as the combined length of IX and X.

Pronotum (Fig. 20) with sexual dimorphism, slender, approximately 1.20–1.25 times as wide as head; posterior angles weakly marked; punctation sparse and very fine, but more distinct than that of head; on either side of middle with two larger punctures, the four punctures approximately forming a square or an oblong rectangle; surface with shallow microsculpture and glossy.

Elytra (Fig. 20) with pronounced sexual dimorphism, 0.8 (large male) to 0.95 (female) times as long as, and much broader than pronotum; humeral angles pronounced; punctation fine and dense; interstices with shallow microsculpture. Hind wings fully developed.

Abdomen with very sparse punctation and transverse microsculpture, glossy; posterior margin of tergite VIII with palisade fringe.

♂: pronotum approximately as long as wide and produced posteriorly, middle of dorsal surface flattened (only in large male), posterior margin pointed in the middle (Fig. 20); elytra with enormous sinuose carinae on either side of middle, extending well beyond middle of suture (Fig. 20); tergite VII near posterior margin with smooth median tubercle (Fig. 33); posterior margin of tergite VIII truncate, serrulate, and with marked lateral angles; sternite VIII broadly convex posteriorly; median lobe of aedeagus 0.35–0.38 mm long, shaped as in Figs 21–22.

♀: pronotum approximately 1.05 times as wide as long, posterior margin weakly convex; elytra and abdominal tergite VII without modifications; tergite VIII broadly and weakly convex posteriorly (Fig. 34); posterior margin of sternite VIII distinctly concave in the middle (Fig. 35); spermatheca as in Fig. 23.

Intraspecific variation: The somewhat smaller male paratype has less pronounced male secondary sexual characters than the holotype; the pronotum is not flattened in the middle and posteriorly less distinctly pointed, the sutural carinae are slightly less conspicuous, and the median tubercle at the posterior margin of the abdominal tergite VIII is smaller.

Etymology: The name (Latin, adjective) refers to the conspicuous sinuose carinae on the male elytra.

Comparative notes: In both external and sexual characters, *T. sinuosum* is

most similar to *T. viaticum*, from which it is readily distinguished by the distinctly larger eyes (*T. viaticum*: eyes only slightly longer than postocular region), the much less pronounced microsculpture of the head and pronotum (*T. viaticum*: microreticulation pronounced, surface only with subdued shine), the modifications of the male pronotum and elytra (*T. viaticum*: posterior margin of pronotum weakly convex; elytral carinae short, weakly elevated, and straight), the smaller and differently shaped aedeagus, the distinct median concavity of the posterior margin of the female sternite VIII (*T. viaticum*: very weakly concave), and the slightly different shape of the spermatheca. For illustrations of *T. viaticum* see Figs 24-27 and PACE (1998c).

Distribution and natural history: The type specimens were collected in three localities in Yunnan, by sifting litter in primary forest remnants and secondary forests at altitudes of 2150-2300 m.

***Oroekklinia smetanai* PACE 2004**

Material examined: China: 1 ♀, Yunnan, Diqing Tibet Aut. Pref., Zhongdian County, 23 km S Zhongdian, Xue Shan, near lake, 27°37'N, 99°37'E, 3850 m, 6.VI.2005, leg. Smetana (cAss).

Comment: The above specimen represents the first record of this species since the original description, which is based on a male and a female from "Xue Shan, nr. Zhongdian" collected at altitudes of 4050 and 3900 m, respectively (PACE 2004b).

***Oroekklinia excaecata* (ASSING 2009), nov.comb.** (Figs 18-19, 36-37)

Atheta (*Microdota*) *excaecata* ASSING 2009: 497 f.

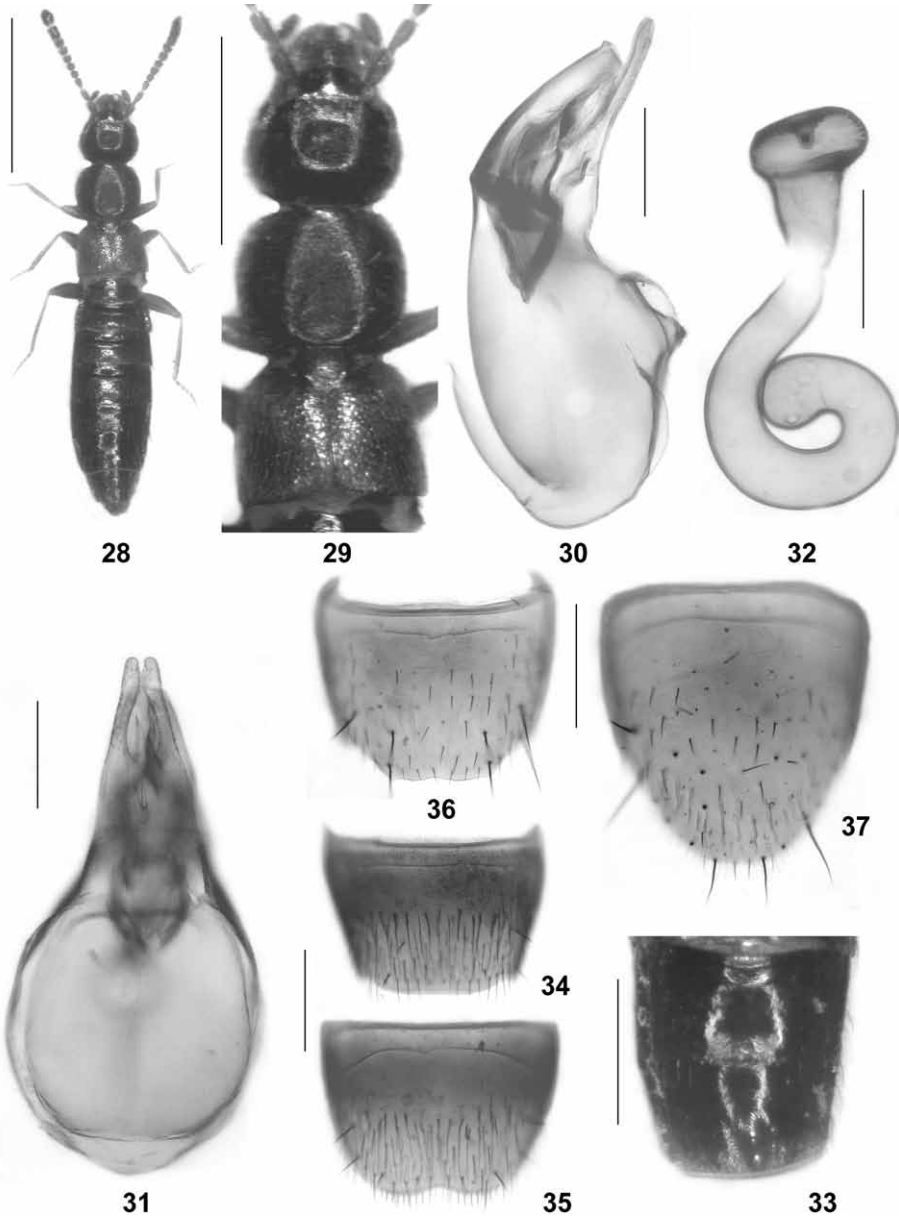
Material examined: China: 13 exs., Yunnan, Nujiang Lisu Pref., Gaoligong Shan, "Cloud pass" pass 21 km NW Liuku, 25°58'N, 98°41'E, 3150 m, shrubs and bamboo, litter sifted, 2.-3.IX.2009, leg. Schülke (cSch, cAss).

Comment: The original description is based on a single female (ASSING 2009); the type locality is identical to the locality where the above specimens were collected. An examination of the male sexual characters (Figs 18-19, 36-37) revealed that the species belongs to *Oroekklinia* PACE 1999. From the other three species of the genus, *O. daxuensis* PACE 1999 (Sichuan), *O. proiecta* ASSING 2002 (Sichuan), and *O. smetanai* PACE 2004 (Yunnan), it is readily distinguished by the much paler coloration (whole body reddish-yellow) alone.

***Bellatheta diacangica* nov.sp.** (Figs 28-32)

Type material: Holotype ♂: "China: Yunnan, Dali Bai Aut. Pref., Diacang Shan, W Dali, 25°41'52"N, 100°06'28"E, 2960 m, along path, sifted from litter, moss, flood debris, 6.IX.2009, leg. M. Schülke [CH09-31] / Holotypus ♂ *Bellatheta diacangica* sp. n. det. V. Assing 2010" (cAss). Paratypes: 1 ♂, 2 ♀ ♀: same data as holotype (cSch, cAss).

Description: Body length 2.6-2.9 mm. Habitus as in Fig. 28. Coloration: head, pronotum, and abdomen blackish; elytra dark-yellowish; legs pale-brown; antennae dark-brown, with the basal three antennomeres reddish.



Figs 28-37: *Bellatheta diacangica* nov.sp. (28-32), *Tropimenelytron sinuosum* nov.sp. (33-35), and *Oroekklima excaecata* (ASSING) (36-37): (28) habitus; (29) forebody; (30-31) median lobe of aedeagus in lateral and in ventral view; (32) spermatheca; (33) male tergites VI-VII; (34) female sternite VIII; (35) female sternite VIII; (36) male tergite VIII; (37) male sternite VIII. Scale bars: 28: 1.0 mm; 29, 33: 0.5 mm; 34-37: 0.2 mm; 30-32: 0.1 mm.

Head (Fig. 29) approximately 1.1 times as wide as long; punctation sparse and extremely fine, barely noticeable in the pronounced microreticulation. Eyes small, approximately half as long as postocular region in dorsal view. Antenna: antennomere IV weakly transverse; V-X gradually increasing in width and increasingly transverse; X nearly twice as wide as long; XI barely as long as the combined length of IX and X.

Pronotum (Fig. 29) 1.15-1.25 times as wide as long and 1.05-1.10 times as wide as head; posterior angles weakly marked; in posterior half with more of less pronounced shallow median impression; punctation moderately dense and extremely fine, barely noticeable in the pronounced microreticulation; pubescence of midline directed anteriorly in anterior 4/5 and posteriorly in posterior 1/5.

Elytra (Fig. 29) short, approximately 0.7 times as long as pronotum; humeral angles weakly pronounced; punctation fine and dense; interstices with shallow microsculpture. Hind wings reduced.

Abdomen approximately 1.1 times as broad as elytra, widest at segments V/VI; tergites III-V with very shallow anterior impression; punctation very fine, moderately sparse on anterior tergites and very sparse on posterior tergites; interstices with shallow, but distinct microsculpture; posterior margin of tergite VIII with palisade fringe; posterior margin of tergite VIII truncate in the middle.

♂: sternite VIII distinctly longer than tergite VIII, posterior margin strongly convex; median lobe of aedeagus as in Figs 30-31.

♀: sternite VIII slightly longer than tergite VIII, posterior margin broadly convex, in the middle almost truncate; spermatheca as in Fig. 32.

E t y m o l o g y : The specific epithet (adjective) is derived from the name of the mountain range where the type locality is situated.

C o m p a r a t i v e n o t e s a n d s y s t e m a t i c s : Based on its sexual characters, particularly to the morphology of the aedeagus, *B. diacangica* is most closely related to some species previously attributed to *Emmelostiba* PACE 1982, which was recently synonymized with *Bellatheta* ROUBAL 1928 (VOGEL 2007). The genus, whose monophyly is doubtful and requires revision, currently includes 25 species, four of which have been recorded from mainland China: *B. chinensis* (PACE 1993) (Xinjiang), *B. gansuica* (ASSING 2005) (Gansu), *B. bellicosa* (PACE 2004) (Sichuan), and *B. granulosa* (PACE 2004) (Sichuan). All these species have distinctly longer elytra and larger eyes than *B. diacangica*. In addition they differ in the sexual characters; for illustrations see PACE (1993, 1998b, 2004b).

D i s t r i b u t i o n a n d n a t u r a l h i s t o r y : The type locality is situated in the Diacang Shan, to the west of Dali, Yunnan province. The specimens were sifted from litter, moss, and flood debris at an altitude of 2960 m. The adaptive reductions of the eyes and the wings suggest that the species has a restricted distribution.

***Atheta (Microdota) foliacea* ASSING 2006**

M a t e r i a l e x a m i n e d : China: 1♀, Yunnan, Diqing Tibet Aut. Pr., Zhongdian Co., 23 km S Zhongdian, Xue Shan near lake, 27°37.1'N, 99°36.5'E, 3850 m, 6.VI.2005, leg. Smetana (cSme).

C o m m e n t : The above specimen was collected together with the types (ASSING 2006).

***Atheta (Microdota) altincisa* ASSING 2009**

Material examined: China: 22 exs., Yunnan, Nujiang Lisu Pref., Gaoligong Shan, E pass 20 km NW Liuku, 25°59'N, 98°42'E, 3000 m, stream valley with degraded primary forest, litter and moss sifted, 3.IX.2009, leg. Schülke & Wrase (cSch, cAss).

Comment: The above specimens were collected near the type locality (ASSING 2009).

***Atheta (Microdota) bicoloricornis* ASSING 2009**

Material examined: China: 5 exs., Yunnan, Nujiang Lisu Pref., Gaoligong Shan, "Cloud pass" 21 km NW Liuku, 25°58'N, 98°41'E, 3150 m, shrubs and bamboo, litter sifted, 2-3.IX.2009, leg. Schülke & Wrase (cSch, cAss).

Comment: The above specimens were collected near the type locality (ASSING 2009).

***Platyola geostiboides* nov.sp. (Figs 38-47)**

Type material: Holotype ♂: "China: Yunnan, Lincang Pref., Bangma Shan, 20 km NW Lincang, 2210 m, 23°58'25"N, 99°54'36"E, water reservoir, devast. forest with ferns, litter & ferns sifted, reservoir bank, 9.IX.2009, leg. M. Schülke [CH09-37] / Holotypus ♂ *Platyola geostiboides* sp. n. det. V. Assing 2010" (cAss). Paratypes: 11 exs.: same data as holotype (cSch, cAss).

Description: Body length 1.5-1.9 mm. Habitus as in Fig. 38. Coloration: body reddish-yellow to reddish, with the abdominal segment VI infuscate; legs yellowish; antennae yellowish-brown, with the basal 3-4 antennomeres yellowish.

Head weakly transverse, somewhat wedge-shaped, widest near posterior angles; punctation very fine and rather sparse, barely noticeable in the microreticulation. Eyes reduced to minute rudiments, approximately as large as antennomere II in cross-section. Antenna short and distinctly incrassate apically; antennomere IV transverse; V-X of increasing width and increasingly transverse; X approximately twice as wide as long (Fig. 39). Ligula deeply divided. Maxilla as in Fig. 40. Mandibles without distinct teeth.

Pronotum weakly transverse, approximately 1.2 times as wide as long and 1.2 times as wide as head, widest approximately in the middle; punctation very fine and sparse; microreticulation composed of isodiametric meshes, rather shallow.

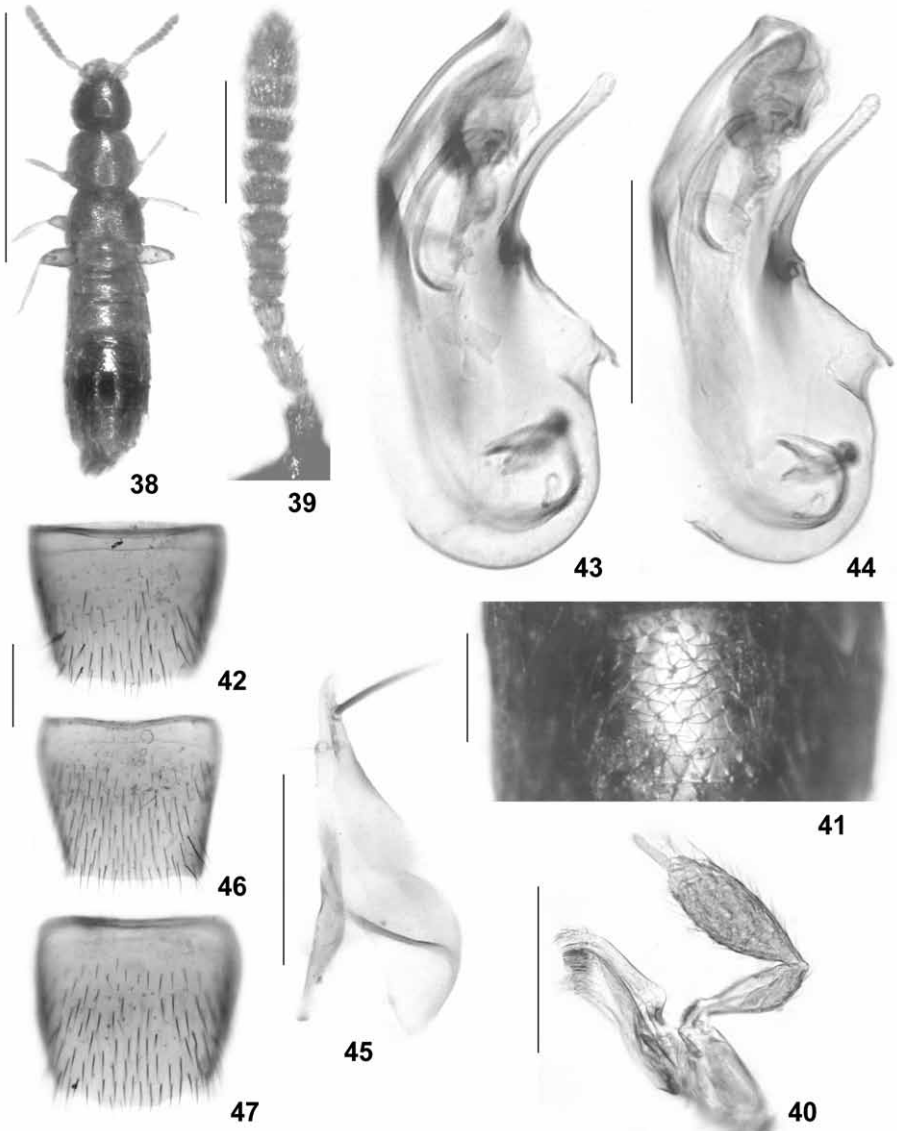
Elytra short, 0.60-0.65 times as long as pronotum; punctation fine, but more distinct than that of head and pronotum. Hind wings absent.

Abdomen slightly wider than elytra, widest at segments V/VI; punctation fine and sparse; microsculpture composed of rhomboid meshes (Fig. 41); posterior margin of tergite VII without palisade fringe.

♂: posterior margin of tergite VIII weakly convex; posterior margin of sternite VIII very weakly angled in the middle (Fig. 42); median lobe of aedeagus as in Figs 43-44; paramere apically with very long stout seta (Fig. 45).

♀: posterior margin of tergite VIII weakly convex posteriorly (Fig. 46); posterior margin of sternite VIII truncate in the middle (Fig. 47); spermatheca not found, apparently not sclerotized.

Etymology: The specific epithet (Latin, adjective) refers to the external resemblance to species of the genus *Geostiba* THOMSON.



Figs .
VI; (4
female tergite VIII; (47) female sternite VIII. Scale bars: 38: 1.0 mm; 39-47: 0.1 mm.

Comparative notes: The habitus of *P. geostiboides* is somewhat unusual for *Platytrochus*. Nevertheless, the species is attributed to this genus particularly based on the characteristic microsculpture of the abdomen, which seems to be unique among the Athetini, on the shape and chaetotaxy of the paramere (especially the long and stout

apical seta), as well as on the internal structures of the aedeagus (presence of a long flagellum). The new species is distinguished from all its congeners by its slender habitus and by the morphology of the aedeagus, from most species also by the strongly reduced eyes and the completely reduced hind wings. Only two *Platyola* species were previously known from mainland China, both of them from Hongkong and both of them originally described under the generic name *Mimacrotona* CAMERON 1920: *P. orousseti* (PACE 1990) and *P. rougemonti* (PACE 1998). They are distinguished from *P. geostiboides* by darker coloration, larger body size, much larger eyes, longer elytra, and a much broader body alone.

Distribution and natural history: The type locality is situated in the Bangma Shan in Yunnan province, southern China. As can be inferred from the adaptive reductions of the eyes, wings, and pigmentation, the distribution is most likely very restricted. The type specimens were sifted from litter and fern debris in a degraded forest at an altitude of approximately 2200 m.

***Anomognathus armatus* (SHARP 1888)** (Figs 48-50)

Thectura armata SHARP 1888: 294.

Type material examined: Lectotype ♂, present designation: "♂ *Thectura armata*. Type D.S., Miyanoshta May, 5.1880. Lewis. [written on mounting label next to the specimen] / Japan. G. Lewis. / Subashiri. 4V.-10.V.80 / Sharp Coll. 1905-313 / Type / Lectotypus ♂ *Thectura armata* Sharp, desig. V. Assing 2010 / *Anomognathus armatus* (Sharp), det. V. Assing 2010" (BMNH).

Material examined: China: 6 exs., Zhejiang, W. Tianmu Shan, ca. 1 km N Tianmu village, 500 m, under pine bark, 26.VI.2008, leg. Huschke (cAss).

Comment: The original description is based on an unspecified number of syntypes; a locality is not specified (SHARP 1888). Only one syntype, a male, was located in the Sharp collection at the BMNH; it is designated as the lectotype. In external and sexual characters, *A. armatus* is highly similar to the West Palaearctic *A. tricuspis* EPPELSHEIM 1884; the aedeagus is practically identical. The only difference between the two species is the shape of the median tooth of the male tergite VIII, which is broader and stouter in *A. tricuspis*. More material is needed to clarify if this difference is an expression of inter- or intraspecific variation. The sexual characters of *A. armatus* are illustrated in Figs 48-50.

The species was previously known only from Japan and Taiwan. The above specimens represent the first record from mainland China.

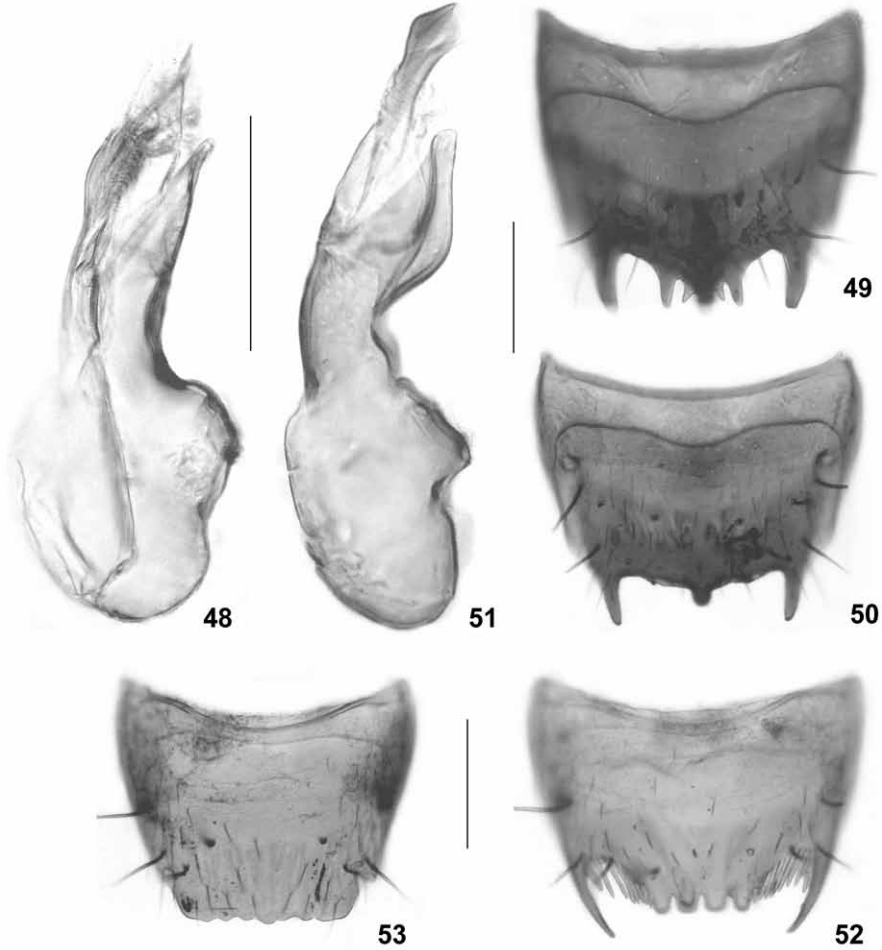
***Anomognathus serratus* nov.sp.** (Figs 51-53)

Type material: Holotype ♂: "China - Zhejiang Prov., Tianmu Shan, Tianmu village, 500 m, under pine bark, 26.VI.2008, leg. Huschke / Holotypus ♂ *Anomognathus serratus* sp. n. det. V. Assing 2010" (cAss). Paratypes: 1 ♂, 3 ♀ ♀: same data as holotype (cAss).

Description: Body length 1.9-2.3 mm. Coloration: head blackish; pronotum bright reddish-yellow; elytra pale-brown, with an indistinct diagonal yellowish band extending from the humeral angles towards, but not always reaching, the sutural angles; abdomen reddish-yellow, with segments VI and anterior portion of VII infuscate; legs yellowish; antennae pale-brown, with antennomeres I-II or I-III yellowish.

Head 1.05-1.10 times as broad as long; lateral margins behind eyes converging posteriad; punctation rather dense and fine, barely visible in the pronounced microreticulation. Eyes

large and bulging, approximately as long as postocular region in dorsal view. Antenna distinctly incrassate apically; antennomere III approximately as long as, but somewhat narrower than II, of conical shape, almost twice as long as broad; IV distinctly transverse; V-X of increasing width and increasingly transverse; X disc-shaped, more than twice as wide as long.



Figs 48-53: *Anomogathus armatus* (SHARP) (48-50; 49: lectotype; 48, 50: Zhejiang) and *A. serratus* nov.sp. (51-53): (48, 51) median lobe of aedeagus in lateral view; (49, 52) male tergite VIII; (50, 53) female tergite VIII. Scale bars: 0.1 mm.

Pronotum approximately 1.3 times as broad as long and 1.1 times as wide as head, widest in anterior half; surface with pronounced microreticulation and almost matt; punctation fine, barely noticeable in the microsculpture.

Elytra 1.05-1.10 times as long as pronotum; humeral angles pronounced; surface with pronounced microreticulation and very fine, barely noticeable punctation. Hind wings fully developed.

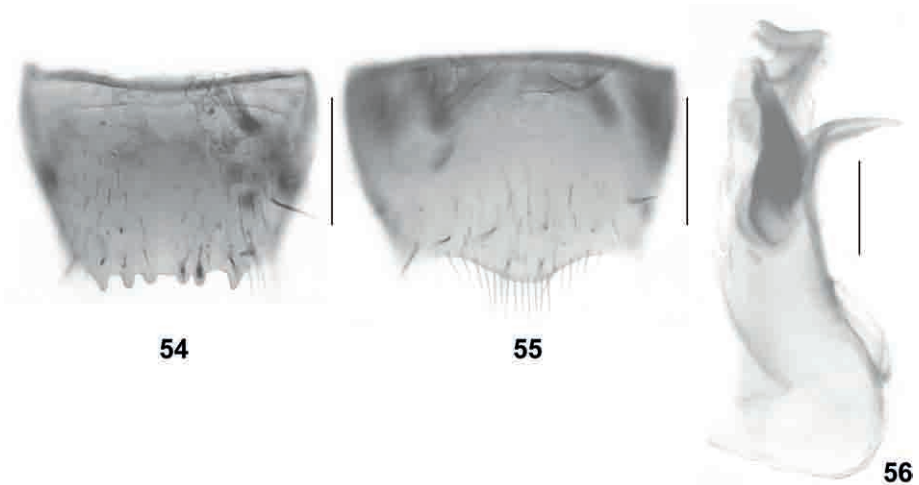
Abdomen subparallel; tergites III-V with shallow anterior impressions; microsculpture distinct, but shallower than that of head and pronotum; tergal surfaces somewhat glossy; punctation sparse and very fine.

♂: posterior margin of tergite VIII with a long tooth-like process on either side, broadly truncate and with four short and apically truncate teeth, between the middle portion and the lateral processes emarginate and with long stout yellowish setae (Fig. 52); sternite VIII with convex posterior margin; median lobe of aedeagus with ventral process almost angled in lateral view (Fig. 51).

♀: posterior margin of tergite VIII truncate and weakly serrate, without lateral processes (Fig. 53); sternite VIII of similar shape as in male; spermathecal capsule as in other species of the genus with large and somewhat oval distal portion and with short proximal portion.

E t y m o l o g y : The specific epithet (Latin, adjective: shape like a saw) refers to the distinctive shape of the posterior margin of tergite VIII in both sexes.

C o m p a r a t i v e n o t e s : The new species is distinguished from its congeners particularly by the morphology of the aedeagus and by the shape of the male tergite VIII. Regarding its coloration, *A. serratus* is similar to *A. laetus* CAMERON 1939 from North India. In *A. laetus*, the elytra are uniformly yellowish-brown and the margin between the lateral processes of the male tergite VIII is "either truncate or with two minute teeth close together at the middle" (CAMERON 1939).



Figs 54-56: *Silusa bodemeyeri* (EPPELSHEIM), lectotype: (54) male tergite VIII; (55) male sternite VIII; (56) median lobe of aedeagus in lateral view. Scale bars: 54-55: 0.2 mm; 56: 0.1 mm.

Distribution and natural history: The type locality is situated in Zhejiang province in northeastern China. The type specimens were collected under pine bark at an altitude of 500 m.

***Apimela schuelkei* ASSING 2006**

Material examined: China: 1♀, Yunnan, Nujiang Lisu Pref., Gaoligong Shan, 27°45'N, 98°36'E, snowfield at 2500 m, 19.VI.2005, leg. Smetana (cAss).

Comment: The above specimen was collected at the type locality (ASSING 2006).

Acknowledgements

My thanks are due to the colleagues indicated in the material section for making their interesting material available for study. In particular, I am grateful to Michael Schülke and to Aleš Smetana for the generous gift of the holotypes of the species described in this paper. Benedikt Feldmann (Münster) proof-read the manuscript.

Zusammenfassung

Sechs Arten werden aus China beschrieben und abgebildet: *Silusa excisa* nov.sp. (Sichuan), *S. mandibulata* nov.sp. (Yunnan), *Tropimelytron sinuosum* nov.sp. (Yunnan), *Bellatheta diacangica* nov.sp. (Yunnan), *Platyola geostiboides* nov.sp. (Yunnan) und *Anomognathus serratus* nov.sp. (Zhejiang). Weitere Nachweise von acht Arten der Unterfamilie Aleocharinae werden gemeldet. Für *Leptusa bodemeyeri* EPPELSHEIM 1883 und *Thectura armata* SHARP 1888 werden Lectotypen designiert. *Atheta excaecata* ASSING 2009 wird in die Gattung *Oroekklima* PACE 1999 gestellt. Für *Silusa sichuanensis* PACE 2004, und *Tropimelytron viaticum* (PACE 1998) werden neue Abbildungen erstellt; die bisher unbekanntenen männlichen Sexualmerkmale von *Oroekklima excaecata*, *Silusa bodemeyeri* (EPPELSHEIM 1883) sowie die Geschlechtsmerkmale von *Anomognathus armatus* (SHARP 1888) werden abgebildet. Frühere Nachweise von *Silusa bodemeyeri* beruhen auf Fehldeterminationen.

References

- ASSING V. (2006): Six new species of micropterous *Atheta* and *Apimela* from northern Yunnan, China (Coleoptera: Staphylinidae, Aleocharinae). — Linzer biologische Beiträge **38** (2): 1143-1156.
- ASSING V. (2009): New species and additional records of Homalotini, Athetini, Pygostenini, and Lomechusini from Yunnan, China (Coleoptera: Staphylinidae: Aleocharinae). — Linzer biologische Beiträge **41** (1): 485-507.
- BERNHAEUER M. (1916): Kurzflügler aus dem deutschen Schutzgebiete Kiautschau und China. — Archiv für Naturgeschichte (A) **81**: 27-34.
- CAMERON M. (1939): The Fauna of British India, including Ceylon and Burma. Coleoptera. Staphylinidae. Vol. IV. Parts I-II. — London: 691 pp.
- EPPELSHEIM E. (1883): Neue Staphylinen der österreichisch-ungarischen Monarchie und der angrenzenden Länder. — Wiener Entomologische Zeitung **2**: 251-255.
- PACE R. (1993): Aleocharinae della Cina (Coleoptera, Staphylinidae). — Bollettino del Museo Civico di Storia Naturale di Verona **17** (1990): 69-126.

- PACE R. (1998a): Aleocharinae della Cina: Parte I (Coleoptera, Staphylinidae). — Revue Suisse de Zoologie **105** (1): 139-220.
- PACE R. (1998b): Aleocharinae della Cina: Parte II (Coleoptera, Staphylinidae). — Revue Suisse de Zoologie **105** (2): 395-463.
- PACE R. (1998c): Aleocharinae della Cina: Parte IV (Coleoptera, Staphylinidae). — Revue Suisse de Zoologie **105** (4): 911-982.
- PACE R. (2004a): Specie nuove o poco note di Homalotini, Silusini, Bolitocharini, Diestotini e Autaliini della Cina e della Thailandia (Coleoptera, Staphylinidae). — Revue suisse de Zoologie **111** (1): 63-76.
- PACE R. (2004b): Hygronomini e Athetini della Cina con note sinonimiche (Coleoptera, Staphylinidae). — Revue suisse de Zoologie **111** (3): 457-523.
- SCHEERPELTZ O. (1966): Die neue Systematik der Großgattung *Leptusa* KRAATZ (Col. Staphylinidae). — Verhandlungen der Zoologisch-Botanischen Gesellschaft in Wien **105/106**: 5-55.
- SHARP D.S. (1888): The Staphylinidae of Japan. — The Annals and Magazine of Natural History (6) **2**: 277-295.
- SMETANA A. (2004): Staphylinidae, subfamily Aleocharinae, pp. 353-494. — In: LÖBL I. & A. SMETANA (eds), Catalogue of Palaearctic Coleoptera. II. Hydrophiloidea – Histeroidea – Staphylinoidea. — Stenstrup, Apollo Books: 942 pp.
- VOGEL J. (2007): *Bellatheta fatrica* (ROUBAL, 1928) – ein Erstnachweis für Deutschland mit Bemerkungen zu Synonymien (Coleoptera, Staphylinidae). — Entomologische Blätter **102** (2006) (1-3): 101-105.

Author's address:

Dr. Volker ASSING
Gabelsbergerstr. 2
D-30163 Hannover, Germany
E-mail: vassing.hann@t-online.de

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Linzer biologische Beiträge](#)

Jahr/Year: 2011

Band/Volume: [0043_1](#)

Autor(en)/Author(s): Assing Volker

Artikel/Article: [Six new species and additional records of Aleocharinae from China \(Coleoptera: Staphylinidae: Aleocharinae\) 291-310](#)