Bonn zoological Bulletin 61 (1): 49–128 July 2012

A revision of East Palaearctic *Lobrathium* (Coleoptera: Staphylinidae: Paederinae)

Volker Assing

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

Abstract. East Palaearctic species of *Lobrathium* Mulsant & Rey, 1878, particularly those of the Himalaya and China, are revised. Thirty-three species, thirty-one of them in *Lobrathium* and two of lobrathioid habitus in *Lathrobium* Gravenhorst, 1802, are described and illustrated: *Lobrathium ablectum* sp. n (China: Hubei); *L. biaculeatum* sp. n. (East Nepal); *L. bicarinatum* sp. n. (North India, Nepal); *L. bicornutum* sp. n. (East Nepal); *L. bimembre* sp. n. (China: Yunnan); *L. bispinosum* sp. n. (China: Guizhou); *L. cholaicum* sp. n. (China: Tibet); *L. configens* sp. n. (China: Shaanxi, Sichuan, Hubei, Yunnan); *L. cornutum* sp. n. (East Nepal); *L. daxuense* sp. n. (China: Sichuan); *L. demptum* sp. n. (China: Hubei); *L. discrepans* sp. n. (North Vietnam); *L. domenoides* sp. n. (China: Sichuan); *L. duplex* sp. n. (China: Sichuan, Yunnan); *L. excisissimum* sp. n. (Yunnan); *L. feldmanni* sp. n. (China: Sichuan); *L. flavipenne* sp. n. (North India: Himachal Pradesh); *L. integrum* sp. n. (East Nepal); *L. kleebergi* sp. n. (Nepal); *L. kosiense* sp. n. (East Nepal); *L. lamellatum* sp. n. (China: Sichuan); *L. mordens* sp. n. (North India); *L. radens* sp. n. (China: Guizhou); *L. retrocarinatum* sp. n. (China: Yunnan); *L. schuelkei* sp. n. (China: Shaanxi); *L. semiflavum* sp. n. (Russian Far East); *L. sinuatum* sp. n. (Central Nepal); *L. spathulatum* sp. n. (China); *L. taureum* sp. n. (China: Hubei, Beijing); *L. tuberosum* sp. n. (China: Jiangxi); *L. unispinosum* sp. n. (Nepal); *Lathrobium lobrathioides* sp. n. (China: Sichuan); *L. lobrathiforme* sp. n. (China: Yunnan). All the previously described species from the Himalaya and China, except for *L. emeiense* Zheng, 1988, and some species from other East Palaearctic regions are redescribed and illustrated. Five new combinations are established: *Lobrathium guttula* (Fauvel, 1895), comb. n. (ex *Lathrobium*); *L. pustulatum* (Cameron, 1931), comb. n. (ex *Lathrobium*); *L. kashmiricum* (Cameron, 1931), comb. n. (ex *Lathrobium*); *Tetartopeus gracilentus* (Kraatz, 1859), comb. n. (ex *Lathrobium*); *T. wui* (Zheng, 2001), comb. n. (ex *Lobrathium*). *Lathrobium sublaeve* Motschulsky, 1858 is excluded from both *Lathrobium* and *Lobrathium*, and treated as Paederini incertae sedis. *Lobrathium ochreonotatum* (Champion, 1922), previously a synonym of *L. semicaeruleum* (Cameron, 1921), is revalidated. *Lobratium shibatai varium* Ito, 1995 is elevated to species rank. Eight synonymies are proposed: *Lobrathium* Mulsant & Rey, 1878 = *Ponthrobium* Korge, 1971, syn. n.; *Lobrathium alticola* (Cameron, 1943) = *L. pirpanjalense* Coiffait, 1982, syn. n.; *L. hongkongense* (Bernhauer, 1931) = *L. sibynium* Zheng, 1988, syn. n., = *L. ryukyuense* Ito, 1996, syn. n.; *L. triste* (Cameron, 1924) = *L. kashmiricum* (Cameron, 1931, syn. n., = *L. afghanicum* Coiffait, 1979, syn. n., = *L. nouristanicum* Coiffait, 1979, syn. n.; *Tetartopeus wui* (Zheng, 2001) = *T. bimaculatum* (Li, Tang & Zhu, 2007), syn. n. Lectotypes are designated for *Lathrobium lederi* Eppelsheim, 1884, *L. badium* Cameron, 1924, *L. brunneum* Cameron, 1931, *L. triste* Cameron, 1924, *L. semicaeruleum* Cameron, 1921, *L. ochreonotatum* Champion, 1922, *L. guttula* Fauvel, 1895, *L. pustulatum* Cameron, 1931, *L. cylindricolle* Cameron, 1924, *L. hongkongense* Bernhauer, 1931, and *L. gracilentum* Kraatz, 1859. *Lobrathium*, according to currently available evidence a Holarctic genus, is now represented in the Palaearctic region by 114 species and one subspecies, the vast majority of which, 87 species and one subspecies, are distributed in the East Palaearctic including Middle Asia, Myanmar, and North Vietnam. The Himalaya (20 species), China (24 species), Taiwan (20 species), and Japan (18 species and one subspecies) are the regions with the greatest diversity. Most species, particularly those with reduced wings and those subject to wing dimorphisms, appear to have remarkably restricted distributions. A catalogue of the *Lobrathium* species recorded from the Palaearctic region and keys to the species of the Himalaya and of China are provided. Some species from China and the Himalaya are subject to pronounced wing dimorphisms. East Palaearctic *Lobrathium* species are partly found near lakes or on banks of rivers and streams, and partly in the leaf litter of forest and shrub habitats at altitudes of 450–4400 m. Additional records of several West Palaearctic species are reported.

Key words. Taxonomy, rove beetles, East Palaearctic region, Himalaya, China, new species, new synonymies, new combinations, revalidation, lectotype designations, key to species, catalogue, diversity, zoogeography, wing dimorphism.

INTRODUCTION

The lathrobiine genus *Lobrathium* Mulsant & Rey, 1878, which had been treated as a subgenus of *Lathrobium* Gravenhorst, 1802 until a few decades ago, probably has an essentially Holarctic distribution. Species from other zoogeographic regions have been attributed to this genus, too, but all those taxa that have been re-examined recently, have turned out to belong to other genera (e.g., Assing in press c).

Received: 15.03.2012
Accepted: 20.04.2012
Corresponding editor: D. Ahrens

According to Smetana (2004), *Lobrathium* is represented in the Palaeactic region by 62 species and three subspecies in three subgenera. In the meantime, however, numerous additional species have been described, one subgeneric and numerous species-group names have been synonymised, one species was transferred to *Tetartopeus* Czwalina, 1888, two to *Pseudolathra* Casey, 1905, and one species previously assigned to *Lathrobium* was moved to *Lobrathium* (Assing 2004, 2005a, 2006a, 2007, 2008, 2010, in press a; Bordoni 2009; Ito 2007, 2009a–c; Shavrin 2008). Moreover, *Lobrathium wui* Zheng, 2001 from China and *L. apogeum* (Normand, 1936) from Algeria had been omitted in the catalogue.

According to Newton et al. (2001), nearly 70 species of *Lobrathium*, two of them adventive, are known from the Nearctic region. However, this figure includes *Pseudolathra* Casey, 1905, which, as most recent authors agree, represents a distinct genus (Assing in press c). According to a database compiled by Newton (unpubl.), there are 36 *Lobrathium* and 33 *Pseudolathra* species in North America north of Mexico (Newton, pers. comm.), and only one of them, *Lobrathium multipunctum* Gravenhorst, 1802, is adventive.

Previous studies have suggested already that the *Lobrathium* fauna of the East Palaearctic is much more diverse than that of the West Palaearctic region. The best-studied regions are Japan and Taiwan. As many as 20 species and subspecies, most of them with more or less restricted distributions, have been reported from Japan alone (Ito 2007, 2009b; Smetana 2004). For the vast majority of these species, illustrations of the male primary sexual characters are available in the literature. According to a recent revision, 20 species, 19 of them endemic, are known from Taiwan (Assing 2010). Remarkably, only seven species have been recorded from mainland China, although this vast, geologically, zoogeographically, and ecologically diverse country is generally known to host a remarkably rich fauna. Aside from the recent revision of the *Lobrathium* species of Taiwan (Assing 2010) and an incomplete key to the *Lobrathium* species of the Himalaya (Coiffait 1982b), which also includes a species of *Pseudolathra*, synoptic taxonomic studies of the East Palaearctic *Lobrathium* fauna are absent.

A recent revision of the Himalayan *Lathrobium* species (Assing in press b) revealed that the type material of several species previously attributed to *Lathrobium* in fact belonged to *Lobrathium* and other genera of Lathrobiina and Medonina. Subsequently, in order to investigate the diversity of *Lobrathium* in the East Palaearctic and to clarify the taxonomic status of previously unrevised *Lobrathium* and *Lathrobium* species, more type and non-type material from various public and private collections was examined. These studies yielded a remarkable number of new species, new synonymies, new combinations, and other taxonomic changes. In addition, new West Palaearctic material examined since the latest instalments (Assing 2007, 2008) to a revision of West Palaearctic *Lobrathium* is reported.

MATERIAL AND METHODS

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). A digital camera (Nikon Coolpix 995) was used for the photographs.
Head length was measured from the anterior margin of the frons 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, the length of the forebody from the anterior margin of the mandibles (in resting position) to the elytral hind margin, and the length of the aedeagus from the apex of the ventral process to the base of the aedeagal capsule. The "parameral" side (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

The maps were created using MapCreator 2.0 (primap) software. The coordinates of some Himalayan localities were obtained from Ahrens (2004).

COLLECTION MATERIAL DEPOSITORIES

BMNH	The Natural History Museum, London (R. G. Booth)
FMNH	Field Museum of Natural History, Chicago (via L. H. Herman)
MCSNV	Museo Civico di Storia Naturale, Verona (L. Latella; via A. Zanetti)
MHNG	Muséum d'Histoire Naturelle, Genève (G. Cuccodoro)
MMUM	The Manchester Museum, The Manchester University (D. Logunov)
MNHNP	Muséum National d'Histoire Naturelle, Paris (A. Taghavian)
NHMB	Naturhistorisches Museum Basel (M. Brancucci, E. Sprecher)
NHMD	Natural History Museum Denmark/ University of Copenhagen Zoological Museum (A. Solodovnikov)
NHMW	Naturhistorisches Museum Wien (H. Schillhammer)
NME	Naturkundemuseum Erfurt (M. Hartmann, assisted by W. Apfel)
SDEI	Senckenberg Deutsches Entomologisches Institut, Müncheberg (L. Behne)
SF	Senckenberg, Frankfurt/M. (A. Hastenpflug-Vesmanis)
SMNS	Staatliches Museum für Naturkunde, Stuttgart (W. Schawaller, K. Wolf-Schwenninger)
SNSD	Senckenberg Naturhistorische Sammlungen Dresden (O. Jäger)
ZML	Museum of Zoology, Lund University (R. Danielsson)
cAss	author´s private collection
cFel	private collection Benedikt Feldmann, Münster

cGia	private collection Pier Mauro Giachino, Torino, Italy
cKle	private collection Andreas Kleeberg, Berlin, Germany
cSch	private collection Michael Schülke, Berlin, Germany
cSha	private collection Alexey Shavrin, Daugavpils, Latvia
cSme	private collection Aleš Smetana, Ottawa, Canada
cWun	private collection Paul Wunderle, Mönchengladbach, Germany

RESULTS

Systematic position and identification of genus. *Lobrathium* belongs to the paederine subtribe Lathrobiina, which is represented in the Palaearctic region by twelve genera: *Achenium* Leach, 1819, *Domene* Fauvel, 1873, *Lathrobium* Gravenhorst, 1802, *Lobrathium* Mulsant & Rey, 1878, *Micrillus* Raffray, 1873, *Platydomene* Ganglbauer, 1895, *Pseudobium* Mulsant & Rey, 1878, *Pseudolathra* Casey, 1905, *Scymbalium* Erichson, 1839, *Scymbalopsis* Reitter, 1909, *Tetartopeus* Czwalina, 1888, and *Throbalium* Mulsant & Rey, 1878. The phylogenetic affiliations of the lathrobiine genera have never been comprehensively studied, so that the polarity of most distinguishing characters is unknown and the identification of apomorphies difficult. For keys to the lathrobiine genera represented in the Palaearctic and more detailed diagnoses see Coiffait (1982c) and Assing (2012).

Lobrathium is distinguished from similar genera such as *Lathrobium*, *Pseudolathra*, *Platydomene*, *Pseudobium*, *Pseudolathra*, and *Tetartopeus* by the following character combination:

Body size moderate to large, not conspicuously flattened. Head more or less coarsely punctate and with broad posterior constriction of approximately half the width of head. Pronotum distinctly oblong, usually 1.15–1.35 times as long as broad, with relatively coarse punctation, and without a separate dorsal series of punctures on either side of the usually distinct, impunctate median band. Elytra with rather coarse and usually defined, often seriate punctation; above lateral margin (in lateral view) with additional fine line (evidently secondarily reduced in some species from Taiwan). Male sexual characters: sternite VII often with pronounced modifications (median impression, posterior excision, presence of strongly modified, short and stout black setae); sternite VIII usually with rather large posterior excision and mostly with strongly modified, short and stout black setae; aedeagus without parameres, without strongly sclerotised spines in internal sac; ventral process of aedeagus often more or less blade-shaped and with ventral carinae or tooth-like projections. Female terminalia without conspicuous modifications.

The genera that have been most frequently confused with *Lobrathium* are *Lathrobium*, *Tetartopeus*, *Pseudolathra*, and *Pseudobium*. In *Lathrobium*, the punctation of the forebody, particularly that of the elytra, is mostly less dense, finer, and less defined than in *Lobrathium*, never arranged in series on the elytra, the pronotum is often less convex in cross-section and less oblong, the elytra lack the additional epipleural line, the chaetotaxy of the male sternites VII and VIII is different (often modified, but not with the clusters of short and stout black setae found in *Lobrathium*), the aedeagus often has strongly sclerotised sclerites (spines, hooks, etc.) in the internal sac, and the female terminalia are modified to various degrees (see, e.g., Assing in press b). In *Tetartopeus*, the posterior constriction of the head is more slender (approximately one-third of head width), the elytra lack the submarginal line, the elytral punctation is finer and not seriate, the pubescence of the male sternite VIII is fine and dense, the posterior excision of this sternite is very small and often in more or less asymmetric position, the aedeagus often has pronounced spines in the internal sac and a more or less spine-shaped ventral process, and the female terminalia are modified to various degrees (see, e.g., Assing 2011b). In *Pseudolathra*, the forebody is much more sparsely punctate, the pronotum has a distinct series of punctures on either side of the impunctate median band, the male sternites VII and VIII lack the short stout setae typical of *Lobrathium*, the posterior excision of sternite VIII is – at least in Palaearctic and Oriental species – almost always very deep and narrow, and the aedeagus is of completely different morphology (see Assing in press c). *Pseudobium* species are of more slender habitus, usually much smaller, have a more oblong pronotum (approximately 1.5 times as long as broad), a more finely and sparsely punctate forebody, a more oblong and distinctly subrectangular head with longer postgenae and with the eyes situated before the middle, a more pronounced seriate arrangement of the elytral punctures, a relatively longer metatarsomere I (distinctly longer than II), male sternites VII and VIII without strongly modified setae, and an aedeagus of completely different morphology (for illustrations see, e.g., Assing 2006b).

Intrageneric affiliations. *Lobrathium* is evidently represented in the Palaearctic region by numerous lineages, some of them currently including only one species (e.g., *L. cylindricolle*, *L. discrepans*) and some of them speciose and widespread. However, since many of the species from Japan and from the Nearctic region have not been examined yet, a comprehensive species group concept is neither attempted nor proposed. On the other hand, the subgeneric classification currently in use is highly doubtful. Five species from the Mediterranean and from northeastern Turkey have been attributed to the subgenus *Ponthrobium* Korge, 1971 and the remainder to the nominate subgenus, a systematic concept that is highly artificial for several reasons. *Ponthrobium* is most unlikely to form a monophyletic group, but represented by two lineages, one

of them including three species (including the type species of *Ponthrobium*) from northeastern Turkey and one comprising two or three species (affiliations of *L. apogeum* unclear) distributed in North Africa and southern Italy. Even more importantly, maintaining *Ponthrobium* as a valid name would undoubtedly render the nominate subgenus paraphyletic and completely distort the true intrageneric phylogenetic affiliations; *Ponthrobium* is most unlikely to form the sister group of all other *Lobrathium* species. Under these circumstances there are two options, either subdivide the nominate subgenus into numerous additional subgenera or synonymise *Ponthrobium*. The latter option is deemed to be in better accordance with the stability of nomenclature, also because the genus has not been fully revised (see above). Hence the following synonymy results: *Lobrathium* Mulsant & Rey, 1878 = *Ponthrobium* Korge, 1971, syn. n.

Diversity and zoogeography. After the revision, *Lobrathium* is represented in the Palaearctic region (including North Vietnam) by 114 species and one subspecies. The fauna of the West Palaearctic, exclusive of Middle Asia, comprises 26 species; the diversity hot spots are located in the Balkans, Turkey, and the Caucasus region. The fauna of the East Palaearctic, including Middle Asia, Myanmar, and North Vietnam, is much more diverse. At present, 88 named species and one subspecies are known from this region, four from Middle Asia (exclusive of Afghanistan), 20 from the Himalaya (including North Afghanistan), 24 from mainland China, 20 from Taiwan, 18 species and one subspecies from Japan, and the remainder from other regions (Siberia, Russian Far East, Myanmar, North Vietnam). The widespread *L. hongkongense* is included in the figures for Japan, Taiwan, and mainland China.

Most of the East Palaearctic *Lobrathium* species have more or less restricted distributions. The most widespread species is *L. hongkongense*, which has been recorded from numerous localities in China, from Taiwan, and from the extreme south of Japan. Interestingly, none of the Himalayan species has been recorded from China, and vice versa. However, at least one species group containing exclusively micropterous and wing-dimorphic species (*L. kosiense*, *L. wittmeri*, *L. cholaicum*, *L. daxuense*, *L. domenoides*, *L. bimembre*, *L. lamellatum*, *L. duplex*) is distributed from Nepal to Sichuan and Yunnan. In the course of the present revision, none of the species from the main islands of Japan was recorded also from continental Asia. The only species that was found to be present in both Japan and continental Asia is *L. hongkongense*, whose distribution in Japan, however, is confined to the extreme south (Ryukyu Islands). Finally, no *Lobrathium* species appears to have a trans-Palaearctic distribution.

The available evidence suggests that the true diversity of the East Palaearctic *Lobrathium* fauna, particularly that of the Himalaya, China, and Taiwan is significantly greater than currently known. In the course of the present revision and of the revision of the species of Taiwan (Assing 2010), a considerable number of probably undescribed species was not described because they were represented only by females. Moreover, numerous named species have been recorded only once or very rarely and seem to have very restricted distributions. Finally, in comparison to the West Palaearctic, Taiwan, and Japan, the faunas of the Himalaya and mainland China have been poorly studied. The taxonomic status of one species, *L. emeiense*, is doubtful, as its male sexual characters are unknown.

Taxonomic changes. In all, 31 species of *Lobrathium* and two species of *Lathrobium* are described for the first time. Seven species-group names are syonymised, six of them in *Lobrathium* and one in *Tetartopeus*. One previously synonymised name, *Lobrathium ochreonotatum*, is revalidated. Five new combinations are established: three names are transferred from *Lathrobium* to *Lobrathium*, and two species, one of them previously in *Lobrathium* and one in *Lathrobium*, are moved to *Tetartopeus.* One previous subspecies from Japan, *L. varium*, is elevated to species.

Di- and polymorphisms. Some species such as the West Palaearctic *L. multipunctum* are subject to remarkable intraspecific (polymorphic) variation of coloration, body size, eye size, elytral length, the length of the hind wings, and other characters.

Conspicuous dimorphisms were observed in several species from the East Palaearctic. *Lobrathium wittmeri* from Nepal, as well as *L. bimembre* and *L. duplex* from China, are represented by two distinct morphs, a macropterous morph with long elytra and fully developed hind wings and a micropterous morph with short elytra, weakly marked humeral angles, and with reduced hind wings. The available evidence suggests that these dimorphisms are not sex-related. Another example of a wing dimorphism may be *L. domenoides*, but the species is currently represented only by a single micropterous male.

Remarkably, several of the Himalayan species are dimorphic regarding the presence or absence of elytral spots. This intraspecific variation is apparently not clinal; on some occasions both morphs were found together. The same was not observed for the spotted *Lobrathium* species from China, though the size of the elytral spot may be subject to considerable variation, particularly so in *L. hongkongense*.

Natural history. East Palaearctic *Lobrathium* species have been found in various habitats. Many, usually more widespread species seem to primarily inhabit lakeshores and river banks, whereas other species, most of them with restricted distributions, were predominantly collected from the leaf litter of forests.

Unlike the vast majority of East Palaearctic *Lathrobium* species, which, for instance in the Himalaya, are confined to high altitudes of usually at least 2500 m up to approximately 5000 m, East Palaearctic *Lobrathium* species have been recorded also from lower elevations. In the Himalaya, they were collected at altitudes of 450–3100 m, most of them between 1000 and 2800 m. In China, the altitudes range from 150 to 3350 m; one species from Tibet, *L. cholaicum*, was even found at 4400 m. In general, macropterous species inhabiting lakeshores and river banks are found at lower elevations than micropterous and wing-dimorphic species living in forest litter. *Lobrathium alticola*, *L. wittmeri*, *L. daxuense*, *L. bimembre*, *L. lamellatum*, and *L. duplex*, for instance, were found at higher altitudes of 2500–3500 m.

Teneral adults of East Palaearctic *Lobrathium* species were collected during the period from February through September, with most observations from March through July, suggesting that the pre-imaginal development of some species occurs during the cold season. However, the data vary between species.

ADDITIONAL RECORDS FROM THE WEST PALAEARCTIC REGION

Lobrathium multipunctum (Gravenhorst, 1802)

Lathrobium striatopunctatum Motschulsky 1858: 646, preoccupied.

Lathrobium differens Gemminger & Harold 1868: 610, replacement name.

Material examined. Spain: 1 ex., Navarra, Sierra de Andia, Pto. de Lizzarraga, 1050 m, 15.VI.2006, leg. Anichtchenko (cAss); 1 ex. [pale-coloured, brachypterous], Soria, Santa Cruz de Yanguas, Sierra del Hayedo de Santiago, Ayo. de las Monjas, 42.09°N, 2.50°W, 1450 m, 16.VIII.2008, leg. Andújar & Arribas (cAss); 1 ex. [pale-coloured, brachypterous], Soria, La Poveda de Soria, Pto. de Piqueras, 42°06°N, 2.54°W, 1710 m, 16.VIII.2008, leg. Andújar & Arribas (cAss); 1 ex. [pale-coloured, brachypterous], La Rioja, Villoslada de Cameros, Sierra Cebollera, Lomos de Orios, 42.04°N, 2.68°W, 1400 m, 17.VIII.2008, leg. Andújar & Arribas (cAss); 1 ex. [teneral], Madrid, Sierra de Guadarrama, Navacerrada, 1800 m, 5.IX.2001, leg. Anichtchenko (cSha); 1 ex., Castilla-La Mancha, Fuencaliente (CR), Sierra Madrona, Rio Cereceda, 1.X.2005, leg. Lencina & Andújar (cAss); 1 ex., Valencia, Alicante, E Planes, Bco. de la Encantada, 38°48'N, 00°18'W, 480 m, 3.VIII.2008, leg Forcke (cAss); 2 exs., Valencia, Alicante, NW El Castell de Guadalest, Beniarda, 38°41'N, 00°13'W, 400 m, river bank, 9.VIII.2008, leg Forcke (cAss); 1 ex., Valencia, Alicante, NE Benissa, 38°45'N, 00°03'W, 400 m, 10.VIII.2008, leg Forcke (cAss).
Italy: Basilicata: 2 exs., Pignola ris. WWF, Lago Pignola (PZ), 11.VII.1992, leg. Angelini (NHMD, cAss); 2 exs., Policoro (MT), 3.XI.2000, leg. Angelini (NHMD, cAss). **Calabria:** 5 exs., Belvedere Mar., S.S. 18 at Sangineto stream (CS), 15.IV.1994, leg. Angelini (NHMD, cAss); 3 exs., Lao river, 4 km from estuary (CS), 17.VI.1994, leg. Angelini (NHMD, cAss); 4 exs., Santa Maria Cedro, Abatemarco river (CS), 17.VI.1994, leg. Angelini (NHMD); 1 ex., Crotone, Esaro river, 26.X.2003, leg. Angelini (cAss).

Catalogue of the *Lobrathium* species of the Palaearctic region

In the references column, only a selection of relatively recent articles providing descriptions, illustrations, significant records, or containing important nomenclatural changes is listed. The references are abbreviated as follows:
App = Assing (present paper); A04 = Assing (2004); A05 = Assing (2005); A06a = Assing (2006a); A07 = Assing (2007); A08 = Assing (2008); A10 = Assing (2010); A11a = Assing (2011a); A12 = Assing (2012); AS02 = Assing & Schülke (2002); B09 = Bordoni (2009); Ca21 = Cameron (1921); Ca24 = Cameron (1924); Ca31 = Cameron (1931); Ca43 = Cameron (1943); Co67 = Coiffait (1967); Co79 = Coiffait (1979); Co82a = Coiffait (1982a); Co82b = Coiffait (1982b); Co82c = Coiffait (1982c); CZ00 = Ciceroni & Zanetti (2000); G93 = Gusarov (1993); G95 = Gusarov (1995); I95 = Ito (1995); I96a = Ito (1996a); I96b = Ito (1996b); I07 = Ito (2007); I09b = Ito (2009b); Kh39 = Koch (1939); Ko71 = Korge (1971); N36 = Normand (1936); S01 = Solodovnikov (2001); Sh08 = Shavrin (2008); W72 = Watanabe (1972); W98b = Watanabe (1998b); WB73 = Watanabe & Baba (1973); Z88 = Zheng (1988).
Valid names are sorted alphabetically, synonyms by publication year.

Lobrathium Mulsant & Rey, 1878 (type species *Lathrobium multipunctum* Gravenhorst, 1802)
= *Lathrobiella* Casey, 1905 (type species *Lathrobium collare* Erichson, 1840)
= *Lathrotaxis* Casey, 1905 (type species *Lathrobium longiusculum* Gravenhorst, 1802)
= *Ponthrobium* Korge, 1971 (subgenus; type species *Lathrobium heinzi* Korge, 1971)
= *Allobrathium* Coiffait, 1972 (type species *Lathrobium lethierryi* Reiche, 1872)
= *Paralobrathium* Bordoni, 1999 (type species *Lathrobium apicale* Baudi di Selve, 1857)

taxon	revised distribution	references
ablectum sp. n.	China (Hubei)	App
alaiense Gusarov, 1995	Kyrgyzstan	G95
alticola (Cameron, 1943)	Kashmir	App, Ca43, Co82a
= *pirpanjalense* Coiffait, 1982; syn. n.		
amamiense Ito, 1996a	Japan (Amami Islands)	App, I96a
anale (Lucas, 1846)	NW-Africa; SW-Europe; Canary Islands	A07, Co82c
= *concinnum* (Gougelet & Brisout, 1860)		
= *canariense* (Wollaston, 1865)		
= *oviceps* (Fauvel, 1902)		
= *lostiae* (Dodero, 1916)		
= *rufiventre* Coiffait, 1953		
= *bellesi* Bordoni, 1977		
= *ullbrichi* Coiffait, 1978		
= *rubriventre* Herman, 2003		
angelinii Ciceroni & Zanetti, 2000	S-Italy	A07, CZ00
angulatum Assing, 2005	Greece	A05
apicale (Baudi di Selve, 1857)	Cyprus	A07, AS02, Co82c
= *cypriacum* Jarrige, 1949		
apogeum (Normand, 1936)	Algeria	N36
badium (Cameron, 1924)	N-India (Uttaranchal, Himachal Pradesh)	App, Ca24, Ca31
bettae (Solodovnikov, 2001)	W-Caucasus	S01
biaculeatum sp. n.	E-Nepal	App
bicarinatum sp. n.	N-India (Uttaranchal); Nepal	App
bicornutum sp. n.	E-Nepal	App
bidigitatum Assing, 2010	Taiwan	A10
bilobatum Assing, 2010	Taiwan	A10
bimembre sp. n.	China (Yunnan)	App
bipeniculatum Assing, 2010	Taiwan	A10
bisagittatum Assing, 2010	Taiwan	A10
bispinosum sp. n.	China (Guizhou)	App
brunneum (Cameron, 1931)	N-India: Sikkim	App, Ca31
bureschi (Scheerpeltz, 1937)	Romania, Bulgaria	AS, Co82c
candicum Bordoni, 2009	Greece (Crete)	App, B09
cholaicum sp. n.	China (Tibet)	App
ciliciae Bordoni, 1980	S-Turkey	A04, AS02
coalitum Assing, 2010	Taiwan	A10
configens sp. n.	China (Shaanxi, Sichuan, Hubei, Yunnan)	App
cornutum sp. n.	E-Nepal	App
cornutissimum Assing, 2010	Taiwan	A10
cribricolle (Sharp, 1889)	Japan (Honshu)	App, I96a
cylindricolle (Cameron, 1924)	N-India (Uttaranchal)	App, Ca24, Ca31
daxuense sp. n.	China (Sichuan)	App
demptum sp. n.	China (Hubei)	App
diecki (Saulcy, 1878)	S-Italy (Sicily)	Co82c
digitatum Assing, 2010	Taiwan	A10
discrepans sp. n.	N-Vietnam	App
domenoides sp. n.	China (Sichuan)	App
duplehamatum Assing, 2010	Taiwan	A10
duplex sp. n.	China (Sichuan, Yunnan)	App
emeiense Zheng, 1988	China (Sichuan)	App, Z88
excisissimum sp. n.	China (Yunnan)	App
extensum Assing, 2010	Taiwan	A10
farsicum Assing, 2007	SW-Iran	A07
feldmanni sp. n.	China (Sichuan)	App
flavipenne sp. n.	N-India (Himachal Pradesh)	App
frater (Korge, 1971)	NE-Turkey	Co82c, Ko71

taxon	revised distribution	references
furcillatum Assing, 2010	Taiwan	A10
gladiatum Zheng, 1988	China (Sichuan)	App, Z88
guttula (Fauvel, 1895); comb. n.	Myanmar	App
hebeatum Zheng, 1988	China (Sichuan, Shaanxi, Yunnan)	App, Z88
heinzi (Korge, 1971)	NE-Turkey	A07, Co82c, Ko71
hokkaidense Ito, 1996	Japan (Hokkaido)	I96b
hongkongense (Bernhauer, 1931) = *sibynium* Zheng, 1988; syn. n. = *ryukyuense* Ito, 1996; syn. n.	China; Taiwan; S-Japan (Ryukyu Islands)	A10, App, I96b, Z88
indubium (Eppelsheim, 1893) = *altaicum* (Coiffait, 1967)	East Siberia (Baikal region), Russian Far East	App, Co67, Co82c, Sh08
integrum sp. n.	NE-Nepal	App
isamutanakai Ito, 2009	Japan (Honshu)	I09b
ishidai Ito, 1996	Japan (Honshu)	I96b
ishizuchiense Ito, 1996	Japan (Shikoku)	I96a
kirgisicum Assing, 2007	Kyrgyzstan	A07
kleebergi sp. n.	Nepal	App
kosiense sp. n.	E-Nepal	App
kuanicum Assing, 2010	Taiwan	A10
lamellatum sp. n.	China (SW-Sichuan)	App
lederi (Eppelsheim, 1884)	Azerbaijan, Russian South European territory, Iran	App, A11a, S01
lethierryi (Reiche, 1872)	Italy (Sicily), Algeria, Tunisia	Co82c
mizunoi Ito, 1996	Japan (Honshu)	I96b
mordens sp. n.	N-India (Uttaranchal, Himachal Pradesh)	App
multipunctum (Gravenhorst, 1802) = *testaceum* Paykull, 1789 (nom. obl.) = *lineare* (Gravenhorst, 1802) = *punctatostriatum* (Stephens, 1833) = *striatopunctatum* (Kiesenwetter, 1850) = *striatopunctatum* (Motschulsky, 1858) = *pyrenaicum* (Fairmaire, 1863) = *differens* (Gemminger & Harold, 1868) = *hispanicum* (Dodero, 1916) = *gallienii* (Fagniez, 1917) = *endogeum* Coiffait, 1971 = *cassolai* Coiffait, 1972	Europe; NW-Africa; Nearctic region (adventive)	A07, A08, A12, Co82c, CZ00
nigripenne Assing, 2010	Taiwan	A10
nipponense Ito, 1995	Japan (Kyushu, Honshu)	I95
novum (Bernhauer & Schubert, 1912) = *cognatum* (Eppelsheim, 1892), preocc.	Tajikistan, Uzbekistan	AS02, G95
nudum (Sharp, 1874)	Japan (Kyushu, Honshu, Ryukyu Islands)	App, I96a
ochreonotatum (Champion, 1922); revalid.	N-India; Nepal	App
ohkurai Ito, 1996	Japan (Honshu)	I96b
okamotoi Ito, 1995	Japan (Shikoku)	I95
partitum (Sharp, 1874)	Japan (Kyushu, Honshu)	App
pedes Assing, 2010	Taiwan	A10
penicillatum Assing, 2010	Taiwan	A10
pravum Assing & Schülke, 2002	E-Turkey, Iraq, Iran	A07, A11a, AS02
pustulatum (Cameron, 1931); comb. n.	N-India (Assam)	App, Ca31
radens sp. n.	China (Guizhou)	App
reitteri (Czwalina, 1889)	W-Caucasus	A07, S01
retrocarinatum sp. n.	China (Yunnan)	App
reuteri Assing, 2008	Iraq	A08
riozoi Watanabe, 1972	Japan (Hokkaido)	W72
rotundiceps (Koch, 1939)	China (Zhejiang)	App, K39

taxon	revised distribution	references
rugipenne (Hochhuth, 1851) = *meridionale* (Korge, 1971) = *vicinum* Coiffait, 1972 = *messeniacum* Bordoni, 1986	SE-Europe; Turkey; Caucasus	A07, AS02, Co82c, G93
sahlbergi (Fauvel, 1900)	Kyrgyzstan, Kazakhstan	Co82c, G95
sasajii Ito, 2007	Japan (Honshu)	I07
schillhammeri Assing & Schülke, 2002	SE-Turkey	AS02
schuelkei sp. n.	China (Shaanxi)	App
semicaeruleum (Cameron, 1921)	N-India; E-Nepal	App, Ca21, Ca31
semiflavum sp. n.	Russian Far East	App
shibatai Ito, 1995	Japan (Honshu)	I95
sinuatum sp. n.	C-Nepal	App
smetanai Assing, 2010	Taiwan	A10
solarii (Koch, 1936)	S-Italy	Kh36, Co82c
sororium Assing, 2010	Taiwan	A10
spathulatum sp. n.	China (Sichuan, Shaanxi, Shanxi, Hubei, Zhejiang)	App
spinosum Assing & Schülke, 2002	Albania	AS02
spoliatum Assing, 2010	Taiwan	A10
stimulans Assing, 2010	Taiwan	A10
taiwanense (Watanabe, 1998)	Taiwan	W98b
taureum sp. n.	China (Hubei, Beijing)	App
tortile Zheng, 1988	China (Sichuan, Shaanxi, Hubei)	App, Z88
trapezuntis (Bordoni, 1973)	NE-Turkey	B73, Co82c
triste (Cameron, 1924) = *kashmiricum* (Cameron, 1931); syn. n. = *afghanicum* Coiffait, 1979; syn. n. = *nouristanicum* Coiffait, 1979; syn. n.	N-India (Uttaranchal, Kashmir), Afghanistan, Pakistan	App, Ca24, Ca31, Co79
tuberosum sp. n.	China (Jiangxi)	App
unispinosum sp. n.	Nepal	App
varium Ito, 1995, stat. n.	Japan (Honshu)	I95
wittmeri Coiffait, 1982	C-Nepal	App, Co82b
wunderlei Assing, 2006	S-Turkey	A06a, A07
yagmuri Assing, 2007	SE-Turkey	A07
yoshidai sadoensis Watanabe & Baba, 1973	Japan (Sado Island)	WB73
yoshidai yoshidai Adachi, 1955	Japan (Honshu)	WB73

Yugoslavia: 3 exs., Serbia, Suva planina, Zorebica, 1350 m, 5.V.2006, leg. Stevanović (cAss).

Comment. When *Lathrobium differens* Gemminger & Harold, 1868, a replacement name for the preoccupied *L. striatopunctatum* Motschulsky, 1858, was placed in synonymy with *L. multipunctum* by Assing (2008), the Motschulsky name was erroneously given as *L. multistriatum* Motschulsky, 1858 (unavailable). This lapsus is rectified here.

Lobrathium rugipenne (Hochhuth, 1851)

Material examined: Greece: 3 exs., Chalkidiki, Sithonia, Sarti, 10 m, 40°05'N, 23°59'E, IX.2007, leg. Frisch (MNHUB, cAss); 1 ex., Trikala, Pindos, Hinka, 1500 m, 23.V.2005, leg. Angelini (NHMD).

Comment. This species is distributed from the southern Balkans to the Caucasus region.

Lobrathium anale (Lucas, 1846)

Material examined. Spain: 2 exs., País Vasco, Guipuzcos, Irun, Plaiaundi, 9.IV.2006, leg. Anichtchenko (cSha); 1 ex., Andalucía, Granada, Rio Darro, barranco de Teatino, 6.II.2005, leg. Anichtchenko (cSha); 1 ex., Andalucía, Córdoba, Charca, Castillo de la Albaida, 15.V.2006, leg. Baena (cAss); 2 exs., Andalucía, Cádiz, 25 km NW Tarifa, Tahivilla, 36°11'N, 5°45'W, 5 m, flooded fallow, under stone, 26.XII.2009, leg. Assing & Wunderle (cAss, cWun); 1 ex., Andalucía, Cádiz, 15 km NW Algeciras, 36°13'N, 5°33'W, 25 m, loamy pasture, under stone, 27.XII.2009, leg. Assing (cAss).
Morocco: 9 exs., N Touya, Ifri cave, 23.IV.1997, leg. Casale (cGia, cAss).

Comment. *Lobrathium anale* is widespread in the western Mediterranean and the Canary Islands.

Lobrathium lederi (Eppelsheim, 1884) (Figs 1–4)

Lathrobium lederi Eppelsheim, 1884: 15 f.

Type material examined. Lectotype ♂, present designation: "Caspi.-M.-Gebiet, Rasano. Leder (Reitter) / Lederi Epp, Verh. naturf. Ver. Brünn, Bd XXII. / Typus / c. Epplsh. Steind. d. / Lectotypus ♂ *Lathrobium lederi* Eppelsheim, desig. V. Assing 2011 / Lobrathium lederi (Eppelsheim), det. V. Assing 2011" (NHMW). Paralectotypes: 1♂: "Caspi.-M.-Gebiet, Liryk. Leder (Reitter) / 1881.1 / Typus" (NHMW); 1♂: "4 / Kaukas Leder, Berge von Talysch. Lirik / Typus / c. Epplsh. Steind. d." (NHMW); 1♀: "Caspi.-M.-Gebiet, Liryk. Leder (Reitter) / Typus / c. Epplsh. Steind. d." (NHMW).

Comment. The original description is based on an unspecified number of syntypes from "Gebirge von Talysch bei Lirik und Rasano" (Eppelsheim 1884). Four syntypes were located in the Eppelsheim collection at the NHMW. A male in good condition is designated as the lectotype. The male primary and secondary sexual characters of the lectotype are illustrated in Figs 1–4.

Lobrathium candicum Bordoni, 2009

Type material examined. Holotype ♂ [teneral]: "Kreta, Kritsi, 13.5.75 / Holotypus Lobrathium candicum n. sp., Bordoni det. 2006 / ZML 2010, 168 / Lobrathium candicum Bordoni, det. V. Assing 2010" (ZML).

Additional material examined. Greece: 1♂ [teneral], W-Crete, bank of Litheos river near Agii Deka, 200 m, 12.V.2001, leg. Apfel (cAss).

Comment. In external and the male sexual characters, including the internal structures of the aedeagus, this species is highly similar to *L. apicale*, from which it is distinguished only by the slightly different shape of the apex of the ventral process of the aedeagus. In *L. candicum*, it is more strongly bent dorsad and has more pronounced lateral carinae and subapical teeth (best visible in lateral view).

THE *LOBRATHIUM* SPECIES OF THE HIMALAYA AND MYANMAR

Key to species

1. Pronotum conspicuously oblong, approximately 1.45 times as long as broad (Figs 119–120). Elytra without submarginal line (lateral view!). Forebody reddish. ♂: sternite VII and VIII as in Figs 121–122; aedeagus 0.8 mm long and with apically bifid ventral process (Figs 123–124). Northern India: Uttaranchal (Fig. 66) ……***cylindricolle*** (Cameron)
– Pronotum much less oblong, at most approximately 1.3 times as long as broad. Elytra with submarginal line (lateral view!). Male sexual characters different. ……..2
2. Large species; length of forebody at least approximately 5.0 mm. Head and pronotum dark-brown. Pronotum at least approximately 1.25 times as long as broad. ♂: ventral process of aedeagus divided into two long processes ……3
– Small to moderately large species; length of forebody 2.9–4.9 mm. (One species, *L. badium*, whose forebody may be more than 4.6 mm long, has the head and pronotum bright reddish and a distinctly less oblong pronotum.) ♂: ventral process sometimes apically bifid, but not divided into two long processes …5
3. Largest Himalayan representative of the genus; length of forebody approximately 7 mm. Macropterous: elytra distinctly longer than pronotum (Fig. 12); hind wings fully developed. Posterior margin of tergite VII with palisade fringe. ♂: sternite VIII as in Fig. 14; aedeagus 2.1 mm long and shaped as in Figs 15–16. Northern India: Sikkim (Fig. 23) ……***brunneum*** (Cameron)
– Smaller species; length of forebody less than 6 mm. Micropterous: elytra much shorter, 0.70–0.75 times as long as pronotum (Fig. 18); hind wings reduced. Posterior margin of tergite VII without palisade fringe. ♂: sexual characters different ……4
4. ♂: sternite VII more transverse (Fig. 19); sternite VIII less oblong and with larger median impression (Fig. 20); aedeagus 2.4 mm long, with longer and more slender bifid ventral process (Figs 21–22). Eastern Nepal: Taplejung (Fig. 23) …***bicornutum*** sp. n.
– ♂: sternite VII less transverse (Fig. 24); sternite VIII more oblong and with smaller median impres-

sion (Figs 25–26); aedeagus 1.8 mm long, with shorter and stouter bifid ventral process (Figs 27–28). Eastern Nepal: Terhathum (Fig. 23) …….***cornutum*** sp. n.

5. On average larger species; length of forebody 4.2–4.9 mm. Head and pronotum bright reddish, distinctly contrasting with the dark-brown to black elytra. Pronotum broad, approximately 1.15 times as long as broad. ♂: sternites VII and VIII as in Figs 7–8; aedeagus approximately 1.3 mm long, with large blade-shaped ventral process (Figs 9–10). Northern India: Uttaranchal and Himachal Pradesh (Fig. 23) ……..…***badium*** (Cameron)
– On average smaller species; length of forebody 2.9–4.8 mm. Head and pronotum blackish, sometimes with bluish hue. Pronotum in the vast majority of species at least 1.20 times as long as broad. Male sexual characters different ……6
6. Posterior margin of tergite VII without palisade fringe. Elytra short, approximately 0.75 times as long as pronotum (Figs 97, 103); hind wings reduced. Small species; length of forebody approximately 3.5 mm at most ……..7
– Posterior margin of tergite VII with palisade fringe. Elytra longer and hind wings fully developed (except in micropterous morph of *L. wittmeri*). Mostly larger species ……..8
7. Eyes small, approximately 1/4 the length of postocular region (Fig. 97). Length of forebody approximately 2.9 mm. ♂: sternite VII highly distinctive, with pronounced median impression posteriorly, this impression without pubescence, except for two isolated posterior setae, but margined with dense black setae, anteriorly with short process (Fig. 98); sternite VIII as in Fig. 99; aedeagus 0.85 mm long and shaped as in Figs 100–101. Kashmir (Fig. 66) ……...***alticola*** (Cameron)
– Eyes larger, more than half the distance from posterior margin of eye to neck in dorsal view (Fig. 103). Length of forebody approximately 3.5 mm. ♂: sternite VII without such conspicuous modifications (Fig. 104); sternite VIII as in Fig. 105; aedeagus 0.95 mm long and shaped as in Figs 106–107. Eastern Nepal: Kosi (Fig. 89) ……...***kosiense*** sp. n.
8. Wing-dimorphic: usually micropterous with elytra 0.70–0.75 times as long as pronotum (Fig. 90) and with reduced hind wings, very rarely macropterous (Fig. 91). Body small; length of forebody 3.0–3.5 mm. Body uniformly blackish; forebody without bluish hue and elytra always without posterior spot. ♂: sternites VII and VIII as in Figs 92–93; aedeagus approximately 1.0 mm long and shaped as in Figs 94–95. Central Nepal (Fig. 41) ……***wittmeri*** Coiffait
– Monomorphic, macropterous species; elytra at least 0.9 times as long as pronotum. Body mostly larger. Forebody often with bluish hue and elytra often with yellowish to reddish spots posteriorly. Male sexual characters different ……...9
9. Forebody brown to black, without bluish hue. Pronotum often less than 1.25 times as long as broad. Elytra in some species shorter than, or as long as elytra. Length of forebody sometimes greater than 4.0 mm. ♂: sternite VII with or without cluster(s) of short stout modified setae ……...10
– Forebody black, usually with bluish hue (rare exceptions without bluish hue may be identified only based on the male sexual characters). Pronotum at least 1.25 times as long as broad. Elytra longer than pronotum. Length of forebody 3.0–4.0 mm. ♂: sternite VII never with short stout modified setae ……...17
10. Forebody uniformly blackish, without elytral spot, rarely with indistinctly paler posterior margin …….11
– Forebody brown to black; elytra with elytral spot posteriorly ……13
11. Pronotum broad, approximately 1.15 times as long as broad (Fig. 114). Body on average larger; length of forebody 4.2–4.8 mm. ♂: sternite VII with two clusters of short stout modified setae (Fig. 115); sternite VIII with extensive and deep impression and with pair of distinct carinae (Fig. 116); aedeagus 1.5–1.6 mm long and shaped as in Figs 117–118. Northern India: Uttaranchal; central Nepal (Fig. 89) ……...***bicarinatum*** sp. n.
– Pronotum at least approximately 1.20 times as long as broad. Body on average smaller; length of forebody 3.6–4.3 mm. ♂: sternite VII without distinctly modified setae; sternite VIII with less pronounced impression and without carinae; aedeagus of different shape ……....12
12. Coloration of forebody black. On average smaller species; length of forebody 3.6–3.9 mm. ♂: sternite VII strongly modified, with two long processes posteriorly (Fig. 109); sternite VIII with relatively deep and broad posterior excision (Fig. 110); aedeagus approximately 0.95 mm long and shaped as in Figs 106–107. Eastern Nepal: Kosi (Fig. 89) ……...***biaculeatum*** sp. n.
– Coloration of forebody brown to black. On average larger species; length of forebody 3.8–4.3 mm. ♂: sternite VII without conspicuous modifications; sternite VIII with even deeper posterior excision (Figs 32–33); aedeagus approximately 1. 3 mm long and with apically spear-shaped ventral process (Figs 34–35). Widespread from northern Afghanistan to northern India (Fig. 23) ……***triste*** (Cameron)
13. Head, except for median dorsal portion, with conspicuously dense punctation. ♂: sternite VII with distinctly modified, short and stout black setae (Figs 69, 73, 79); posterior excision of sternite VIII of subtrapezoid shape, basally often bisinuate (Figs 70, 74, 80); aedeagus with blade-shaped ventral process ……..14

– Head with less dense punctation dorsally. ♂: sternite VII without distinctly modified setae; posterior excision of sternite VIII not of subtrapezoid shape; aedeagus of different morphology ……...16

14. ♂: sternite VII as in Fig. 69; sternite VIII more transverse and with convex lateral margins, its posterior excision not distinctly bisinuate basally (Fig. 70); aedeagus approximately 1.1 mm long and shaped as in Figs 71–72. Nepal (Fig. 41) ……...***kleebergi*** sp. n.
– ♂: sternite VII of different shape and chaetotaxy; sternite VIII not distinctly transverse and with concave lateral margins, its posterior excision distinctly bisinuate basally (Figs 74, 80); aedeagus of different shape ……...15

15. ♂: sternites VII and VIII as in Figs 79–80; aedeagus as in Figs 81–82. Central Nepal (Fig. 90) ……***sinuatum*** sp. n.
– ♂: sternites VII and VIII as in Figs 73–74; aedeagus as in Figs 75–76. Myanmar (Fig. 140) ……...***guttula*** (Fauvel)

16. Elytra with large and clear-cut elytral spot (Fig. 84). ♂: sternites VII and VIII as in Figs 85–86; aedeagus 1.5 mm long and with long, slender, and apically very acute ventral process (Figs 87–88). Northern India: Assam (Fig. 89) ……***pustulatum*** (Cameron)
– Elytra with indistinct and ill-defined elytral spot at posterior margin (Fig. 108). ♂: sternite VIII as in Fig. 32; aedeagus approximately 1.3 mm long and with apically spear-shaped ventral process (Figs 34–35). Widespread from northern Afghanistan to northern India ……***triste*** (Cameron)

17. Posterior 2/3 of the elytra yellowish, anterior 1/3 blackish (Fig. 62). ♂: sternite VII with bidomed tubercle posteriorly (Fig. 63); sternite VIII with deep posterior excision (Fig. 67); aedeagus 1.1 mm long and with apically bifid ventral process (Figs 64–65). Northern India: Himachal Pradesh (Fig. 41) ……..***flavipenne*** sp. n.
– Elytra with much smaller yellowish to reddish spot posteriorly or uniformly blackish with bluish hue. Male sexual characters different ……18

18. ♂: ventral process of aedeagus asymmetric. Specimens with spotted elytra unknown ……19
– ♂: ventral process of aedeagus symmetric. Elytra with or without yellowish to reddish spots ……20

19. ♂: sternite VII as in Fig. 48; sternite VIII with very small posterior excision (Fig. 49); aedeagus 1.2–1.3 mm long, ventral process stout, on right ventral side (ventral view) with pronounced tooth-shaped process (Figs 50–51). Nepal (Fig. 23) …..***unispinosum*** sp. n.
– ♂: sternite VII as in Fig. 54; sternite VIII with profound posterior excision (Fig. 55); aedeagus 1.4 mm long and with slender ventral process without tooth (Figs 56–57). Northeastern Nepal: Taplejung ……...***integrum*** sp. n.

20. ♂: aedeagus 1.2–1.3 mm long, ventral process very slender, sting-shaped in ventral view (Figs 44–45); sternite VII as in Fig. 42; sternite VIII with broad posterior excision of almost semi-circular shape (Fig. 43). Northern India: Uttaranchal, Himachal Pradesh (Fig. 41) ……***mordens*** sp. n.
– ♂: aedeagus shorter, ventral process shorter and stouter; sternite VIII of different shape ……..21

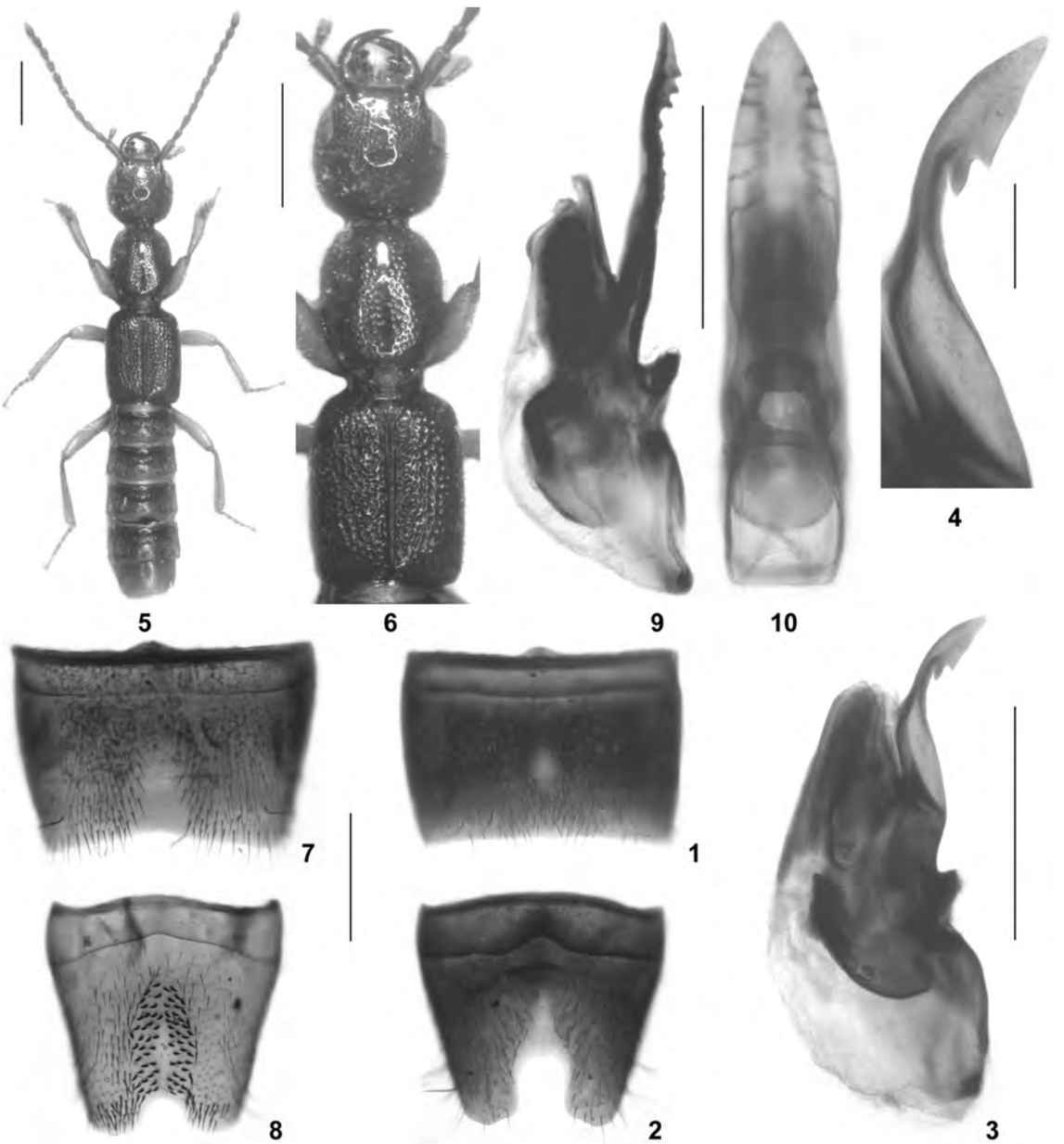
21 ♂: aedeagus approximately 1.0 mm long, ventral process apically bifid (Figs 39–40); sternite VIII with deep and U-shaped posterior excision (Fig. 37). Elytra usually of uniformly black coloration, rarely with posterior spots. Northern India, eastern Nepal (Fig. 41) ……...***semicaeruleum*** (Cameron)
– ♂: aedeagus approximately 0.9 mm long, ventral process apically not bifid (Figs 60–61); sternite VIII with less deep and broader posterior excision (Fig. 59). Elytra usually with, rarely without posterior spots. Northern India, Nepal (Fig. 66) ……...***ochreonotatum*** (Champion)

Lobrathium badium **(Cameron, 1924)** (Figs 5–10, 23)
Lathrobium (Lobrathium) badium Cameron, 1924: 193 f.

Type material examined. Lectotype ♂, present designation: "R. Song, Dehra Dun. / Dr. Cameron. 2.IV.1922. / Syntype / M.Cameron. Bequest. B.M. 1955–147. / Syntype Lathrobium badium Cam., det. R.G. Booth 2011 / Lectotype ♂ *Lathrobium badium* Cameron, desig. V. Assing 2011 / Lobrathium badium (Cameron), det. V. Assing 2011" (BMNH). Paralectotype ♂ [aedeagus missing]: "Dhobi Ghat, Mussoorie. Dr. Cameron. 14.IV.22. / Lathrobium badium Cam. / Type / M.Cameron. Bequest. B.M. 1955–147." (BMNH).

Comment. The original description is based on an unspecified number of syntypes, among them at least one male, from "Mussoorie District; Dhobi Ghat, Keyarkuli, 6000 feet above the sea. Dehra Dun District; Nim Nadi, Song River" (Cameron 1924). Two male syntypes from Dehra Dun and Dhobi Ghat were located in the Cameron collection at the BMNH. The specimen from Dehra Dun is designated as the lectotype; no aedeagus was found in the male from Dhobi Ghat.

Additional material examined. India: Uttaranchal: 3 exs., Garhwal, 16 km from Srinagar, 550 m, 29.X.1979, leg. Löbl (MHNG, cAss); 1 ex., Garhwal, 20 km S Chamba, 1150 m, 20.X.1979, leg. Löbl (MHNG); 1 ex., Garhwal, between Tehri and Srinagar, 900 m, 25.X.1979, leg. Löbl (MHNG); 1 ex., Garhwal, 22 km N Rishikesh, 450 m, 30.X.1979, leg. Löbl (MHNG); 2 exs., Kumaon, 10 km from Ramnagar, Garjia, 450 m, 15.X.1979, leg. Löbl (MHNG, cAss); 1♀, Haldwani district, Kaldhunga, 26.III.1923, leg. Champion (cAss). **Himachal Pradesh:** 1♀, Mandi, Dhelu ["Dhelu, Mandi, Punjab"], ca. 1500 m, leg. Champion (BMNH); 1♀, Baijnath [32°02'N, 76°38'E], ca. 1100 m, leg. Champion (BMNH).



Figs 1–10. *Lobrathium lederi*, lectotype (**1–4**), and *L. badium* (**5–10; 5–6, 8:** paralectotype). **1, 7:** male sternite VII; **2, 8:** male sternite VIII; **3, 9:** aedeagus in lateral view; **4:** apex of ventral process of aedeagus in lateral view; **5:** habitus; **6:** forebody; **10:** aedeagus in ventral view. Scale bars: 5–6: 1.0 mm; 1–3, 7–10: 0.5 mm; 4: 0.1 mm.

Redescription. Body length 8.2–10.5 mm; length of forebody 4.2–4.9 mm. Habitus as in Fig. 5. Coloration: head and pronotum bright-reddish to dark-reddish; elytra dark-brown to blackish, sometimes with reddish posterior margin; abdomen reddish-brown with paler apex or reddish with infuscate apex; legs yellowish to reddish; antennae reddish to reddish-brown.

Head (Fig. 6) as wide as long; posterior angles broadly rounded, almost obsolete; punctation of lateral and posterior dorsal portion very dense and moderately coarse, interstices reduced to narrow ridges; median dorsal portion and middle of frons more or less impunctate; interstices without microsculpture. Eyes large, half as long as distance from posterior margin of eye to neck, or slightly larger.

Pronotum (Fig. 6) approximately 1.15 times as long as broad and 0.9 times as wide as head; punctation similar to that of head, but less dense.

Elytra approximately as long as, and distinctly wider than pronotum (Fig. 6); punctation coarse and dense, not arranged in distinct series; interstices without microsculpture. Hind wings present.

Abdomen narrower than elytra; punctation fine and dense; posterior margin of tergite VII with palisade fringe.

♂: posterior margin of tergite VIII weakly convex; sternite VII strongly transverse and with impunctate median impression posteriorly, on either side of this impression with cluster of moderately sparse black setae, posterior margin broadly and distinctly concave (Fig. 7); sternite VIII approximately as long as broad, impressed along the middle, this impression with numerous short modified black setae, posterior excision relatively small, on either side of this excision with cluster of black setae (Fig. 8); aedeagus approximately 1.3 mm long, with large blade-shaped ventral process (Figs 9–10).

Distribution and natural history. The known distribution of *L. badium* is confined to several localities in Uttaranchal and two localities in Himachal Pradesh, North India (Fig. 23). The species has been collected at altitudes of 450 to almost 2000 m.

***Lobrathium brunneum* (Cameron, 1931)** (Figs 11–16, 23)

Lathrobium brunneum Cameron, 1931: 252.

Type material examined. Lectotype ♂, present designation: "Sikkim: Gopaldhara, Rungbong Vall. H. Stevens. / Lathrobium brunneum Cam Type ♂ / Type / Lectotypus ♂ *Lathrobium brunneum* Cameron, desig. V. Assing 2011 / Lobrathium brunneum (Cameron), det. V. Assing 2011" (BMNH).

Comment. The original description is based on an unspecified number of syntypes, among them at least one male, from "Sikkim: Rungbong Valley" (Cameron 1931). A male syntype was located in the collections of the BMNH; it is designated as the lectotype.

Redescription. Body length 11 mm; length of forebody 7 mm. Habitus as in Fig. 11. Coloration: head and pronotum dark-brown; elytra reddish-brown; abdomen dark-brown with slightly paler apex; legs brown; antennae dark-brown.

Head (Fig. 12) distinctly oblong, approximately 1.1 times as long as broad; posterior angles weakly marked, broadly rounded; punctation dense and and not very coarse, median dorsal portion impunctate; interstices without microsculpture. Eyes large, approximately half the length of distance between posterior margin of eye to neck in dorsal view. Antenna long and slender, 4.8 mm long.

Pronotum (Fig. 12) 1.28 times as long as broad and 0.87 times as wide as head, lateral margins straight, weakly converging posteriorly in dorsal view; punctation similar to that of head.

Elytra long, 1.12 times as long as pronotum (Fig. 12); humeral angles marked; punctation coarse and dense, indistinctly arranged in series; interstices without microsculpture. Hind wings fully developed.

Abdomen narrower than elytra; punctation very fine and dense; interstices with fine and shallow microsculpture; posterior margin of tergite VII with palisade fringe.

♂: tergite VIII obtusely pointed posteriorly (Fig. 13); sternite VII with weakly concave posterior margin; sternite VIII with shallow median impression posteriorly, this impression with weakly modified pubescence, posterior excision moderately deep, relatively narrow, and almost V-shaped (Fig. 14); aedeagus 2.1 mm long, ventral process conspicuously bifid, of highly characteristic shape (Figs 15–16).

Comparative notes. *Lobrathium brunneum* is readily distinguished from its congeners by its enormous size, its conspicuously long antennae, and the distinctive male sexual characters.

Distribution. This species is currently known only from the type locality in Sikkim, northern India (Fig. 23).

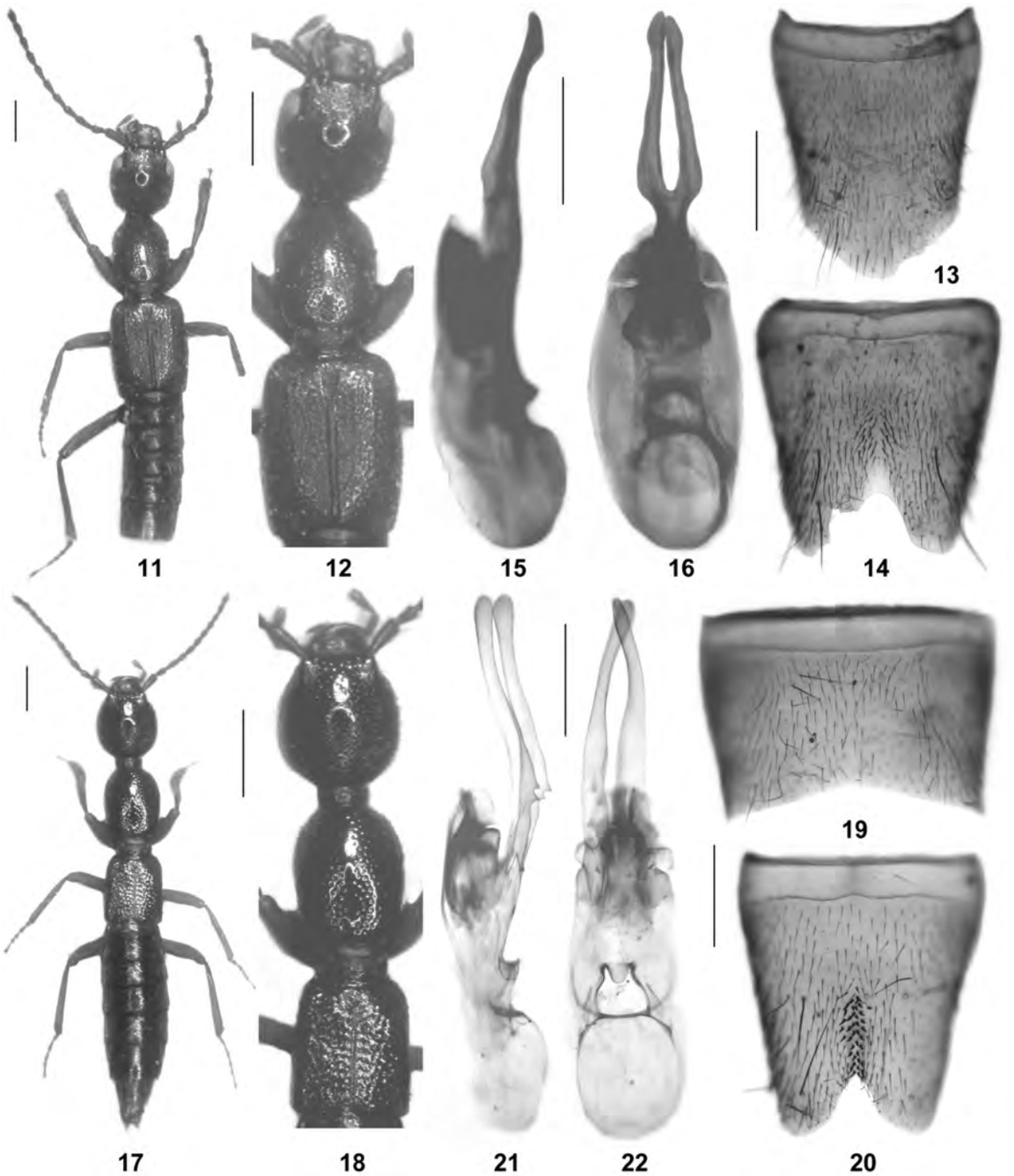
***Lathrobium bicornutum* sp. n.** (Figs 17–23)

Type material. Holotype ♂ [teneral; somewhat damaged; dissected prior to present study]: "Nepal-Expeditionen Jochen Martens / 356 Taplejung Distr., Omje Kharka NW Yamputhin, mature mixed broad-leaved forest, 2300–2500 m, 1–6 May88 Martens & Schawaller / Lobrathium n. sp., det. 1990 G. de Rougemont / Holotypus ♂ *Lobrathium bicornutum* sp. n., det. V. Assing 2011" (SMNS). Paratype ♀: same data as holotype (cAss).

Etymology. The specific epithet (Latin, adjective: with two horns) refers to the shape of the ventral process of the aedeagus.

Description. Body length 9.5–10.3 mm; length of forebody 5.2–5.6 mm. Habitus as in Fig. 17. Coloration: head, pronotum, and abdomen dark-brown to blackish-brown; elytra dark reddish-brown; legs and antennae reddish.

Head (Fig. 18) approximately 1.1 times as long as broad; posterior angles weakly marked, broadly rounded; punctation dense and moderately coarse, frons and vertex sparsely punctate; interstices without microsculpture. Eyes not projecting from lateral contours of head and small, ap-



Figs 11–22. *Lobrathium brunneum*, lectotype (**11–16)**, and *L. bicornutum* (**17–22**). **11, 17:** habitus; **12, 18:** forebody; **13:** male tergite VIII; **14, 20:** male sternite VIII; **15–16, 21–22:** aedeagus in lateral and in ventral view; **19:** male sternite VII. Scale bars: 11–12, 17–18: 1.0 mm; 13–16, 19–22: 0.5 mm.

proximately 0.20–0.25 times as long as distance between posterior margin of eye to neck in dorsal view. Antenna 3.1–3.6 mm long.

Pronotum (Fig. 18) 1.25–1.30 times as long as broad and 0.90–0.95 times as wide as head, lateral margins convex in dorsal view; punctation as coarse as that of head, but distinctly sparser; interstices glossy.

Elytra (Fig. 18) short, 0.70–0.75 times as long as pronotum; humeral angles weakly marked; punctation coarse and dense, but shallow, not arranged in series; interstices

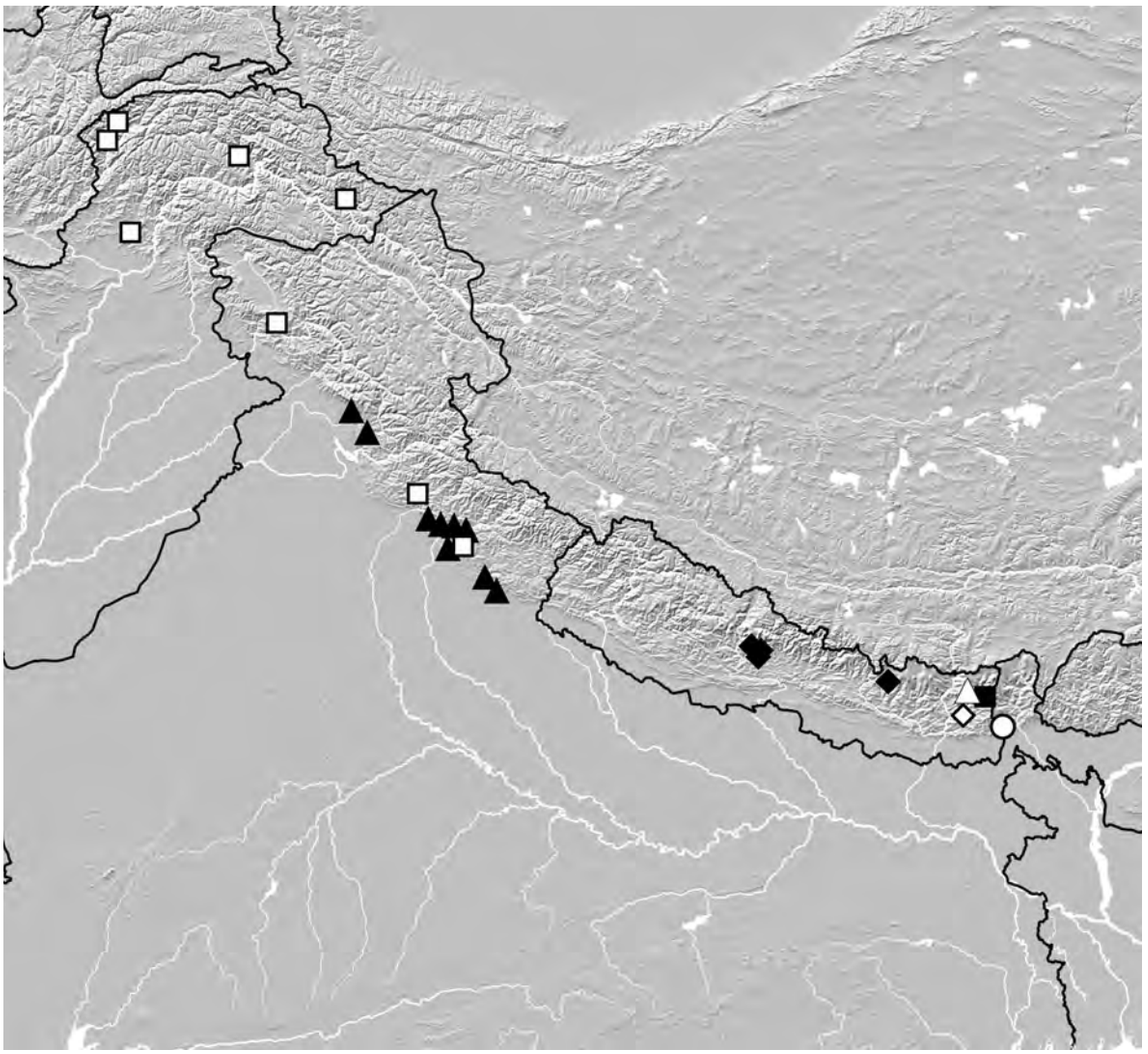


Fig. 23. Distributions of Himalayan *Lobrathium* species, based on revised records: *L. triste* (open squares); *L. badium* (filled triangles); *L. unispinosum* (filled diamonds); *L. cornutum* (open diamond); *L. integrum* (open triangle); *L. bicornutum* (filled square); *L. brunneum* (open circle).

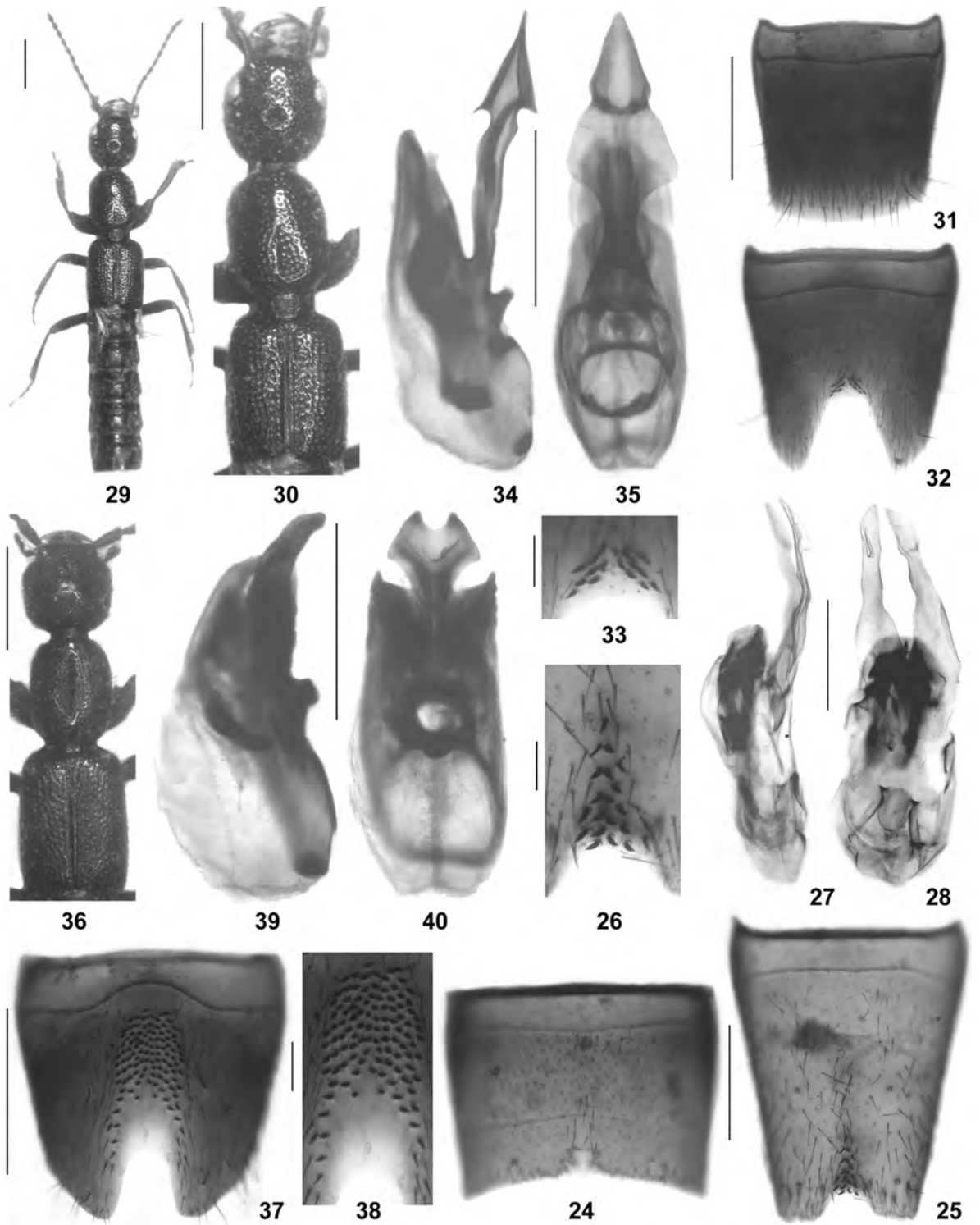
without microsculpture. Hind wings reduced. Protarsi without sexual dimorphism, moderately dilated in both sexes.

Abdomen broader than elytra; punctation very fine and dense, slightly less dense on posterior than on anterior tergites; interstices with fine and shallow, or almost obsolete microsculpture; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII convex.

♂: sternite VII with shallow median impression posteriorly, with sparse unmodified pubescence, and with weakly concave posterior margin (Fig. 19); sternite VIII with narrow median impression posteriorly, this impression with distinctly modified, short and stout black setae, posterior excision moderately deep, relatively narrow, and almost V-shaped (Fig. 20); aedeagus 2.4 mm long, ventral process deeply bifid, of characteristic shape (Figs 21–22).

Comparative notes. *Lobrathium bicornutum* is readily distinguished from the similarly large *L. brunneum* by the much smaller eyes, much shorter elytra, reduced hind wings, the absence of a palisade fringe at the posterior margin of the abdominal tergite VIII, and by the male sexual characters.

Distribution and natural history. The type locality is situated in Taplejung district, eastern Nepal (Fig. 23). The specimens were collected in a mature mixed deciduous forest at an altitude of 2300–2500 m. The holotype is teneral.



Figs 24–40. *Lobrathium cornutum* (**24–28**), *L. triste*, lectotype (**29–35**), and *L. semicaeruleum*, lectotype (**36–40**). **24:** male sternite VII; **25, 32, 37:** male sternite VIII; **26, 33, 38:** posterior median portion of male sternite VIII; **27–28, 34–35, 39–40:** aedeagus in lateral and in ventral view; **29:** habitus; **30, 36:** forebody; **31:** tergite VIII. Scale bars: 29–30, 36: 1.0 mm; 24–25, 27–28, 31–32, 34–35, 37, 39–40: 0.5 mm; 26, 33, 38: 0.1 mm.

***Lathrobium cornutum* sp. n.** (Figs 23–28)

Type material. Holotype ♂ [teneral; somewhat damaged; dissected prior to present study]: "Nepal-Expeditionen Jochen Martens / 2978 Terhathum Dist., Tinjura Dara, 2450–2850 m, artenreicher Laubmischwald, 17 Sep 83 Martens & Daams l. / L. lasallei Coiff.? det. 198 [sic] G. de Rougemont / Lobrathium n. sp. det. 1990 G. de Rougemont (also in coll. Rgmt.) / Lobrathium n. sp., det. 1990 G. de Rougemont / Holotypus ♂ *Lobrathium cornutum* sp. n., det. V. Assing 2011" (SMNS). Paratype ♀ [teneral]: same data as holotype (cAss).

Etymology. The specific epithet (Latin, adj.: with horns) refers to the shape of the ventral process of the aedeagus.

Comment. Both type specimens have been subject to post-mortem darkening, evidently as a result of exposure to a chemical of unknown identity.

Description. Length of forebody 5.0–5.4 mm. External characters highly similar to those of *L. bicornutum*.

♂: sternite VII moderately transverse, with shallow median impression posteriorly, with sparse unmodified pubescence, and with weakly concave posterior margin (Fig. 24); sternite VIII strongly oblong, with small median impression posteriorly, this impression with few distinctly modified, short and stout black setae, posterior excision small and almost U-shaped (Figs 25–26); aedeagus 1.8 mm long, ventral process deeply bifid, of characteristic shape (Figs 27–28).

Comparative notes. *Lobrathium cornutum* is reliably distinguished from the similar *L. bicornutum* only by the male sexual characters: the less transverse sternite VII, the more oblong sternite VIII with a smaller median impression, with fewer modified setae, and with a smaller posterior excision, as well as the slightly shorter aedeagus with a shorter and stouter bifid ventral process.

Distribution and natural history. The type locality is situated in Terhathum district, Kosi Zone, eastern Nepal (Fig. 23). The teneral specimens were collected in a mixed deciduous forest at an altitude of 2450–2850 m.

***Lobrathium triste* (Cameron, 1924)** (Figs 23, 29–35, 108)
Lathrobium (Lobrathium) triste Cameron, 1924: 193.
Lathrobium kashmiricum Cameron, 1931: 202 f.; **syn. n.**
Lobrathium afghanicum Coiffait, 1979: 562; **syn. n.**
Lobrathium nouristanicum Coiffait, 1979: 562 f.; **syn. n.**

Type material examined. *L. triste*: lectotype ♂, present designation: "Chakrata Dist. Manjgaon 6500, Dr. Cameron. 21.V.22 / Lathrobium triste Cam. / Type / M.Cameron. Bequest. B.M. 1955–147. / Lectotypus ♂ *Lathrobium triste* Cameron, desig. V. Assing 2011 / Lobrathium triste (Cameron), det. V. Assing 2011" (BMNH).

L. kashmiricum: syntype ♀ [somewhat damaged, left hind leg and apical half of right antenna missing]: "Type / Ramsu 4500, Chenab Valley, Kashmir. 8.V.28. B.M. Bhatia. / Under wet stones / 308 / Lathrobium kashmiricum Cam. Type / M. Cameron. Bequest B.M. 1955–147. / Lobrathium triste (Cameron), det. V. Assing 2012" (BMNH).

L. nouristanicum: holotype ♀: "entre Camdech et Kouchtous, 1400–2000 m, 8.76 / Afghanistan L et M / Holotype / Lobrathium nouristanicum H. Coiffait det. 1978 / Lobrathium triste (Cameron), det. V. Assing 2012" (MNHNP).

Comment. The original description of *L. triste* is based on an unspecified number of syntypes, among them at least one male, from "Chakrata District; Manjgaon, Dodora Khud, Chulli Khud, 6500 to 8000 feet above the sea" (Cameron 1924). A male syntype from Manjgaon was located in the Cameron collection at the BMNH and designated as the lectotype.

The original description of *L. kashmiricum* is based on an unspecified number of syntypes from "Kashmir: Ramsu, Chenab Valley, alt. 4500 feet" (Cameron 1931). The male sexual characters are not described, suggesting that male syntypes were not available. An examination of a female syntype, possibly the only type specimen that exists, yielded no evidence whatsoever that it should not be conspecific with *L. triste*. It represents the colour morph with indistinct posterior spots on the elytra. Moreover, the type locality is well within the range of *L. triste*. Therefore, the available evidence suggests that the syntype of *L. kashmiricum* is conspecific with the lectotype of *L. triste*; hence the synonymy proposed above. The syntype of *L. kashmiricum* is illustrated in Fig. 108.

Lobrathium afghanicum was described from a male syntype collected in "Darah i Nour" and three male paratypes from "Gorges du Tanguy Garou, Maïpar" (Coiffait 1979). The type material was not examined, but based on the illustration of the characteristic aedeagus provided in the original description, *L. afghanicum* is undoubtedly conspecific with *L. triste*; hence the synonymy proposed above.

According to the original description of *L. nouristanicum*, which is based on a unique female from "Nouristan, entre Camdech et Kouchtous" (Coiffait 1979), this species is distinguished from *L. afghanicum* (there is no mention of *L. triste*) by smaller size, more slender habitus, relatively smaller eyes, longer elytra without posterior spots and with the punctation arranged in more distinct series. An examination of the holotype revealed that, in all these characters, it is well within the range of intraspecific variation of *L. triste*, suggesting that it is conspecific with this species. Consequently, *L. nouristanicum* is placed in synonymy with *L. triste*.

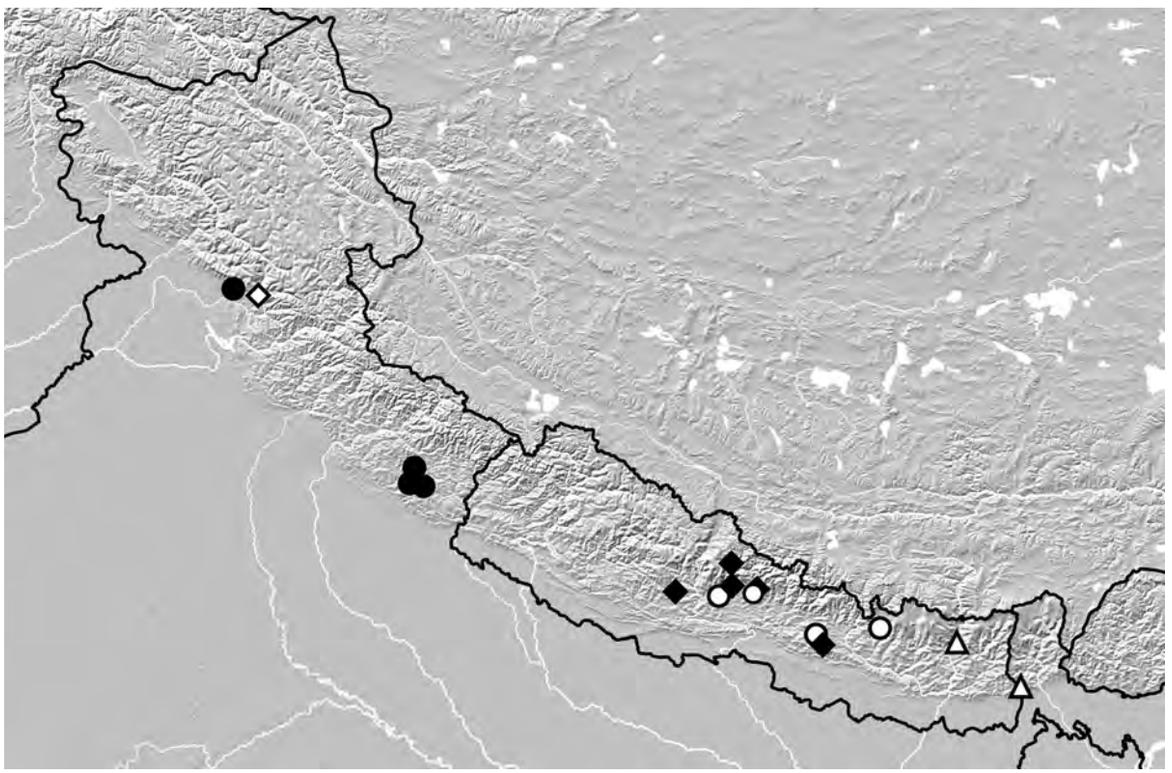


Fig. 41. Distributions of Himalayan *Lobrathium* species, based on revised records: *L. mordens* (filled circles); *L. flavipenne* (open diamond); *L. wittmeri* (filled diamonds); *L. kleebergi* (open circles); *L. semicaeruleum* (open triangles).

Additional material examined. Pakistan: 1♂, Chitral, Garam Chashma, 1900–2800 m, 1.–2.VII.1982, leg. Erber & Heinz (cAss); 2♂♂, Swat Marghuzar, 1300 m, 8.V.1983, leg. Besuchet & Löbl (MHNG, cAss); 1♂, 6♀♀, Chitral, Lotkoh, 2350 m, 29.V.1983, leg. Besuchet & Löbl (MHNG, cAss); 1♀, Northwest Frontier Province, Hazara, Lower Kagan Valley, ca. 1100 m, 24.V.1927, leg. Champion (BMNH); 2 exs., Kargah valley near Gilgit, 26.X.2008, leg. Latella (MCSNV, cAss); 2 exs., Ghangche district, Hushey valley, 25.–29.VI.2008, leg. Latella (MCSNV).

India: 1♀ [labelled as "Cotype" of *L. triste*], Chakrata district, Binal Gad, 28.V.1922, leg. Cameron (MHNG).

Redescription. Body length 7.3–8.3 mm; length of forebody 3.8–4.3 mm. Habitus as in Fig. 29. Coloration: body reddish-brown to blackish, elytra sometimes with ill-delimited yellowish to reddish spots posteriorly; legs uniformly reddish to dark-brown with even darker femora; antennae reddish, with antennomere I sometimes infuscate.

Head (Figs 30, 108) weakly oblong, approximately 1.05 times as long as broad; posterior angles broadly rounded, practically obsolete; punctation dense and coarse, median dorsal portion sparsely punctate; interstices without microsculpture. Eyes large and bulging, slightly more than half as long as distance from posterior margin of eye to neck.

Pronotum (Figs 30, 108) approximately 1.25 times as long as broad and nearly as wide as head; punctation similar to that of head, but less dense.

Elytra (Figs 30, 108) 0.90–0.95 times as long as, and distinctly wider than pronotum; punctation coarse and dense, arranged in somewhat irregular series; interstices without microsculpture. Hind wings present.

Abdomen narrower than elytra; punctation moderately fine and moderately dense (less fine and less dense than in *L. badium*); posterior margin of tergite VII with palisade fringe.

♂: posterior margin of tergite VIII weakly convex (Fig. 31); sternite VII transverse and with median impression posteriorly, posterior margin broadly and distinctly concave; sternite VIII approximately as long as broad, posterior excision very deep and rather broad, anterior to this excision with small cluster of modified, short black setae (Figs 32–33); aedeagus approximately 1.3 mm long, with conspicuously spear-shaped ventral process (Figs 34–35).

Distribution. *Lobrathium triste* has been recorded from North India (Uttaranchal), Kashmir (Smetana 2004), Afghanistan, and Pakistan (Fig. 23).

***Lobrathium semicaeruleum* (Cameron, 1921)** (Figs 36–41)
Lathrobium semicaeruleum Cameron, 1921: 271.

Type material examined. Lectotype ♂, present designation: "Gopaldhara, Br. Sikkim. H. Steven. / L. semicaeruleum / Type / M.Cameron. Bequest. B.M. 1955–147. / Lectotypus ♂ *Lathrobium semicaeruleum* Cameron, desig. V. Assing 2011 / Lobrathium semicaeruleum (Cameron), det. V. Assing 2011" (BMNH).

Comment. The original description of *L. semicaeruleum* is based on an unspecified number of syntypes, among them at least one male, from "Gopaldhara, Sikkim ..., West Bhatkot, alt. 4000 feet, and West Almora, Kumaon" (Cameron 1921). A male syntype from Gopaldhara was located in the Cameron collection at the BMNH and designated as the lectotype.

Additional material examined. India: 1♀ [labelled as "Cotype" of *L. semicaeruleum*; identification doubtful], Dehra Dun, 1922, leg. Cameron (MHNG).
Nepal: 4♂♂, 2♀♀ [5 exs. with, 1 without elytral spots; 1 ex. teneral]: Khandbari district, Arun valley at Num main bridge, 1000 m, 21.IV.1984, leg. Smetana & Löbl (cSme, cAss).

Redescription. Body length 6.0–7.2 mm; length of forebody 3.4–3.9 mm. Coloration variable: forebody blackish with distinct bluish hue; abdomen black; elytra with or without large reddish spot occupying posterior 1/3–2/5 of elytra; legs blackish-brown to blackish, with slightly paler tarsi; antennae blackish-brown to black.

Head (Fig. 36) approximately as long as broad; posterior angles broadly rounded, practically obsolete; punctation dense and coarse, median dorsal portion sparsely punctate; interstices without microsculpture. Eyes very large and bulging, distinctly more than half as long as distance from posterior margin of eye to neck.

Pronotum (Fig. 36) approximately 1.25–1.30 times as long as broad and approximately 0.9 times as wide as head, lateral margins distinctly convex in dorsal view; punctation very dense, somewhat coarser than that of head.

Elytra (Fig. 36) conspicuously long, 1.10–1.15 times as long as, and distinctly wider than pronotum; punctation coarse and dense, not arranged in series; interstices without microsculpture. Hind wings present.

Abdomen narrower than elytra; punctation fine and dense; posterior margin of tergite VII with palisade fringe.

♂: posterior margin of tergite VIII weakly convex; sternite VI with small median tubercle; sternite VII with pronounced median tubercle, posterior margin weakly concave; sternite VIII weakly transverse, with long and broad median impression, this impression with numerous modified, short black setae, posterior excision relatively deep and U-shaped (Figs 37–38); aedeagus approximately 1 mm long, with apically bifid ventral process of characteristic shape (Figs 39–40).

Intraspecific variation. The coloration of the elytra is variable. A posterior elytral spot may be present or absent. In one locality in eastern Nepal, both colour morphs were collected together.

Distribution and natural history. Confirmed records of this species are known only from the type locality in North India and one locality in eastern Nepal (Fig. 41). Other previous literature records (Cameron 1921, 1931), as well as the examined female-based record from Uttaranchal must be regarded as doubtful and require confirmation; they may well refer to *L. mordens* or other similar species. The examined material was found at altitudes of 1000 and approximately 1200 m. One specimen collected in April is teneral.

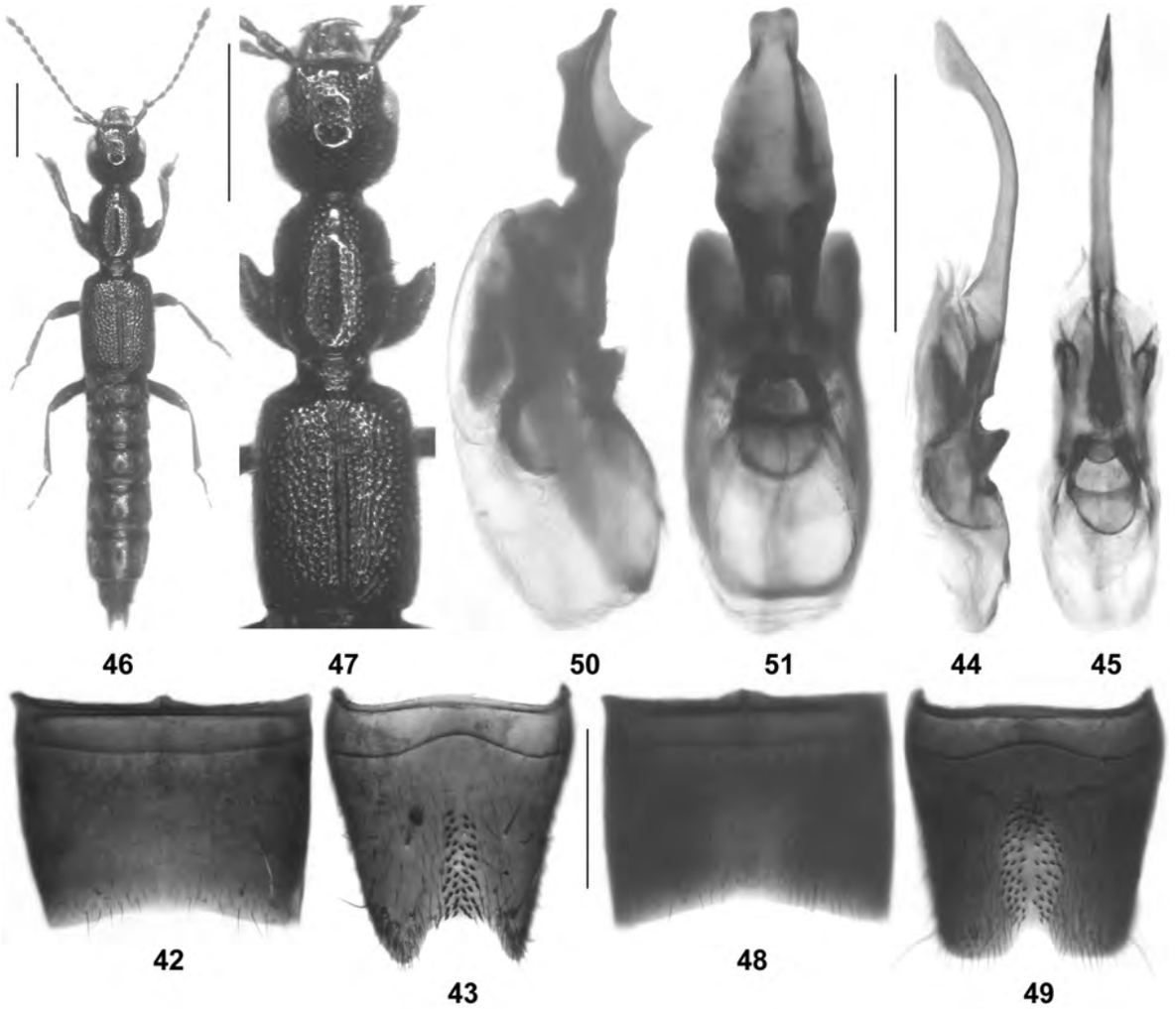
***Lobrathium mordens* sp. n.** (Figs 41–45)

Type material. Holotype ♂: "W. Almora, Kumaon, India. H. G. C. / G.C. Champion coll. B.M. 1927–409 / Holotypus ♂ *Lobrathium mordens* sp. n., det. V. Assing 2012" (BMNH). Paratypes: 2♂♂: "2115 / W. Almora Divn. Kumaon. U.P., Apr, 1918. HGC" (BMNH, cAss); 1 ex.: same data, but "Mar. 1917" (cAss); 1♀ [teneral]: "Ranikhet, Kumaon. H. G. C." (BMNH); 2 exs.: "Ranikhet Div., Kumaon, U.P., Feb. '20, HGC." (BMNH); 2 exs.: "Ranikhet, Kumaon, India. H.G.C." (BMNH); 1 ex.: "West Bhatka [?], Kumaon 4000', Mar '20 HGC" (BMNH); 2 exs.: "India, Haldwani Dist., Kumaon, H.G. Champion" (BMNH); 3 exs.: "Haldwani Div., Kumaon, India. H.G.C." (BMNH, cAss); 1 ex.: "2745 / W. Almora Dn, Almora U.P., Mar. '19. HGC" (cAss); 1 ex.: "Dhelu [= Chauntra], Mandi [Mandi District in Himachal Pradesh], Punjab. 4500ft. H.G.C." (cAss).

Etymology. The specific epithet (Latin, present participle of mordere: to sting) refers to the long and slender ventral process of the aedeagus.

Description. Body length 5.5–7.3 mm; length of forebody: 3.0–3.8 mm. Forebody uniformly black with bluish hue. Other external characters as in *L. semicaeruleum*; reliably distinguished only by the male sexual characters.

♂: sternite VI unmodified; sternite VII with shallow and extensive median impression, pubescence not distinctly modified, posterior margin broadly convex (Fig. 42); sternite VIII weakly oblong, in the middle with relatively narrow, but deep oblong impression, this impression with numerous modified, short and stout black setae, posterior excision broadly and rather deeply U-shaped (Fig. 43); aedeagus 1.2–1.3 mm long, with conspicuously long, slen-



Figs 42–51. *Lobrathium mordens* (**42–45**) and *L. unispinosum* (**46–51**). **42, 48:** male sternite VII; **43, 49:** male sternite VIII; **44–45, 50–51:** aedeagus in lateral and in ventral view; **46:** habitus; **47:** forebody. Scale bars: 46–47: 1.0 mm; 42–45, 48–51: 0.5 mm.

der, and apically dorso-ventrally dilated ventral process (Figs 44–45).

Comparative notes. From other externally similar Himalayan representatives with a uniformly blackish forebody with bluish hue (*L. semicaeruleum*, *L. unispinosum*, *L. integrum*), *L. mordens* is distinguished by the male secondary sexual characters and particularly by the completely different shape of the ventral process of the aedeagus.

Distribution and natural history. *Lobrathium mordens* is currently known from several localities in Uttaranchal and Himachal Pradesh in northern India (Fig. 41). Two specimens were collected at altitudes of approximately 1300–1500 m.

***Lobrathium unispinosum* sp. n.** (Figs 23, 46–51)

Type material. Holotype ♂: "Nepal, 31.10.92, Pokhara-See, leg. J. Schmidt / Holotypus ♂ *Lathrobium unispinosum* sp. n., det. V. Assing 2011" (SDEI). Paratypes: 1♂, 5♀♀: same data as holotype (SDEI, cAss); 1♀: "Nepal, Annapurna, Pokhara Umg. / 800 m, 26.–28.II.1994, leg. Ahrens" (SDEI); 1♀ [without bluish hue]: "Nepal, Annapurna Mts., Landruk-Bhari Kharka, 1650–1900 m, 6.5.1999, leg. C. Krüger, G. Hirthe" (cAss); 1♀: "Ost-Nepal, Rolwaling Himal / Tama Koshi Tal, Suri Dhoban, 1200 m, 14.05.2000, leg. A. Kleeberg" (cKle).

Etymology. The specific epithet (Latin, adjective: with one tooth) refers to the shape of the ventral process of the aedeagus.

Description. Body length 6.3–7.3 mm; length of forebody 3.4–3.8 mm. Habitus as in Fig. 46. Coloration: forebody blackish, usually with distinct bluish hue; abdomen black; legs blackish-brown to blackish, with slightly paler tarsi; antennae blackish-brown to black.

In external characters highly similar to *L. semicaeruleum* (Figs 46–47), but reliably distinguished by the male sexual characters:

♂: posterior margin of tergite VIII weakly convex; sternite VI without median tubercle; sternite VII with median impression posteriorly, but without tubercles, posterior margin broadly concave (Fig. 48); sternite VIII approximately as long as broad, with long median impression, this impression with numerous modified, short and stout black setae, posterior excision relatively small and concave (Fig. 49); aedeagus 1.2–1.3 mm long, ventral process asymmetric, on right ventral side (ventral view) with pronounced tooth-shaped process, dorsal plate lamellate (Figs 50–51).

Intraspecific variation. One female from the Annapurna lacks the bluish hue and has the forebody black, but other external characters are identical to those of the material from other localities.

Comparative notes. From the externally highly similar *L. semicaeruleum*, this species is reliably distinguished only by the modifications of the male sternites VI–VIII (sternites VI and VII without tubercles, posterior excision of sternite VIII much smaller and less deep), as well as by the larger and differently shaped, asymmetric aedeagus.

Distribution and natural history. *Lobrathium unispinosum* was collected in central Nepal, one female also in eastern Nepal (Fig. 23), at altitudes of 800–1900 m.

***Lobrathium integrum* sp. n.** (Figs 23, 52–57)

Type material. Holotype ♂ [slightly teneral]: "Nepal, Taplejung, Mewa Khola 1570 m, 02.VI.2011, leg. S. Taman, 27°33'13N, 87°36'10E / Collection Naturkundemuseum Erfurt / Holotypus ♂ *Lathrobium integrum* sp. n., det. V. Assing 2011" (NME). Paratypes: 1♂, 8♀♀ [mostly teneral]: same data as holotype (NME, cAss).

Etymology. The specific epithet (Latin, adjective: immaculate, pure) refers to uniform coloration of the elytra.

Description. Body length 6.9–7.9 mm; length of forebody 3.7–4.0 mm. Habitus as in Fig. 52. Coloration: forebody blackish, with distinct bluish hue; abdomen black; legs blackish-brown to blackish, with slightly paler tarsi; antennae blackish-brown to black.

In external characters highly similar to *L. semicaeruleum* and *L. unispinosum* (Figs 52–53), but reliably distinguished by the male sexual characters:

♂: sternite VI unmodified; sternite VII with shallow median impression and with pair of tubercles posteriorly, posterior margin broadly concave (Fig. 54); sternite VIII weakly oblong, with narrow median impression in anterior half, this impression with numerous modified, short and stout black setae, posterior excision conspicuously deep and narrow (Fig. 55); aedeagus 1.4 mm long, ventral process somewhat asymmetric and of distinctive shape, dorsal plate lamellate (Figs 56–57).

Comparative notes. From the externally highly similar *L. semicaeruleum* and *L. unispinosum*, this species is readily distinguished by the shapes and chaetotaxy of the male sternites VII and VIII, as well as by the distinctive shape of the ventral process of the aedeagus.

Distribution and natural history. *Lobrathium integrum* is currently known from only one locality in Taplejung district in the very northeast of Nepal (Fig. 23). The specimens, most of which are somewhat teneral, were collected at an altitude of 1570 m.

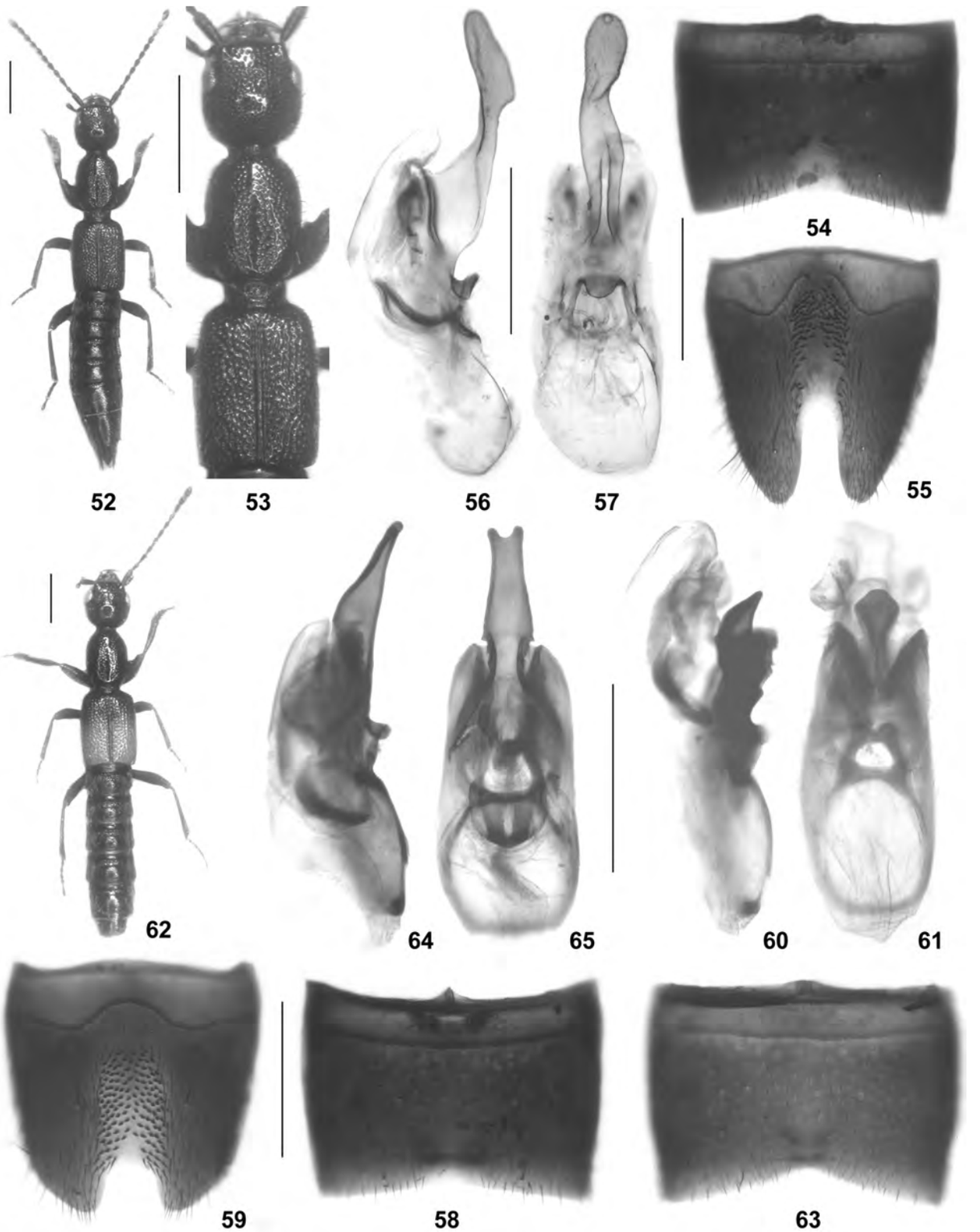
***Lobrathium ochreonotatum* (Champion, 1922), revalidated** (Figs 58–61, 66)

Lathrobium semicaeruleum var. *ochreonotatum* Champion, 1922: 34.

Type material examined. Lectotype, present designation: "R. [River] Sarda Gorge, Kumaon, U. P., Dec. 1918, HGC / Lathrobium semicaeruleum Cam. v. ochreonotatum Ch. / 2632 / Brit. Mus. 1922–71. / Syntype / Lectotypus ♂ *Lathrobium ochreonotatum* Champion, desig. V. Assing 2011 / Lobrathium ochreonotatum (Champion), det. V. Assing 2011" (BMNH). Paralectotype: 1♀: "Ranikhet, Kumaon, India, H.G.C. / Lathrobium semicaeruleum Cam. v. ochreonotatum Ch. / Brit. Mus. 1922–71. / Syntype" (BMNH).

Comment. Champion (1922) described *L. ochreonatum* as a variety of *L. semicaeruleum*, stating that it was characterised by "a large ochreous patch at the apex of the elytra", but "differing in no other way from the type". The four type specimens of this variety were apparently collected together with a series of specimens with uniformly coloured elytra. The variety was treated as a synonym of *L. semicaeruleum* by Cameron (1931).

Two syntypes, a male and a female, from the Champion collection at the BMNH were made available for study; the male is designated as the lectotype. An examination of these types, as well as of additional specimens previously identified as *L. semicaeruleum* with red-spotted ely-



Figs 52–65. *Lobrathium integrum* (**52–57**), *L. ochreonotatum* (**58–61**), and *L. flavipenne* (**62–65**). **52, 62:** habitus; **53:** forebody **54, 58, 63:** male sternite VII; **55, 59:** male sternite VIII; **56–57, 60–61, 64–65:** aedeagus in lateral and in ventral view. Scale bars: 52–53, 62: 1.0 mm; 54–61, 63–65: 0.5 mm.

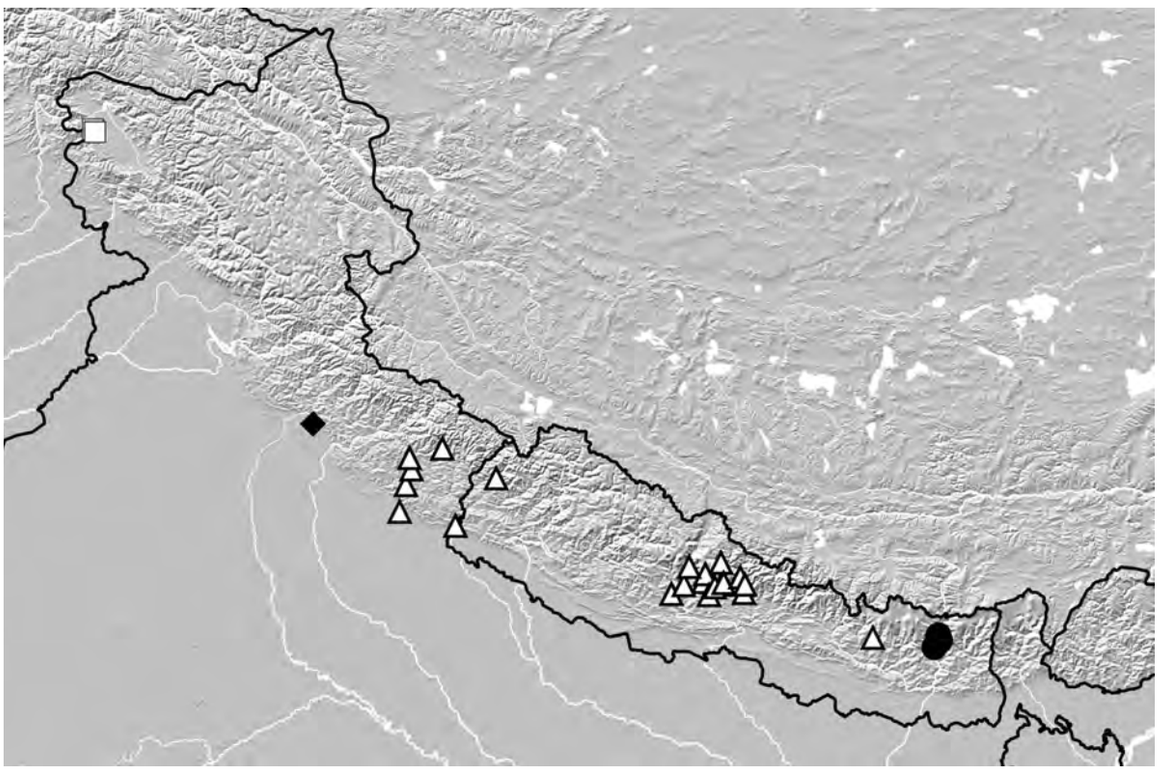


Fig. 66. Distributions of Himalayan *Lobrathium* species, based on revised records: *L. alticola* (open squares); *L. cylindricolle* (filled diamond); *L. ochreonotatum* (open triangles); *L. biaculeatum* (filled circles).

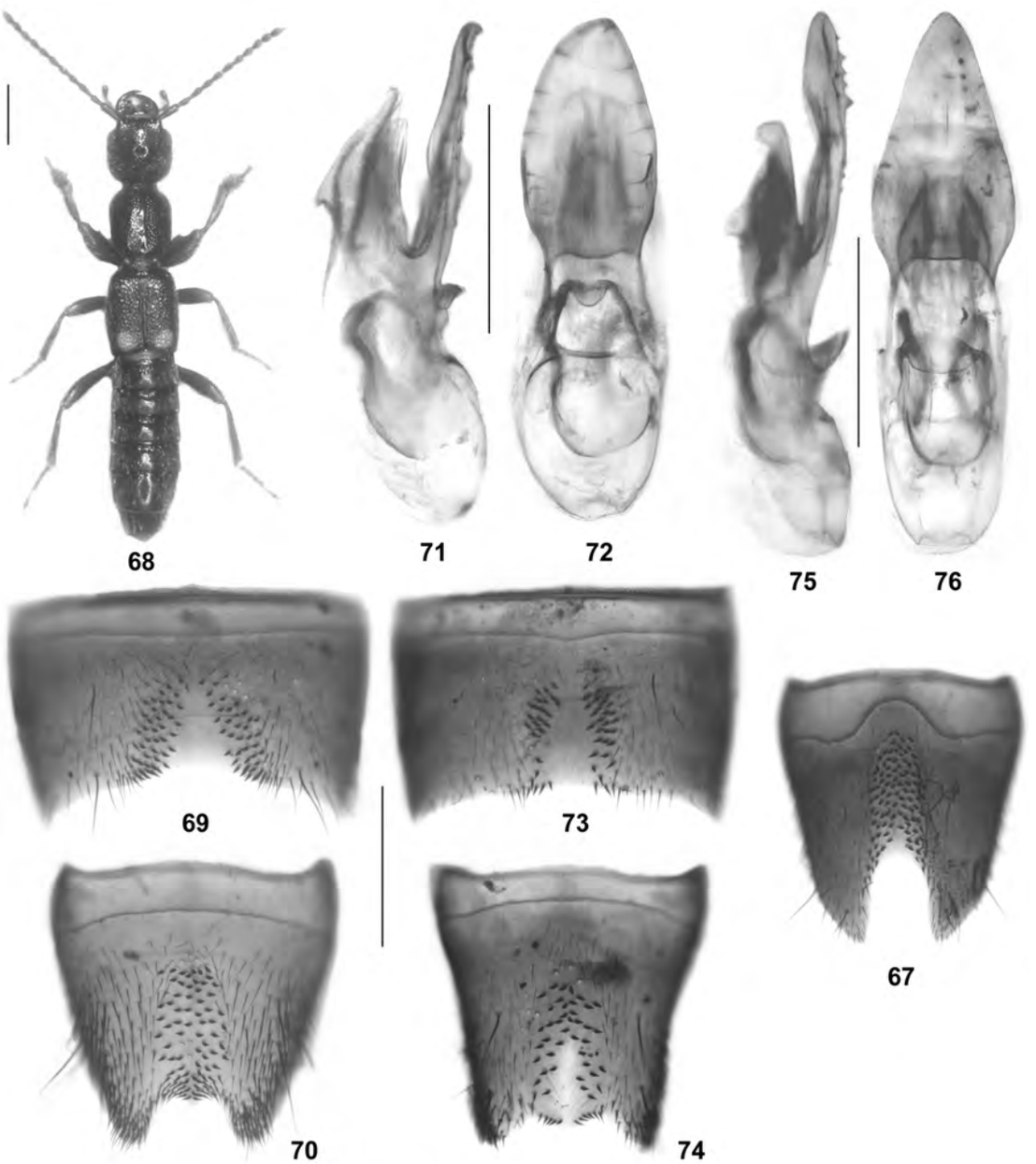
tra revealed that they clearly represent a distinct species, so that the name *L. ochreonotatum* is revalidated.

Additional material examined. Nepal: 1 ex., Annapurna range, Landruk-Bhari Kharka, 1650–1900 m, 6.V.1999, leg. Krüger & Hirthe (cAss); 2 exs., Annapurna, Tadapani-Chomrong, Kyumnu Khola, 1950 m, 4.V.1999, leg. Krüger & Hirthe (cAss); 4 exs., Annapurna, NE Pokhara Sikles, 2000 m, 15.V.1993, leg. Schmidt (cKle, cAss); 3 exs., SW-Manaslu, Bhara Pokhari Lekh, below Taksa, 1500–1700 m, 31.III.1999, leg. Jäger (SNSD, cAss); 3 exs., Manaslu, Marsyangdi Khola, E-side, Bhachok Khola, 1000 m, 13.IV.1999, leg. Hirthe (cAss); 3 exs., Manaslu, Marsyangdi Khola, E-side, above Besi Sahar, 1500 m, 31.III.1999, leg. Hirthe (cAss); 3 exs., Manaslu, Ngadi Khola, 6 km NE Ngadi, 1350 m, 17.V.2005, leg. Schmidt (NME, cAss); 1 ex., Maharkali/Darchula, Latinath, 29°44'N, 80°46'E, 1030 m, stream bank, 31.V.–1.VI.2005, leg. Weigel (NME); 1 ex., Dhaulagiri, Baglung Lekh, above Okhle vill., 2460 m, 13.V.2004, leg. Kleeberg (cAss); 1 ex., Pokhara, southern shore of Phewa lake, 800–900 m, stream bank, sifted, 8.V.2001, leg. Hirthe (cAss); 1 ex., Pokhara lake, 31.X.1992, leg. Schmidt (cAss); 5 exs., Kali-Gandaki river, between Tatopani and Beni, 1000 m, 29.X.1992, leg. Schmidt (SDEI, cAss); 2 exs., W Annapurna, between Lete and Dana, 1400–2400 m, 25.X.1992, leg. Schmidt (SDEI, cAss); 2 exs. [1 teneral], Annapurna, Sikles range, Garlang, 1350 m, 18.IV.1996, leg. Schmidt (SDEI); 1 ex., Annapurna, N Sikles, below Dhara Kharka, 1750 m, 26.IV.1996, leg. Schmidt (cAss); 1 ex., Annapurna, Marsyangdi Khola, Chamje bis valley, 1400–1700 m, 11.VI.1994, leg. Schmidt (SDEI); 1♂ [teneral; without elytral spots], E-Nepal, Ramechap district, Khimti Khola near Shivalaya, 1800 m, 5.V.1997, leg. Schawaller (SMNS). **India: Uttaranchal:** 7 exs., ca. 30 km N Bageshwar, Khati village, 2100–2300 m, 27.–30.VI.2003, leg. Kejval & Trýzna (cSch, cAss); 1♂ [slightly teneral], West Almora Division, Kumaon, VI.1917, leg. Champion (BMNH); 1 ex., Kumaon, Sarda Gorge, XII.1018, leg. Champion (BMNH); 2 exs., Kumaon, West Bhatkat, V.1920, leg. Champion (BMNH, cAss); 2 exs., N Kumaon, Gori R. Gorge, leg. Champion (BMNH, cAss); 2 exs. [1 slightly teneral], Haldwani Division, Kaldhunga, 26.III.1923, leg. Champion (BMNH).

Redescription. External characters as in *L. semicaeruleum*. Elytra usually with, rarely without large bright-reddish spots in the posterior portion of the elytra.

♂: sternite VI unmodified; sternite VII with pair of tubercles posteriorly, posterior margin weakly concave (Fig. 58); sternite VIII weakly transverse, with long and broad median impression, this impression with numerous modified, short and stout black setae, posterior excision relatively deep and broadly U-shaped (Fig. 59); aedeagus approximately 0.9 mm long, ventral process of characteristic shape, apically not bifid (Figs 60–61).

Intraspecific variation. In the male from Ramechap district, the usually large and distinct elytral spots are missing; the elytra are uniformly black with a distinct bluish hue.



Figs 67–76. *Lobrathium flavipenne* (**67**), *L. kleebergi* (**68–72**), and *L. guttula*, lectotype (**73–76**). **67, 70, 74:** male sternite VIII; **68:** habitus; **69, 73:** male sternite VII; **71–72, 75–76:** aedeagus in lateral and in ventral view. Scale bars: 68: 1.0 mm; 67, 69–76: 0.5 mm.

Comparative notes. As can be inferred from the highly similar external morphology and particularly the similar male primary and secondary sexual characters, *L. ochreonotatum* is closely related to, and probably the adelphotaxon of *L. semicaeruleum*, from which it is readily distinguished by the morphology of the aedeagus. In addition, it is separated by the slightly different modifications of the male sternites VII and VIII.

Distribution and natural history. *Lobrathium ochreonotatum* is apparently widespread in the Himalaya (North India, Nepal) (Fig. 66), where it has been found at altitudes of 800–2460 m, at least on one occasion together with *L. unispinosum*. Teneral specimens were collected during the period from March through June.

***Lobrathium flavipenne* sp. n.** (Figs 41, 62–65, 67)

Type material. Holotype ♂: "Parbatti V., Kulu. Punjab. 6–8,000 ft. H. G. C. / G.C. Champion coll. B.M. 1927–409 / Holotypus ♂ *Lobrathium flavipenne* sp. n., det. V. Assing 2012" (BMNH).

Etymology. The specific epithet (Latin, adjective: with yellow wings) alludes to the distinctive coloration of the elytra.

Description. Body length 7.4 mm; length of forebody 3.8 mm. Habitus as in Fig. 62. Coloration: head and pronotum blackish with distinct bluish hue; elytra yellowish, with the anterior third infuscate; abdomen blackish; legs and antennae blackish-brown. Other external characters similar to those of *L. semicaeruleum* and *L. ochreonotatum*.

♂: sternite VII with shallow and extensive median impression, near anterior margin with transverse, bi-domed tubercle, posterior margin weakly concave (Fig. 63); sternite VIII weakly oblong, median impression extensive and with numerous modified, stout and short black setae, posterior excision deep and U-shaped (Fig. 67); aedeagus 1.1 mm long, symmetric, and with apically bifid ventral process in ventral view (Figs 64–65).

Comparative notes. This species is readily distinguished from the spotted morphs of *L. semicaeruleum* and *L. ochreonotatum*, as well as from other similar species by the extensively yellowish coloration of the elytra, as well as by the male primary and secondary sexual characters.

Distribution and natural history. The type locality is situated near Kulu in Himachal Pradesh, northern India (Fig. 41), at an altitude of approximately 2000–2600 m.

***Lobrathium kleebergi* sp. n.** (Figs 41, 68–72)

Type material. Holotype ♂: "Nepal, nordöstl. Kathmandu-Tal, 06.05.1993, leg. A. Kleeberg / Holotypus ♂ *Lobrathium kleebergi* sp. n., det. V. Assing 2011" (cAss). Paratypes: 2♂♂: same data as holotype (cKle, cAss); 1♂ [slightly teneral]: "Nepal-Himalaya, Annapurna Mts., Pokhara-See, Flußmündung, 850 m, 10.5.1993, leg. Schmidt" (cKle); 1♂ [slightly teneral]: "Nepal, Tama Koshi Vall., Suri Doban, 1100–1300 m, 04.06.2000, leg. J. Schmidt" (cKle); 1♂: "Nepal Manaslu Mts., Bara Pokhari Leak [sic] above Bhachok Goan vill., 1600–1800 m, leg. J. Schmidt, 29.IV.2005, 28°14'28N 84°24'32E" (NME).

Etymology. This species is dedicated to Andreas Kleeberg, who collected most of the type specimens.

Description. Body length 6.6–8.0 mm; length of forebody 4.0–4.6 mm. Habitus as in Fig. 68. Coloration: body blackish, elytra with relatively small subcircular yellowish spot, this spot reaching neither suture, nor lateral margin, nor posterior margin; legs reddish brown with reddish tarsi, femora sometimes infuscate; antennae reddish.

Head approximately as long as broad; posterior angles broadly rounded, weakly marked; punctation coarse and conspicuously dense, interstices reduced to narrow ridges, median dorsal portion and frons sparsely punctate or impunctate; interstices without microsculpture. Eyes moderately large, approximately half as long as distance from posterior margin of eye to neck.

Pronotum 1.15–1.20 times as long as broad and 0.90–0.95 times as wide as head, lateral margins almost straight and weakly converging in dorsal view; punctation moderately dense, distinctly less dense than that of head.

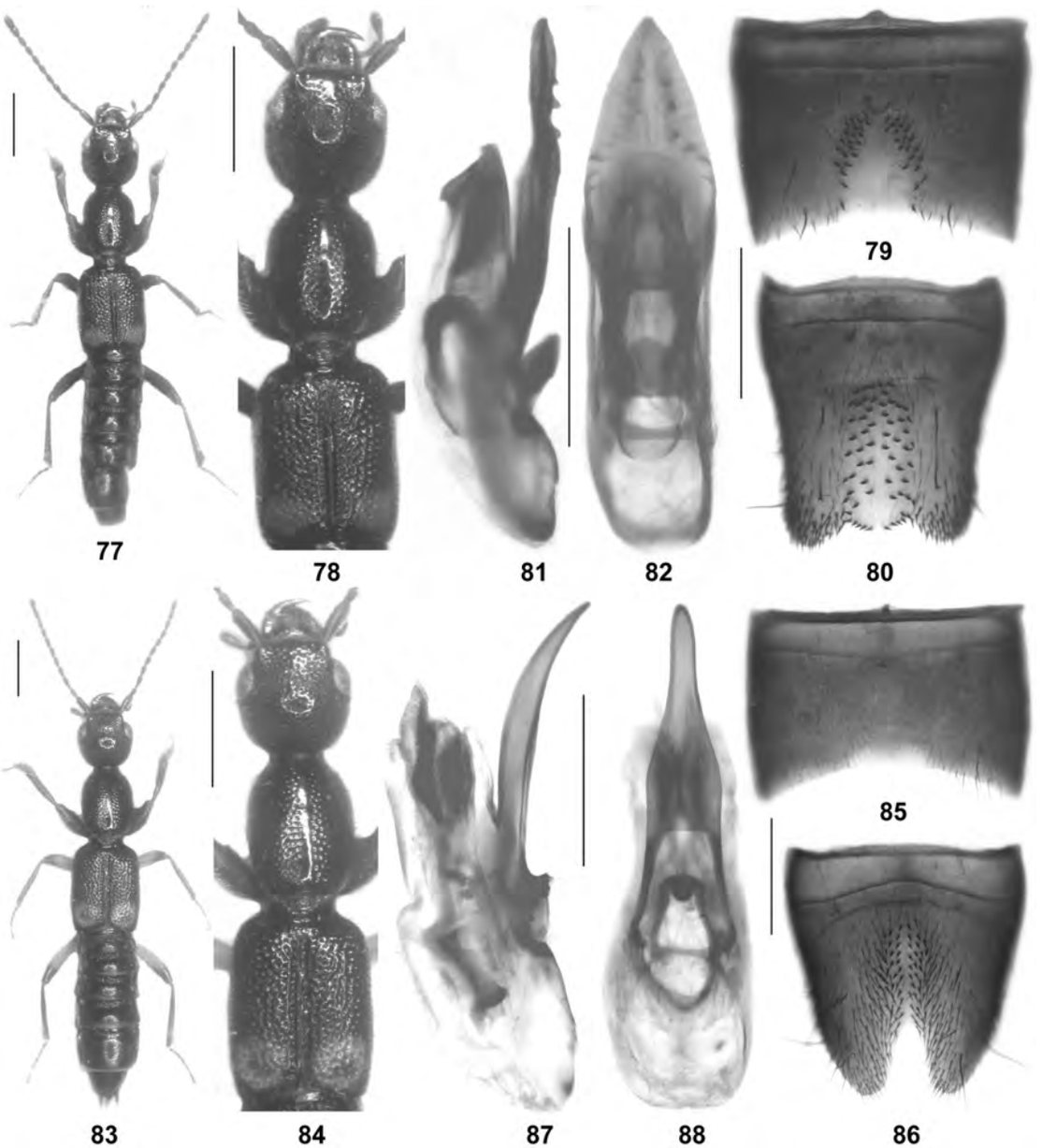
Elytra of variable length, 0.9–1.1 times as long as, and somewhat wider than pronotum; punctation coarse and dense, not arranged in distinct series; interstices without microsculpture. Hind wings apparently present.

Abdomen narrower than elytra; punctation fine and dense; posterior margin of tergite VII with palisade fringe.

♂: posterior margin of tergite VIII strongly convex; sternite VI unmodified; sternite VII strongly transverse and with median impression posteriorly, this impression with pair of clusters of numerous modified, stout and short black setae, posterior margin broadly and rather deeply concave (Fig. 69); sternite VIII weakly transverse, with broad and deep median impression, this impression with numerous modified, stout and short black setae, posterior excision rather broad and of subtrapezoid shape, in the middle with short acute process, on either side of excision with dense blackish pubescence (Fig. 70); aedeagus approximately 1.1 mm long, with large blade-shaped ventral process (Figs 71–72).

Comparative notes. This species is characterised particularly by the male sexual characters. It is readily distinguished from *L. ochreonotatum* by external characters alone: much larger and broader body with a less slender pronotum, extremely dense punctation of the head, absence of a bluish hue on the forebody, smaller elytral spot.

Distribution and natural history. *Lobrathium kleebergi* is currently known only from several localities in Nepal (Fig. 41). Some of the type specimens were collected at altitudes between 850 and approximately1700 m. The specimens from the type locality were floated from the bank of a stream (Kleeberg, pers. comm.).



Figs 77–88. *Lobrathium sinuatum* (**77–82**) and *L. pustulatum*, lectotype (**83–88**). **77, 83:** habitus; **78, 84:** forebody; **79, 85:** male sternite VII; **80, 86:** male sternite VIII; **81–82, 87–88:** aedeagus in lateral and in ventral view. Scale bars: 77–78, 83–84: 1.0 mm; 79–82, 85–88: 0.5 mm.

***Lobrathium guttula* (Fauvel, 1895), comb. n.** (Figs 73–76, 140)
Lathrobium guttula Fauvel, 1895: 234 f.

Type material examined. Lectotype ♂, present designation: "Carin, Asciuii Ghecù [near Loi-kaw; approx. 19°41'N, 97°15'E], 1400–1500 m, L. Fea. III–IV.88. / Coll. R. I. Sc. N. B. / Ex-Typis / Lectotypus ♂ *Lathrobium guttula* Fauvel, desig. V. Assing 2011 / Lobrathium guttula (Fauvel), det. V. Assing 2011" (IRSNB). Paralectotypes: 1♀: same data as lectotype; 1♀: "Darjeeling / guttula Fvl. / Coll. R. I. Sc. N. B. / Ex-Typis" (IRSNB).

Comment. The original description is based on an unspecified number of syntypes, among them at least one male, from "Birmanie, Carina Asciuii Ghécu, 1400–1500 m,

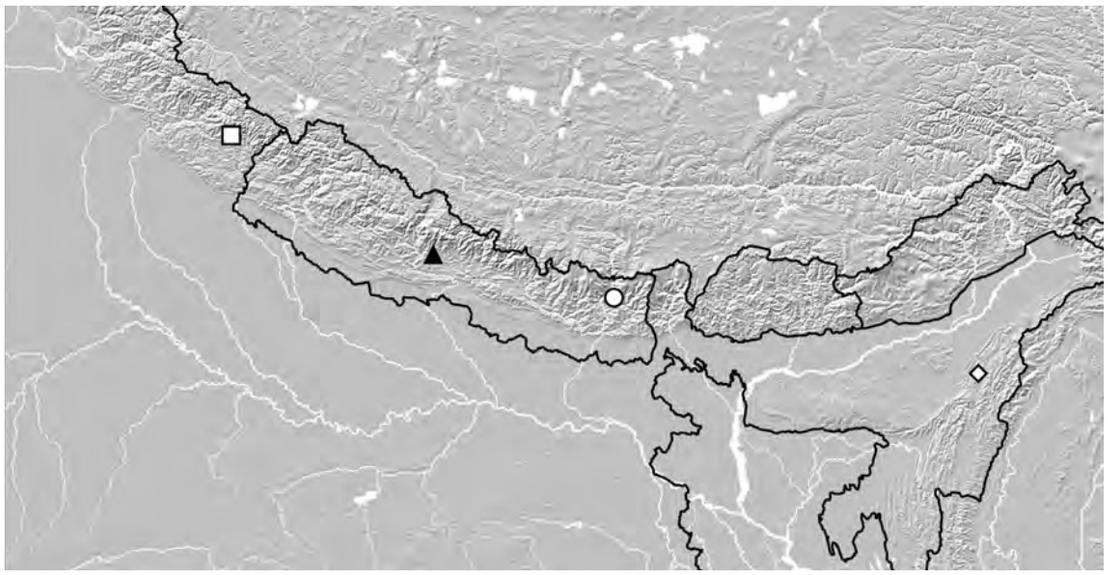


Fig. 89. Distributions of Himalayan *Lobrathium* species, based on revised records: *L. bicarinatum* (open square); *L. sinuatum* (filled triangle); *L. kosiense* (open circle); *L. pustulatum* (open diamond).

III–IV (L. Fea). Sikkim, Darjeeling (Christie)" (Fauvel 1895). Three syntypes, a male and two females, were located in the collections of the IRSNB; the slightly teneral male is designated as the lectotype. It is currently unclear whether or not the female syntype from Darjeeling is conspecific with the lectotype; the possibility that it refers to *L. kleebergi* or to an undescribed species cannot be ruled out. Although Fauvel (1895) had placed *L. guttula* near *L. multipunctum*, it had previously been listed as *Lathrobium* even in recent catalogues (Smetana 2004). The species clearly belongs to *Lobrathium*.

Redescription. External characters as in *L. kleebergi* (see preceding section). Distinguished only by the male sexual characters:

♂: sternite VI unmodified; sternite VII strongly transverse and with pronounced median impression, this impression impunctate in the middle and laterally with a pair of clusters of numerous modified, stout and short black setae, posterior margin broadly and weakly concave (Fig. 73); sternite VIII as long as broad, with broad and deep median impression, this impression with numerous modified, stout and short black setae, posterior excision rather broad and shallow, in the middle triangularly produced and with row of five short, black marginal setae on either side (Fig. 74); aedeagus 1.3 mm long and with blade-shaped ventral process (Figs 75–76).

Comparative notes. As can be inferred from the similar external (large head with extremely dense punctation and large impunctate patches) and from the similar male sexual characters, *L. guttula* is a close relative of *L. kleebergi*. It is distinguished from the latter by the shape and chaetotaxy of the male sternites VII and VIII, as well as by the different shape of the ventral process of the aedeagus. For characters separating it from *L. sinuatum*, its presumable sister species, see the following section.

Distribution and natural history. *Lobrathium guttula* was originally described from Myanmar and Darjeeling (North India: West Bengal). Cameron subsequently reported it from Siwaliks in Uttaranchal. In the Palaearctic Catalogue (Smetana 2004), it is also listed for Himachal Pradesh and the Oriental region. In view of the external similarity of *Lobrathium* species and the fact that the male sexual characters of the type material were previously unknown, all records, except those from the type locality, which is situated in Kaya State close to the town Loi-kaw (Fig. 140), should be considered doubtful and require confirmation.

Two of the type specimens were collected at an altitude of 1400–1500 m during spring (March/April). The lectotype is slightly teneral.

***Lobrathium sinuatum* sp. n.** (Figs 77–82, 89)

Type material. Holotype ♂: "Nepal, 31.10.92, Pokhara-See, leg. J. Schmidt / Holotypus ♂ *Lobrathium sinuatum* sp. n., det. V. Assing 2011" (SDEI).

Etymology. The specific epithet (Latin, adjective) alludes to the bisinuate posterior margin of the male sternite VIII.

Description. Body length 7.2 mm; length of forebody 4.1 mm. Habitus as in Fig. 77. Coloration: body blackish, elytra with relatively small subcircular yellowish spot, this spot reaching neither suture nor lateral or posterior margins; legs blackish with reddish tarsi; antennae dark-brown.

Head (Fig. 78) 1.05 times as long as broad; lateral margins behind eyes convexly rounded towards neck, posterior angles obsolete; punctation moderately coarse and very dense, interstices reduced to narrow ridges, transverse patch in median dorsal portion and frons impunctate; interstices without microsculpture. Eyes moderately large, approximately half as long as distance from posterior margin of eye to neck.

Pronotum (Fig. 78) 1.22 times as long as broad and 0.9 times as wide as head, lateral margins almost straight and weakly converging in dorsal view; punctation moderately dense, distinctly less dense and somewhat coarser than that of head.

Elytra (Fig. 78) nearly 1.1 times as long as, and distinctly wider than pronotum; punctation coarse and dense, arranged in very irregular series; interstices without microsculpture. Hind wings apparently present.

Abdomen narrower than elytra; punctation fine and dense; posterior margin of tergite VII with palisade fringe.

♂: posterior margin of tergite VIII weakly convex; sternite VI unmodified; sternite VII moderately transverse and with median impression posteriorly, this impression delimited by approximately 20 modified, stout and short black setae on either side, posterior margin broadly and weakly concave (Fig. 79); sternite VIII oblong, with broad median impression, this impression with numerous modified, stout and short black setae, posterior excision shallow and bisinuate (Fig. 80); aedeagus approximately 1.2 mm long, with large blade-shaped ventral process (Figs 81–82).

Comparative notes. *Lobrathium sinuatum* is characterised particularly by the conspicuous shape and chaetotaxy of the male sternite VIII, as well as by the shape and chaetotaxy of the male sternite VII and the morphology of the aedeagus. It is additionally separated from the similar and geographically close *L. kleebergi* by the darker legs and antennae, as well as by the more slender pronotum. Based on the similarly derived male sexual characters (shapes and chaetotaxy of the male sternites VII and VIII; morphology of the aedeagus), *L. sinuatum* is the adelphotaxon of *L. guttula*, from which it is separated by the slightly different shape of the ventral process of the aedeagus (both in lateral and in ventral view), the different shape of the dorso-apical portion of the aedeagus in lateral view, the slightly different chaetotaxy of the less transverse male sternite VII, as well as by the slightly different shape and chaetotaxy of the male sternite VIII.

Distribution and natural history. The type locality is situated near Pokhara in central Nepal (Fig. 89), where the holotype was collected together with *L. unispinosum*.

Lobrathium pustulatum (Cameron, 1931), comb. n.

(Figs 83–89)

Lathrobium pustulatum Cameron, 1931: 202.

Type material examined. Lectotype ♂ [somewhat damaged, four legs missing, antennae broken], present designation: "Naga Hills, Assam (8) / L. pustulatum / M. Cameron. Bequest. B.M. 1955–147. / Syntype / Syntype Lathrobium pustulatum Cameron, 1931, det. R.G. Booth 2011 / Lectotypus ♂ *Lathrobium pustulatum* Cameron, desig. V. Assing 2012 / Lobrathium pustulatum (Cameron), det. V. Assing 2012" (BMNH). Paralectotype ♀: same data as lectotype (BMNH).

Comment. The original description is based on an unspecified number of syntypes, among them at least one male, from "Assam: Naga Hills, alt. 9000 feet" collected by "S. N. Chatterjee" (Cameron 1931). Two syntypes, a male and a female, were located in the collections of the BMNH. The somewhat damaged male is designated as the lectotype. The species undoubtedly belongs to *Lobrathium*.

Redescription. Body length 7.0–7.5 mm; length of forebody 4.0–4.2 mm. Habitus as in Fig. 83. Coloration: body blackish, elytra with a relatively large yellowish spot not reaching posterior and lateral margins; legs yellowish with the apices of the femora and the tibiae infuscate; antennae brown to dark-brown with darker antennomere I.

Head (Fig. 84) approximately as long as broad, widest accross eyes, convexly narrowed posteriad behind eyes; posterior angles broadly rounded, weakly marked; punctation coarse and dense, interstices reduced to narrow ridges in posterior and lateral dorsal portions, median dorsal portion and frons more sparsely punctate; interstices without microsculpture. Eyes large and strongly convex, distinctly more than half as long as distance from posterior margin of eye to neck.

Pronotum (Fig. 84) 1.25–1.30 times as long as broad and 0.90–0.95 times as wide as head, lateral margins weakly convex in dorsal view; punctation moderately dense, distinctly less dense than that of head; impunctate midline distinct and of moderate breadth.

Elytra (Fig. 84) long and broad, approximately 1.05 times as long as, and much wider than pronotum; punctation coarse and dense, partly obliquely confluent, and partly arranged in irregular and distinctly oblique series; interstices without microsculpture. Hind wings present and apparently fully developed.

Abdomen narrower than elytra; punctation moderately fine and dense, shallower on posterior than on anterior ter-

gites; microsculpture shallow on anterior tergites, distinct on tergite VII; posterior margin of tergite VII with palisade fringe.

♂: posterior margin of tergite VIII convex; sternites V and VI with shallow impression posteriorly; sternite VII strongly transverse and with pronounced median impression posteriorly, this impression without pubescence in the middle and semitransparent posteriorly, posterior margin broadly and rather strongly concave (Fig. 85); sternite VIII as long as broad, with deep and relatively narrow median impression, this impression with numerous modified, stout and short black setae, posterior excision deep and narrow (Fig. 86); aedeagus 1.5 mm long and with ventral process of characteristic shape (Figs 87–88).

♀: posterior margin of tergite VIII pointed, almost of triangular shape.

Comparative notes. *Lobrathium pustulatum* is distinguished from the similarly coloured *L. kleebergi* particularly by the coloration of the legs, the shape of the head, the larger and more bulging eyes, the partly confluent punctation of the elytra, the shape and chaetotaxy of the male sternites VII and VIII, and by the completely different morphology of the aedeagus.

Distribution and natural history. *Lobrathium pustulatum* has become known only from the type locality in Assam, northeastern India (Fig. 89), where the type specimens were collected at an altitude of about 2750 m.

Lobrathium wittmeri Coiffait, 1982 (Figs 41, 90–95)

Lobrathium wittmeri Coiffait, 1982b: 283.

Type material examined. Holotype ♂: "Phulchoki 2600 m, 11.–14.6. / Nepal, W. Wittmer, C. Baroni U. 1976 / Holotype / Lobrathium wittmeri H. Coiffait 1982 / Lobrathium wittmeri Coiffait, det. V. Assing 2011" (NHMB).

Comment. The original description of *L. wittmeri* is based on a single male holotype and a female paratype from "Népal, Phulchoki, 2600 m" (Coiffait 1982b). The holotype is deposited in the collections of the NHMB.

Additional material examined. Nepal: 13 exs. [micropterous], Dhaulagiri range, Baglung Lekh, ca. 30 km W Baglung, northern Tara Khola, 2800 m, 20.V.2004, leg. Kleeberg (cKle, cAss); 1 ex. [micropterous], same data, but 2700–2900 m (cKle); 7 exs. [6 exs. micropterous, 1♀ macropterous], same data, but upper Tara Khola, 2600 m, 18.V.2004 (cKle, cAss); 1♀ [micropterous], Annapurna, Marsyangdi valley, Bagarchhap, 2100 m, 4.V.2007, leg. Schmidt (NME); 6 exs. [micropterous], Annapurna, Sikles range, Nyauli Kharka, S Sikles, 2400 m, 21.–24.IV.1996, leg. Schmidt (SDEI, cAss); 1♀ [micropterous], Manaslu, Barapokhari Lekh, Lake Barapokhara env., 12 km NE Besisahar village, 28°18'N, 84°28'E, 3100 m, 10.IX.2000, leg. Hetzel (cFel); 1♂, Annapurna Himal, Sikles range, 1400–2100 m, V.1996, leg. J. Schmidt (NME).

Redescription. Body length 6–7 mm; length of forebody 3.0–3.5 mm. Coloration: body blackish; legs dark-brown to blackish-brown with reddish tarsi; antennae dark-brown, with antennomere I usually even darker and with the apical antennomeres usually reddish.

Head (Figs 90–91) approximately as long as broad, occasionally weakly transverse or weakly oblong; posterior angles broadly rounded; punctation dense and moderately coarse, median dorsal portion more sparsely punctate; interstices without microsculpture. Eyes rather large, approximately half as long as distance from posterior margin of eye to neck, or slightly larger.

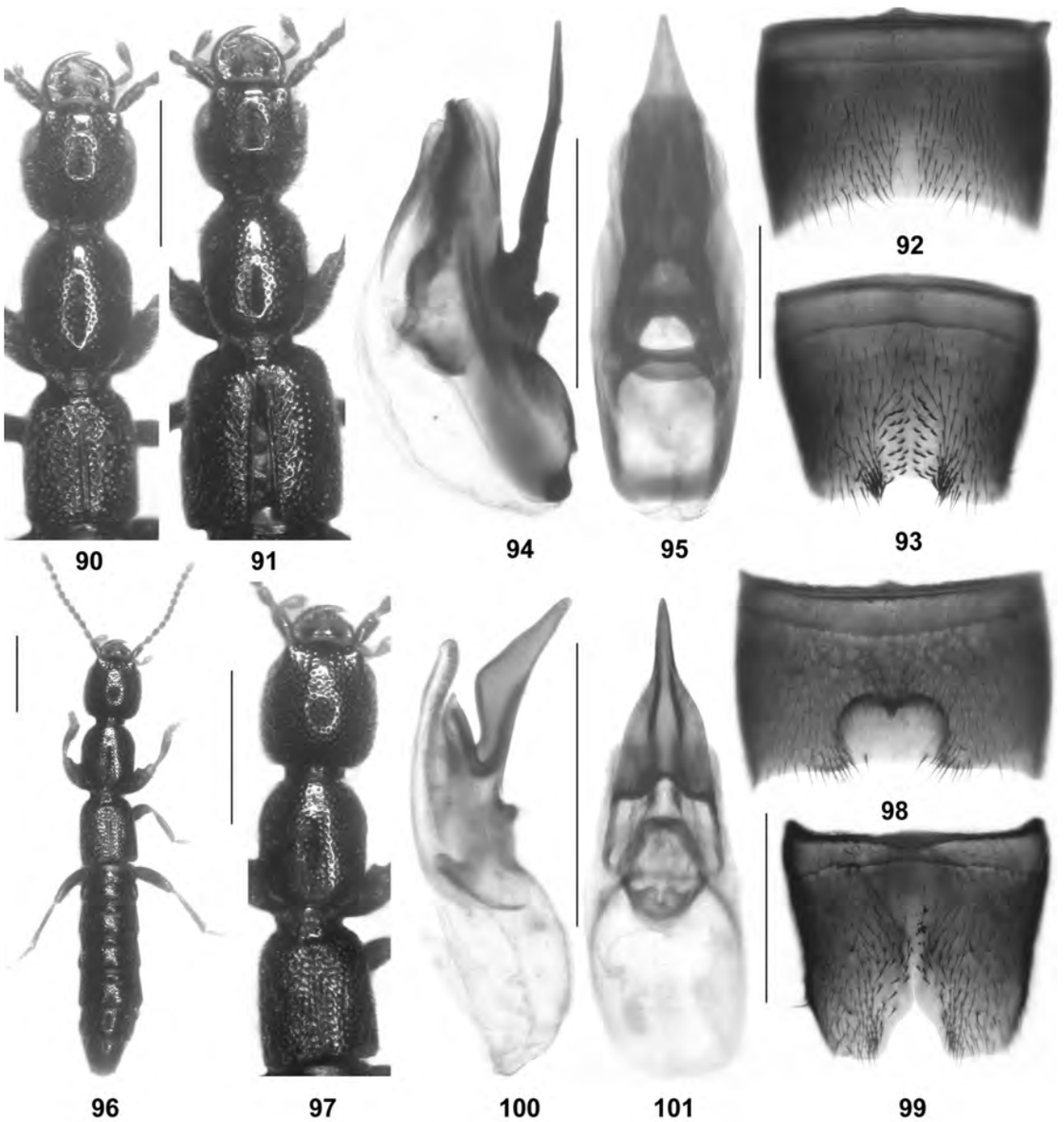
Pronotum (Figs 90–91) approximately 1.25 times as long as broad and approximately 0.95 as wide as head, lateral margins weakly convex in dorsal view; punctation similar to that of head, but less dense.

Elytra dimorphic, in micropterous morph short (but see comment below), 0.70–0.75 times as long and approximately as wide as pronotum (Fig. 90), or nearly so, in macropterous morph 1.05 times as long as, and much broader than pronotum (Fig. 91); humeral angles marked (macropterous morph) or weakly marked (micropterous morph); punctation coarse, moderately dense, and not arranged in series; interstices without microsculpture and glossy. Hind wings reduced (micropterous morph) or fully developed (macropterous morph).

Abdomen broader than elytra; punctation fine and dense; posterior margin of tergite VII with palisade fringe; tergite VIII without sexual dimorphism, posterior margin weakly convex in both sexes.

♂: sternite VII with median impression posteriorly, on either side of this impression with sparse, weakly modified, somewhat darker and longer setae, posterior margin broadly and distinctly concave (Fig. 92); sternite VIII transverse, with broad median impression, this impression with approximately 30–40 modified, stout and short black setae, posterior excision broad and rather shallow, on either side of this excision with tuft of long black setae (Fig. 93); aedeagus approximately 1 mm long or nearly so; ventral process blade-shaped, slender and apically acute in lateral view; apex of acutely triangular shape in ventral view (Figs 94–95).

Comparative notes. *Lobrathium wittmeri* belongs to a group of species distributed from Nepal to Sichuan and Yunnan, represented in the Himalaya by *L. wittmeri* and *L. kosiense*, and characterised as follows: body small or of moderate size; coloration more or less uniformly blackish, elytral spots absent; elytra and hind wings reduced or dimorphic; eyes mostly of reduced size; sternite VII moderately transverse, relatively weakly modified, without distinctly modified setae; sternite VIII with small posterior excision, on either side of this excision with tuft of black setae; aedeagus symmetric and with more or less blade-shaped ventral process. The Chinese representatives of this



Figs 90–101. *Lobrathium wittmeri* (**90–95**) and *L. alticola* (holotype of *L. pirpanjalense*) (**96–101**). **90–91, 97:** forebody (**91**: macropterous female); **92, 98:** male sternite VII; **93, 99:** male sternite VIII; **94–95, 100–101:** aedeagus in lateral and in ventral view; **96:** habitus. Scale bars: 90–91, 96–97: 1.0 mm; 92–95, 98–101: 0.5 mm.

group are *L. cholaicum*, *L. daxuense*, *L. domenoides*, *L. bimembre*, *L. lamellatum*, and *L. duplex*.

Distribution and natural history. The known distribution of *L. wittmeri* is confined to central Nepal (Fig. 41), where it was found at altitudes of 2100–3100 m. However, since the species is wing-dimorphic it may be widespread in the Himalaya. The specimens from Baglung were scraped from crevices in a vertical loamy wall (Kleeberg, pers. comm.).

***Lobrathium alticola* (Cameron, 1921)** (Figs 66, 96–101)
Lathrobium (*Lobrathium*) *alticola* Cameron, 1943: 36.
Lobrathium pirpanjalensis [sic] Coiffait, 1982a: 87 f.; **syn. n.**

Type material examined. *L. alticola*: Holotype ♀: "Kashmir, Gulmarg, vi–vii–31, Dr. Cameron / L. alticola Cam. Type / Type / M.Cameron. Bequest. B.M. 1955–147. / Holotypus ♀ Lathrobium alticola Cameron, rev. V. Assing 2011 / Lobrathium alticola (Cameron), det. V. Assing 2011" (BMNH).

L. pirpanjalense: Holotype ♂: "India: Kashmir: Tangmarg, Pir Panjal Gebirge, 2600 m, 21.–25.V.1976, Martens & Schawaller leg. / Type / Holotypus / Lobrathium pirpanjalensis H. Coiffait 1979 / Senckenberg-Museum Frankfurt/Main / Lobrathium alticola (Cameron), det. V. Assing 2012" (SF).

Comment. The original description of *L. alticola* is based on a unique female holotype from "Kashmir: Gulmarg, altitude 8000–10,000 feet" (Cameron 1943).

Lobrathium pirpanjalense was described from a single male holotype collected in "Inde, Cachemire, Tangmarg, Pir Panjal Gebirge" (Coiffait 1982a) without any reference to *L. alticola*, although the type localities of both names are separated by a distance of less than 10 km. A comparison with the holotype of *L. alticola* yielded no differences whatsoever suggesting that *L. pirpanjalense* should represent a distinct species. Hence the synonymy proposed above.

Redescription. Body length 5.1–5.8 mm; length of forebody 2.9 mm. Habitus as in Fig. 96. Coloration: body blackish; legs, except for the paler tarsi and antennae brown to dark-brown; maxillary palpi dark-yellowish.

Head (Fig. 97) approximately 1.05 times as long as broad; posterior angles abruptly rounded, almost marked; punctation dense and coarse, median dorsal portion somewhat less densely punctate; interstices without microsculpture. Eyes small, approximately 1/4 the length of postocular region in dorsal view.

Pronotum (Fig. 97) approximately 1.2 times as long as broad and 0.92–0.94 times as wide as head, lateral margins weakly convex in dorsal view; punctation slightly less coarse and somewhat less dense than that of head.

Elytra short, 0.75 times as long as, and only slightly wider than pronotum, humeral angles weakly marked (Fig. 97); punctation moderately coarse and dense, not arranged in series; interstices without microsculpture. Hind wings reduced.

Abdomen slightly broader than elytra; punctation distinct, moderately coarse, and moderately dense; posterior margin of tergite VII without palisade fringe.

♂: posterior margin of tergite VIII convexly produced in the middle; sternite VI with shallow median impression posteriorly; sternite VII strongly transverse, with pronounced median impression posteriorly, this impression without pubescence, except for two isolated posterior setae, but margined by dense black setae, anteriorly with short process (Fig. 98); sternite VIII moderately transverse, with pronounced median impression posteriorly, this impression with moderately modified setae, posterior excision moderately deep and moderately broad (Fig. 99); aedeagus 0.85 mm long, with dorsally angled (lateral view) and apically acute ventral process (Figs 100–101).

♀: posterior margin of tergite VIII produced, obtusely angled in the middle.

Distribution and natural history. This species is currently known only from Kashmir (Fig. 66). The specimens were collected at altitudes of 2600 and approximately 3000 m.

Lobrathium kosiense sp. n. (Figs 89, 102–107)

Type material. Holotype ♂ [slightly teneral]: "E. Nepal: Kosi, Val. Induwa Kola [sic], 2850 m, 15.IV.84, Löbl – Smetana / Holotypus ♂ *Lobrathium kosiense* sp. n., det. V. Assing 2011" (MHNG).

Etymology. The specific epithet (adjective) is derived from the name of the region where the type locality is situated.

Description. Body length 7.2 mm; length of forebody 3.5 mm. Habitus as in Fig. 102. Coloration (note that the holotype is slightly teneral; the coloration of mature specimens may be darker): head, pronotum, and abdomen blackish-brown; elytra dark-brown; legs reddish-brown with paler tarsi; antennae dark-brown.

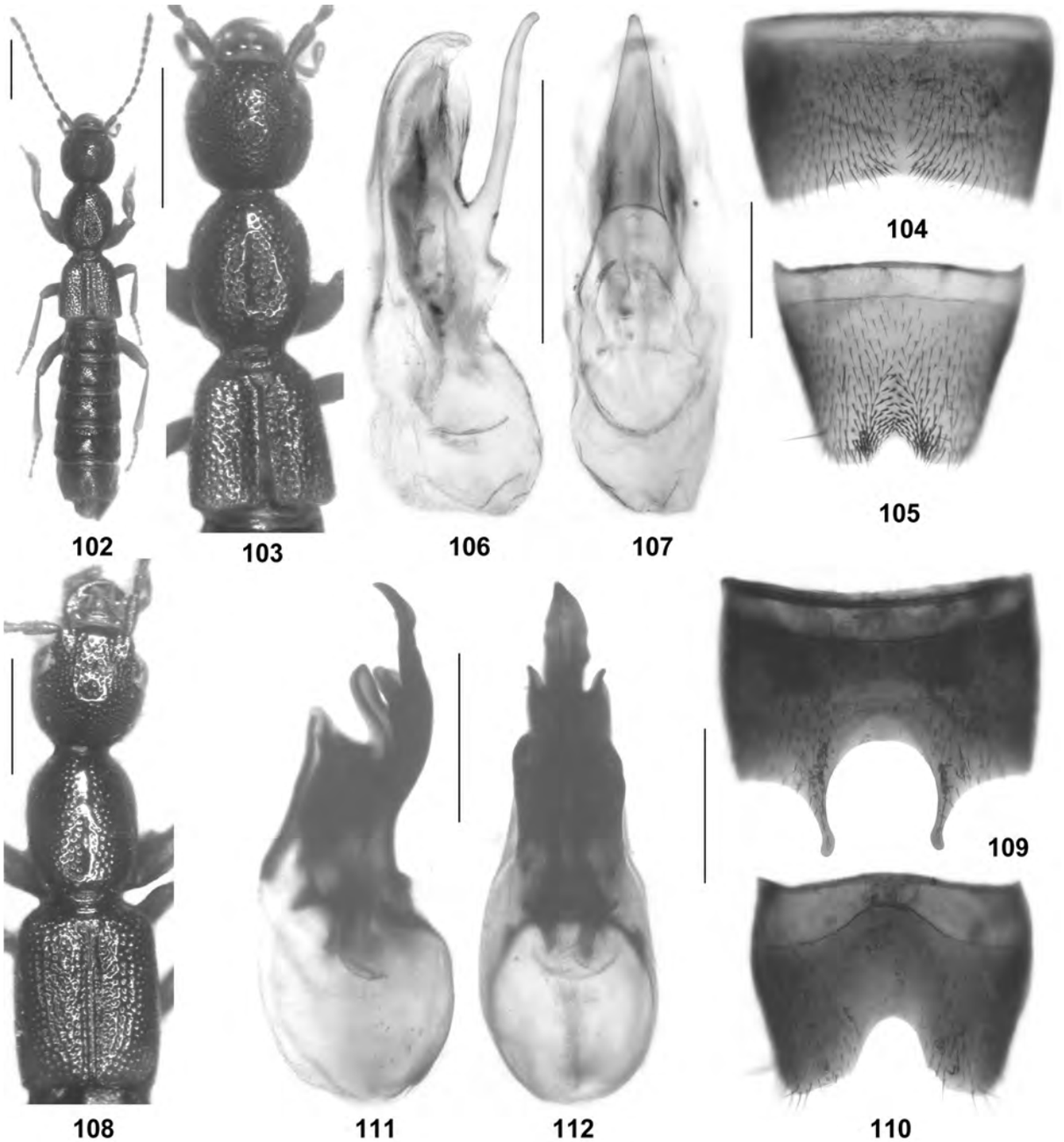
Head (Fig. 103) almost as broad as long; lateral margins behind eyes convexly rounded towards neck in dorsal view, posterior angles not marked; punctation coarse and very dense, interstices reduced to narrow ridges; small patches on median dorsal surface and on frons with sparse punctation or impunctate. Eyes large, more than half as long a distance from posterior margin of eye to neck in dorsal view. Antenna moderately slender, approximately 2.3 mm long.

Pronotum (Fig. 103) approximately 1.25 times as long as broad and nearly as wide as head, convexly tapering posteriad in posterior half; punctation dense and coarse; interstices without microsculpture and glossy, distinctly narrower than diameter of punctures.

Elytra (Fig. 103) short, 0.77 times as long as pronotum; humeral angles weakly marked; punctation very coarse and dense. Hind wings completely reduced.

Abdomen broader than elytra; punctation dense and not particularly fine on tergites III–VI, somewhat finer and less dense on tergite VII; interstices with distinct microsculpture; posterior margin of tergite VII without palisade fringe.

♂: posterior margin of tergite VIII indistinctly angled in the middle; sternite VII strongly transverse and with relatively shallow median impression of triangular shape posteriorly, this impression with weakly modified black setae (Fig. 104); sternite VIII moderately transverse, with pronounced median impression posteriorly, this impres-



Figs 102–112. *Lobrathium kosiense* (**102–107**), *L. triste* (syntype of *L. kashmiricum*) (**108**), and *L. biaculeatum* (**109–112**). **102:** habitus; **103, 108:** forebody; **104, 109:** male sternite VII; **105, 110:** male sternite VIII; **106–107, 111–112:** aedeagus in lateral and in ventral view. Scale bars: 102–103, 108: 1.0 mm; 104–107, 109–112: 0.5 mm.

sion with numerous distinctly modified, short and black setae, posterior excision relatively small and convex anteriorly, on either side of this excision with cluster of dense black setae (Fig. 105); aedeagus approximately 0.95 mm long, with relatively simple, blade-shaped ventral process (Figs 106–107).

Comparative notes. Based on the modifications of the male sternites VII and VIII, as well as on the similar morphology of the aedeagus, *L. kosiense* appears to be closely related to *L. wittmeri*, from which it is distinguished particularly by slightly smaller size, paler coloration of the legs, distinctly coarser punctation of the head and prono-

tum, slightly larger eyes, a male sternite VIII with a narrower posterior excision and more numerous modified setae, and by the smaller aedeagus with a ventral process of different shape. For additional remarks on species group affiliations see the comparative notes in the section on *L. wittmeri*.

Distribution and natural history. The type locality is situated in the Induwa Khola, to the east of Num, Kosi, eastern Nepal (Fig. 89). The slightly teneral holotype was collected at an altitude of 2850 m.

***Lobrathium biaculeatum* sp. n.** (Figs 66, 109–112)

Type material. Holotype ♂: "Nepal Khandbari Distr. Pass NE Mangmaya 2300 m 6.IV.84, Smetana & Löbl / Holotypus ♂ *Lobrathium biaculeatum* sp. n., det. V. Assing 2012" (cAss). Paratypes: 1♀: "Nepal, Khandbari District / above Sheduva, 3000 m, 31.III.–1.IV.1982, A. & Z. Smetana" (cSme); 1♀: "Nepal, Khandbari District / For. above Ahale [=Ahali], 2400 m, 25.III.82, A. & Z. Smetana" (cSme).

Etymology. The specific epithet (Latin, adjective) refers to the two needle-shaped processes of the male sternite VII, a unique character separating this species from all its congeners.

Description. Body length 6.6–8.2 mm; length of forebody 3.6–3.9 mm. Coloration: head, pronotum, and abdomen blackish; elytra uniformly blackish or with indistinctly paler posterior margins; legs yellowish, with the profemora, at least the basal portion of the protibiae, the apices of the meso- and metafemora, and sometimes the bases of the meso- and metatibiae infuscate; antennae reddish to brown.

Head weakly oblong or approximately as broad as long; posterior angles weakly marked; punctation coarse and dense, more or less distinctly sparser in median dorsal portion. Eyes large and distinctly convex, at least slightly more than half as long as distance from posterior margin of eye to neck in dorsal view. Antenna moderately slender, approximately 1.9–2.0 mm long.

Pronotum 1.20–1.25 times as long as broad and approximately as wide as head, weakly tapering posteriad, lateral margins weakly convex; punctation similar to that of head.

Elytra moderately short, approximately 0.9 times as long as pronotum; humeral angles marked; punctation coarse and arranged in oblique, more or less regular series. Hind wings present, but possibly of reduced length.

Abdomen slightly broader than elytra; punctation dense and relatively coarse in anterior half of tergite III, gradually becoming finer and sparser towards the abdominal apex; microsculpture shallow and transverse, sometimes practically obsolete on anterior tergites; posterior margin of tergite VII with palisade fringe; posterior margin of tergite VIII indistinctly angled in the middle.

♂: sternite VII highly distinctive, strongly transverse, posterior margin with broad and deep, semi-circular posterior excision, on either side of this incision with long process (Fig. 109); sternite VIII with extensive median impression without pubescence and with rather deep posterior excision (Fig. 110); aedeagus 1.55 mm long, ventral process of highly distinctive shape, somewhat asymmetric in ventral view (Figs 111–112).

♀: tergite X without evident modifications.

Comparative notes. *Lobrathium biaculaeatum* is readily identified based on the conspicuous morphology of the male sternite VII and of the aedeagus. It is additionally distinguished from *L. wittmeri* by the much coarser punctation of the forebody, the larger and more bulging eyes, the seriate punctation of the elytra, the paler legs, and the shape of the elytra (*L. wittmeri*: shorter and with less pronounced humeral angles in the micropterous morph, longer in the macropterous morph).

Distribution and natural history. The type specimens were collected in three localities in Khandbari district, eastern Nepal (Fig. 66), at altitudes of 2300–3000 m. Since the two paratypes are females, the possibility that they in fact refer to different species cannot be ruled out with absolute certainty, but no convincing evidence was found that they should not be conspecific with the holotype.

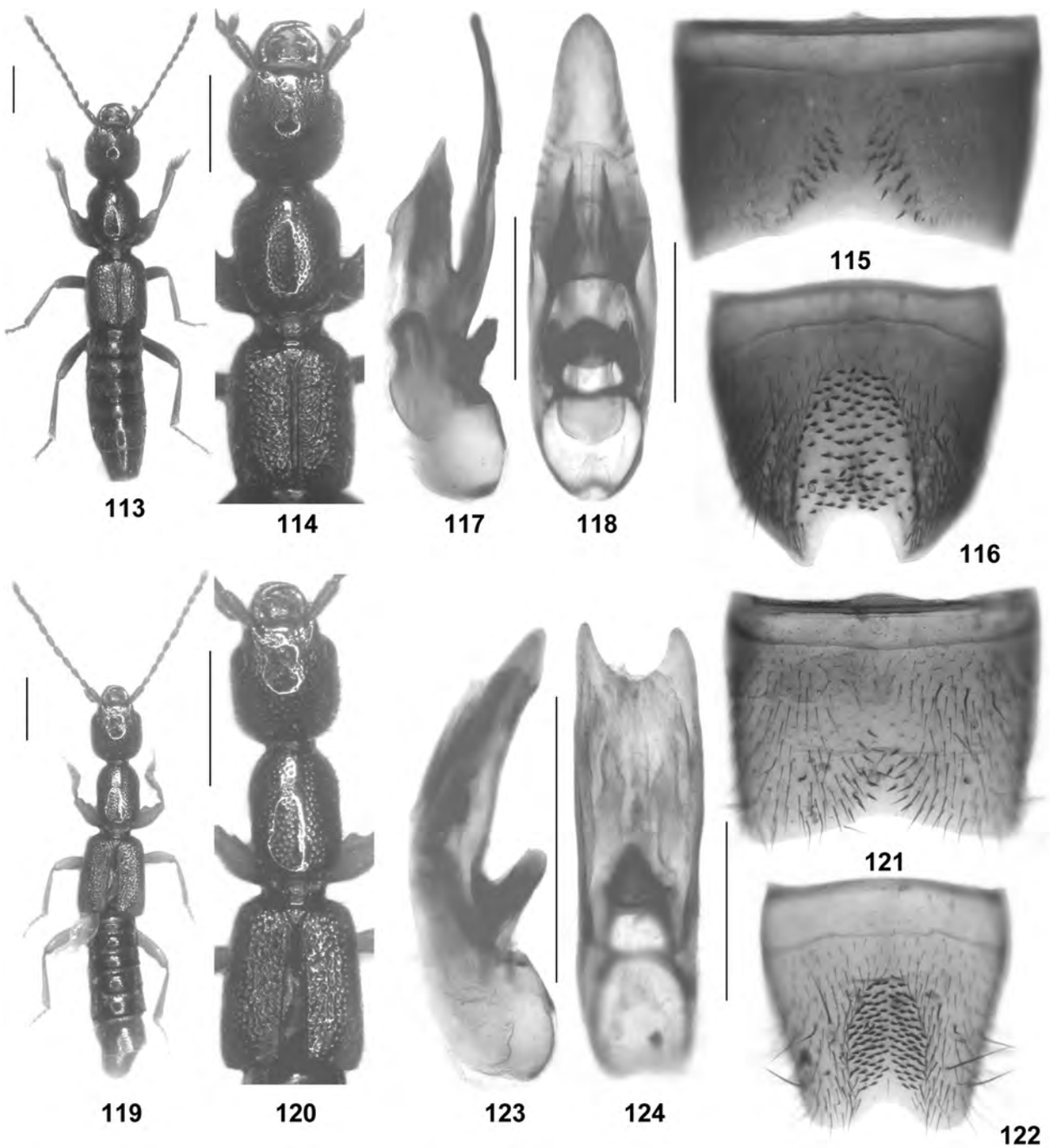
***Lobrathium bicarinatum* sp. n.** (Figs 89, 113–118)

Type material. Holotype ♂: "India: Uttaranchal state, ca. 30 km N of Bageshwar, Khati vill. env., 2100–2300 m, 27.–30.VI.2003, Z. Kejval & M. Trýzna / Holotypus ♂ *Lobrathium bicarinatum* sp. n., det. V. Assing 2011" (cAss). Paratypes: 3♂♂, 2♀♀: same data as holotype (cSch, cAss); 1♀: "Sikles-Mts., upp. Khilang & Chipli, 1.8.95, 23–2500 m / Nepal Annapurna Mts., leg. Fabrizi, Jäger, Schmidt" (SDEI).

Etymology. The specific epithet (Latin, adjective: with two carinae) refers to the shape of the male sternite VIII.

Description. Body length 7.0–8.7 mm; length of forebody 4.2–4.8 mm. Habitus as in Fig. 113. Coloration: whole body blackish, except for the dark-reddish tarsi and the reddish-yellow posterior margin of tergite VII.

Head (Fig. 114) approximately as long as broad; posterior angles broadly rounded; punctation very dense, with the interstices reduced to narrow ridges, and moderately coarse, median dorsal portion and frons sparsely punctate



Figs 113–124. *Lobrathium bicarinatum* (**113–118**) and *L. cylindricolle*, lectotype (**119–124**). **113, 119:** habitus; **114, 120:** forebody; **115, 121:** male sternite VII; **116, 122:** male sternite VIII; **117–118, 123–124:** aedeagus in lateral and in ventral view. Scale bars: 113–114, 119–120: 1.0 mm; 115–118, 121–124: 0.5 mm.

or impunctate; interstices without microsculpture. Eyes moderately large, approximately half as long as distance from posterior margin of eye to neck, or slightly shorter. Antenna 2.5–2.9 mm long.

Pronotum (Fig. 114) approximately 1.15 times as long as broad and slightly narrower than head, lateral margins distinctly converging posteriad in dorsal view; punctation distinctly sparser than that of head.

Elytra (Fig. 114) approximately 0.95 times as long as, and distinctly broader than pronotum; humeral angles moderately marked; punctation coarse, dense, and not arranged in series; interstices without microsculpture and glossy. Length of hind wings not examined.

Abdomen narrower than elytra; punctation very fine and moderately dense; posterior margin of tergite VII with palisade fringe; tergite VIII without sexual dimorphism, posterior margin weakly convex, almost truncate, in both sexes.

♂: sternite VI with shallow median impression posteriorly; sternite VII with rather deep median impression posteriorly, this impression with pair of clusters of modified, short and stout black setae, posterior margin broadly concave (Fig. 115); sternite VIII weakly transverse, with extensive and deep median impression, this impression with numerous modified, short and stout black setae, and on either side delimited by pronounced carinae, posterior excision of trapezoid shape (Fig. 116); aedeagus 1.5–1.6 mm long, with strongly sclerotized blade-shaped ventral process (Figs 117–118).

Comparative notes. This species is characterised particularly by the conspicuous shape and chaetotaxy of the male sternite VIII, as well as by the morphology of the aedeagus. It is readily distinguished from some other Himalayan representatives of the genus with a uniformly blackish body (e.g., *L. wittmeri, L. alticola*) by much larger size and broader body alone.

Distribution and natural history. The type locality is situated to the north of Bageshwar in Uttaranchal, North India (Fig. 89), at an altitude of 2100–2300 m. A female paratype was collected in the Annapurna range, central Nepal, at an altitude of 2300–2500 m.

***Lobrathium cylindricolle* (Cameron, 1924)** (Figs 66, 119–124)

Lathrobium (*Lobrathium*) *cylindricolle* Cameron, 1924: 194 f.

Type material examined. Lectotype ♂, present designation: "Nun Nadi, Dehra Dun. / Dr. Cameron. 15.10.22. / Lathrobium cylindricolle Cam. / Type H.T. / M.Cameron. Bequest. B.M. 1955–147. / Lectotypus ♂ *Lathrobium cylindricolle* Cameron, desig. V. Assing 2011 / Lobrathium (?) cylindricolle (Cameron), det. V. Assing 2011" (BMNH).

Comment. The original description of *L. cylindricolle* is based on an unspecified number of syntypes, among them at least one male, from "Dehra Dun District; Nun Nadi"(Cameron 1924). A male syntype was located in the Cameron collection at the BMNH; it is designated as the lectotype. An examination of this specimen revealed that the generic assignment of *L. cylindricolle* is somewhat doubtful. The elytra lack the submarginal carina usually found in the genus and the pronotum is narrower and more oblong than is usually the case in the genus. In general, the facies somewhat resembles that of *Pseudobium* Mulsant & Rey, 1878, but the male primary and secondary sexual characters resemble those of *Lobrathium*. Until the generic affiliations of *L. cylindricolle* are clarified, the species is tentatively retained in *Lobrathium*.

Redescription. Body length 6.5 mm; length of forebody 3.7 mm. Habitus as in Fig. 119. Coloration: head and elytra reddish; pronotum dark-reddish; abdomen reddish-brown, except for the reddish apex (segments VII–X); legs reddish-yellow; antennae reddish. (Note that, according to the original description, the pronotum and the abdomen, except for the red apex, are black.)

Head (Fig. 120) distinctly oblong, 1.13 times as long as broad; posterior angles moderately marked; punctation dense and coarse, median dorsal portion more sparsely punctate; interstices without microsculpture. Eyes large, slightly more than half the length of postocular region in dorsal view. Antenna long and slender, 2.5 mm long.

Pronotum (Fig. 120) long and slender, 1.47 times as long as broad and approximately 0.8 times as wide as head, subparallel, lateral margins straight in dorsal view; punctation similar to that of head.

Elytra (Fig. 120) long, approximately 1.05 times as long as, and distinctly broader than pronotum; humeral angles marked; punctation coarse and dense, not arranged in series; interstices without microsculpture. Hind wings fully developed.

Abdomen narrower than elytra; punctation fine and moderately dense; microsculpture almost obsolete on tergites III–VI and distinct on tergites VII–VIII; posterior margin of tergite VII with palisade fringe.

♂: sternite VII weakly impressed and with weakly modified pubescence in the middle, posterior margin broadly concave (Fig. 121); sternite VIII with distinct and broad median impression, this impression with numerous modified, short and stout black setae, posterior excision broadly concave and not very deep (Fig. 122); aedeagus 0.8 mm long, ventral process bifid apically (Figs 123–124).

Distribution. This species is currently known only from the type locality in Uttaranchal, northern India (Fig. 66).

***Lobrathium* sp. n. 1**

Material examined. 1♀: "E. Nepal: Kosi, Val. Induwa Kola, 2000 m, 2.IV.84, Löbl – Smetana" (MHNG).

This undescribed species is characterised by large body size (body length: 10 mm; length of forebody: 4.6 mm), uniformly blackish body with reddish legs and antennae (except for the infuscate profemora), short elytra (0.7 times as long as pronotum), and completely reduced hind wings.

Lobrathium sp. n. 2

Material examined. 1♀: "377 Taplejung Dist., upper Tamur Valley, below Walungchung Gola, mixed forest, open river bank, 2400–2700 m, 20 May 1988, J. Martens & W. Schawaller leg." (SMNS).

This undescribed species is characterised by small body size (body length: 5.7 mm; length of forebody: 3.0 mm), uniformly blackish body, short elytra, and reduced hind wings. In general appearance it is most similar to *L. alticola*.

Lobrathium sp. n. 3

Material examined. 1♀: "Nepal, Khandbari District / "Bakan" W of Tashigaon, 3200 m, 5.IV.1982, A. & Z. Smetana" (cSme).

This unnamed species is characterised by rather large body size (body length: 9.3 mm; length of forebody: 5.5 mm), uniformly blackish brown coloration, and a strongly convex female tergite X with a spine-like posterior extension. As can be inferred from the morphology of tergite X, this species is not conspecific with *L. biaculeatum*.

Lobrathium sp. n. 4

Material examined. 1♀: "Nepal Khandbari Distr. Induwa Khola Valley 2000 m, 17.IV.84 Smetana & Löbl" (cSme).

This species is similar to the preceding species, but slightly smaller (body length: 8.5 mm; length of forebody: 4.9 mm), and the female tergite X lacks the posterior spine-like extension. The legs are completely blackish-brown with pale tarsi.

THE *LOBRATHIUM* SPECIES OF MAINLAND CHINA

Key to species

The following key does not account for *L. emeiense*, whose description is based on a single female holotype from the Emei Shan in Sichuan. For a key to the *Lobrathium* species of Taiwan see Assing (2010).

1. Elytra with posterior portion partly or completely yellowish or reddish, mostly with yellowish spots, and often with bluish to purple hue ……2
– Elytra uniformly dark-brown to blackish ……...16
2. Elytra with more extensive yellowish coloration posteriorly, at least posterior two fifths completely yellowish (Figs 187–188, 194–195) ……...3
– Elytra less extensively yellowish or reddish posteriorly, usually with more or less defined spots often leaving the lateral and/or posterior margins blackish ……...4
3. ♂: posterior excision of sternite VIII smaller and less deep (Fig. 197); aedeagus 1.1 mm long, with ventral process apically spattle-shaped (Figs 198–199). Shaanxi: Qinling Shan ……***schuelkei*** sp. n.
– ♂: posterior excision of sternite VIII slightly larger and somewhat deeper (Fig. 190); aedeagus larger, 1.2–1.3 mm long, ventral process apically with two long processes (Figs 191–192). Hubei, Beijing (Fig. 193) ……***taureum*** sp. n.
4. Large species; length of forebody at least 4.9 mm. Pronotum broad, 1.10–1.20 times as long as broad (Figs 201, 224). Elytra 0.90–0.95 times as long as pronotum and without bluish hue. ♂: sternite VIII with distinctly modified, short and stout black setae; sternite VIII with conspicuously deep posterior excision, its depth at least approximately half the length of sternite; ventral process of aedeagus ventrally with rasp-like structures ……...5
– Smaller species; length of forebody 4.6 mm at most. Pronotum more slender, 1.20–1.35 times as long as broad, only in one species broader (*L. radens*). Elytra often longer than pronotum and often with bluish or purple hue. ♂: sternite VII in most species without strongly modified setae; sternite VIII with less deep posterior excision, except in *L. bispinosum* and *L. tuberosum* ……6
5. Pronotum slightly broader, 1.10–1.15 times as long as broad (Fig. 224). ♂: sternite VII as in Fig. 225; posterior excision of sternite VIII extremely deep, reaching well beyond middle of sternite (Fig. 226); aedeagus 1.6 mm long, ventral process with two rasp-like projections and stoutly blade-shaped (Figs 227–228). Northern Yunnan: Diancang Shan (Fig. 180) ……***excisissimum*** sp. n.
– Pronotum slightly less broad, 1.15–1.20 times as long as broad (Fig. 201). ♂: sternite VII as in Fig. 202; posterior excision of sternite VIII less deep, approximately reaching middle of sternite (Fig. 203); aedeagus 1.5 mm long, ventral process with more numerous rasp-like projections, somewhat more slender and apically more acute in ventral view (Figs 204–205). Eastern Guizhou: Leigong Shan (Fig. 153) ……***radens*** sp. n.
6. Elytral spots situated in anterior portion of posterior half of elytra (i.e., at some distance from posterior margin (Fig. 218). Dorsal surface of head uneven, with median and lateral impressions. Punctation of head and pronotum extremely dense (Fig. 218). Relatively large species; length of forebody 4.4–4.6 mm. Antennae slender (Fig. 219). ♂: sternite VII moderately transverse (Fig. 220); sternite VIII as in Fig. 221; aedeagus 1.35 mm long, ventral process apically bifid (Figs 222–223). Western Hubei: Daba Shan. ……***ablectum*** sp. n.
– Elytral spots situated at or near posterior margin of elytra. Dorsal surface of head without distinct impressions. Punctation of head and pronotum less dense. Smaller species, length of forebody usually 4.0 mm at most, except for *L. spathulatum* (3.7–4.5 mm).

Male sexual characters different. A reliable identification of the following species is possible only based on the male sexual characters ……7

7. Elytra black, without bluish or purple hue, 0.9–1.0 times as long as pronotum ……8
– Elytra usually with, rarely without bluish or purple hue, 1.0–1.15 times as long as pronotum ……..12
8. ♂: sternite VIII with small posterior excision in asymmetric position, posterior margin with tooth-like projection on either side of the excision (Fig. 136–137); aedeagus approximately 1.5 mm long, ventral process very long, slender, and apically asymmetric (Figs 138–139). Widespread: Sichuan, Shaanxi, Hubei (Fig. 140) ……***tortile*** Zheng
– ♂: sternite VIII with deep posterior excision in symmetric position; aedeagus of different morphology 9
9. ♂: aedeagus 0.9–1.0 mm long, ventral process long, slender, apically acute, and very thin at base (Fig. 152); sternite VIII with very broad and deep posterior excision, on either side of excision with dense pubescence (Fig. 151); sternite VII as in Fig. 150. Central Sichuan: Qingcheng Shan (Fig. 153 ……***gladiatum*** Zheng
– Male sexual characters different ……10
10. ♂: sternite VII anteriorly with tubercle (Figs 182, 184); sternite VIII oblong and with U-shaped posterior excision (Fig. 183); aedeagus 1.2 mm long and with massive ventral process (Figs 185–186). Jiangxi (Fig. 141) ……***tuberosum*** sp. n.
– ♂: sternite VII without tubercle; posterior excision of sternite VIII of different shape; aedeagus longer, at least approximately 1.4 mm long ……11
11. ♂: sternite VII with shallow posterior excision with pubescence (Fig. 272); sternite VIII with moderately deep posterior excision and of characteristic chaetotaxy (Fig. 273); aedeagus 1.4 mm long and with ventral process of distinctive shape (Figs 274–275). Northeastern Hubei (Fig. 180) ……...***demptum*** sp. n.
– ♂: sternite VII with more pronounced posterior impression without pubescence (Fig. 176); posterior excision of sternite VIII much deeper, broader, and of subtrapezoid shape (Fig. 177); aedeagus longer, 1.5 mm long, ventral process with two tooth-like projections ventrally (Figs 178–179). Southeastern Guizhou (Fig. 141) ……...***bispinosum*** sp. n.
12. Elytra with weak purple hue; posterior spots relatively small, defined, and of circular shape. Pronotum less oblong, approximately 1.2 times as long as broad (Figs 206–207). ♂: sternite VII moderately transverse and with moderately modified setae (Fig. 208); sternite VIII not transverse and with moderately deep posterior excision (Fig. 209); aedeagus 1.0 mm long, ventral process with dorsal carina and apically acute (Figs 210–211). Northern Yunnan (Fig. 153) ……..***retrocarinatum*** sp. n.
– Elytra usually with bluish hue; posterior spots usually larger and/or of different shape or less defined. Pronotum more oblong, at least approximately 1.25 times as long as broad. ♂: sternite VII either with strongly modified short and stout black setae or without modified setae at all; sternite VIII and aedeagus of different shape ……...13
13. ♂: sternite VII with distinctly modified short and stout black setae (Fig. 144); sternite VIII with deep U-shaped posterior excision (Fig. 145); aedeagus approximately 1.2 mm long, ventral process of distinctive morphology (Figs 146–147). Sichuan, Shaanxi, Hubei (Fig. 153) ……***hebeatum*** Zheng
– ♂: sternite VII without distinctly modified setae; sternite VIII with less deep and differently shaped posterior excision; aedeagus of different morphology 14
14. ♂: posterior excision of sternite VII small (Fig. 128); aedeagus approximately 1.0 mm long and shaped as in Figs 129–132. Widespread and common species: China, Taiwan, southern Japan (Fig. 140) ……***hongkongense*** (Bernhauer)
– ♂: posterior excision of sternite VII larger and of broadly triangular shape; aedeagus of different shape. Species with more restricted distributions ……15
15. ♂: aedeagus of somewhat variable shape and size, 1.3–1.5 mm long, ventral process very slender, apically acute, and weakly asymmetric (Figs 160–165); sternites VII and VIII as in Figs 156–159. Widespread in China: Shaanxi, Sichuan, Hubei, Yunnan (Fig. 153)……...***configens*** sp. n.
– ♂: aedeagus longer, 1.6–1.8 mm long, ventral process distinctly asymmetric and apically distinctly dilated (ventral view) (Figs 170–173); sternites VII and VIII as in Figs 168–169. Widespread in China: Sichuan, Shaanxi, Shanxi, Hubei, Zhejiang (Fig. 180) ……..***spathulatum*** sp. n.
16. Largest representative of the genus in China; length of forebody approximately 6.0 mm; length of antennae approximately 4.0 mm. Head distinctly oblong, of ovoid shape, and with conspicuously dense and fine punctation (Figs 229–230). Zhejiang: Tianmushan ……..***rotundiceps*** (Koch)
– Distinctly smaller species; length of forebody less than 5.0 mm; length of antennae 3.3 mm at most. Head of different shape and with coarser punctation ……17
17. Posterior margin of abdominal tergite VII without palisade fringe. Eyes small, distinctly less than half the length of distance from posterior margin of eye to neck in dorsal view ……18
– Posterior margin of abdominal tergite VII at least with narrow rudiment of a palisade fringe. Eyes often larger ……...19
18. Slightly smaller species; length of forebody 3.4–3.6 mm. Eyes larger, their length more than one third of

the distance from posterior margin of eye to neck in dorsal view (Fig. 232). Punctation of head less dense and somewhat sparser on vertex (Fig. 232). ♂: sternite VII without modified spines (Fig. 238); sternite VIII as in Fig. 239; aedeagus 0.9 mm long, shaped as in Figs 240–241. Southeastern Tibet (Fig. 141) ……..***cholaicum*** sp. n.

– Slightly larger species; length of forebody 3.8 mm. Eyes smaller, their length little more than one fourth of the distance from posterior margin of eye to neck in dorsal view (Fig. 266). Punctation of head (except frons) conspicuously dense; dorsal surface matt (Fig. 266). ♂: sternite VII with few modified, short and stout black setae in median impression (Fig. 267); sternite VIII of different chaetotaxy (Fig. 268); aedeagus 1.0 mm long, ventral process slightly asymmetric (ventral view), and more slender both in ventral and in lateral view (Figs 269–270). Southwestern Sichuan (Fig. 180) ……***lamellatum*** sp. n.

19. Larger species; length of forebody 4.1–4.8 mm; length of antennae 3.0–3.3 mm ……20

– Smaller species; length of forebody 3.3–4.1 mm; length of antennae 1.9–2.2 mm ……...21

20. Forebody dark-brown. Elytra monomorphic. ♂: sternites VII and VIII as in Figs 214–215; aedeagus 1.8 mm long, ventral process long and slender (Figs 216–217). Northeastern Sichuan (Fig. 193) ……..***feldmanni*** sp. n.

– Forebody black. Wing-dimorphic species (Figs 254–255). ♂: sternites VII and VIII as in Figs 256–257; aedeagus much smaller, 1.1 mm long, ventral process very slender and apically curved in lateral view (Figs 258–259). Yunnan, Sichuan (Fig. 193) ……***duplex*** sp. n.

21. Eyes very small, one third as long as distance from posterior margin of eyes to neck (Fig. 261). Elytra short, 0.7 times as long as pronotum (Fig. 261). ♂: sternite VII as in Fig. 262; posterior excision of sternite VIII with semi-transparent margins (Fig. 263); aedeagus small, 0.75 mm long, ventral process broad in ventral view (Figs 264–265). Southern Sichuan (Fig. 141) ……...***domenoides*** sp. n.

– Eyes at least slightly larger, at least half as long as distance from posterior margin of eyes to neck, or nearly so. Elytra longer, at least approximately 0.80 times as long as pronotum. Male sexual characters different; posterior excision of sternite VIII with fully sclerotised margins ……...22

22. Wing-dimorphic species (Figs 243–244). ♂: aedeagus approximately 1.0 mm long, ventral process slender in ventral view (Figs 247–252); sternites VII and VIII as in Figs 245–246. Yunnan (Fig. 141) ……...***bimembre*** sp. n.

– Micropterous species (Fig. 237). ♂: ventral process of aedeagus broader in ventral view (Figs 240–241); sternites VII and VIII as in Figs 238–239. Sichuan: Daxue Shan (Fig. 180) ……...***daxuense*** sp. n.

***Lobrathium hongkongense* (Bernhauer, 1931)** (Figs 125–132, 140)

Lathrobium (Lobrathium) hongkongense Bernhauer, 1931: 127 f.
Lobrathium sibynium Zheng, 1988: 186 f.; **syn. n.**
Lobrathium ryukyuense Ito, 1996a: 114 ff.; **syn. n.**

Type material examined. *L. hongkongense*: Lectotype ♂: present designation: "7 / Hong Kong. J. J. Walker. / hongkongensis [sic] Bernh. Cotypus / Chicago NHMus, M.Bernhauer Collection / Lectotypus ♂ *Lathrobium hongkongense* Bernhauer, desig. V. Assing 2012 / Lobrathium hongkongense (Bernhauer), det. V. Assing 2012 (FMNH). Paralectotypes: 1♂ [dissected prior to present study; somewhat damaged]: "Hong Kong. Walker Coll., 93–58. / British Museum / hongkongensis Brh. Type / hongkongensis Bernh. Typus / Chicago NHMus, M.Bernhauer Collection" (FMNH); 1♀: "Hong Kong. Walker Coll., 93–58. / hongkongensis Bernh. Cotypus / Chicago NHMus, M.Bernhauer Collection" (FMNH).

L. ryukyuense: Paratypes: 1♂, 1♀: "Kametsu Tokuno Shima Is., 29.III.1966, T. Ito / Paratype Lobrathium ryukyuense T. Ito. sp. nov. / Lobrathium hongkongense (Bernhauer), det. V. Assing 2012" (cAss).

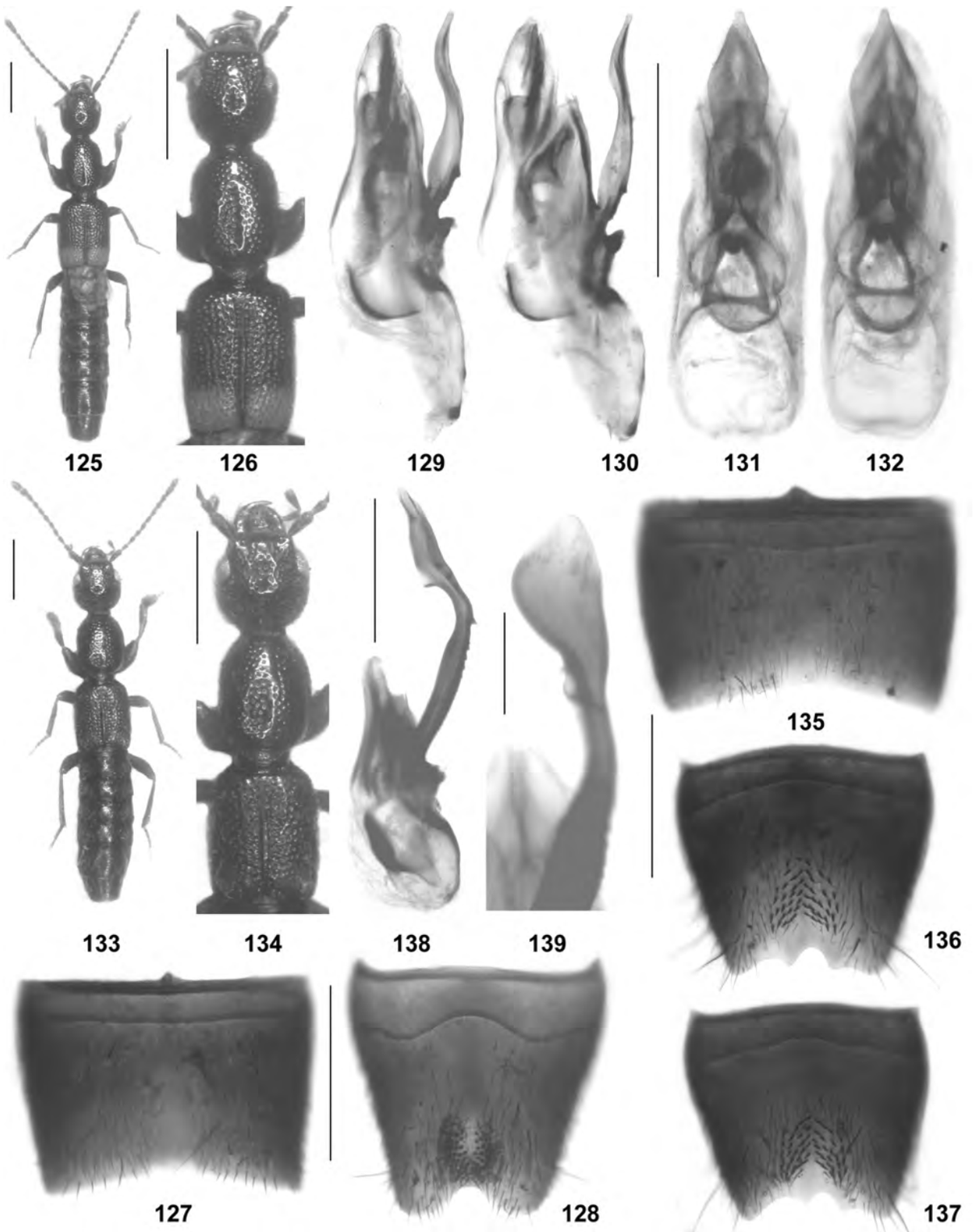
Comment. *Lathrobium hongkongense* was described from an unspecified number of syntypes, among them at least one male, from "Hongkong, gesammelt von J. J. Walker" (Bernhauer 1931). One of the three syntypes in the Bernhauer collection at the FMNH, a male in good condition, is designated as the lectotype. According to the original description, additional syntypes, now paralectotypes, are desposited in the collections of the BMNH.

The original description of *L. sibynium* is based on numerous specimens from Sichuan (Zheng 1988). Type material was not examined, but the descriptive details and the illustrations provided by Zheng (1988), as well as the fact that material of this widespread species was seen also from Sichuan leave little doubt that *L. sibynium* is conspecific with *L. hongkongense*.

Lobrathium ryukyuense was described from various localities in the Ryuku Islands, southern Japan (Ito 1996a). An examination of two paratypes made available to me by Tateo Ito revealed that they are conspecific with the holotype of *L. hongkongense*. Hence the synonymy proposed above.

For illustrations of the sexual characters of males from Taiwan (as *L. sibynium*) see Assing (2010).

Additional material examined. China: Zhejiang: 17 exs. [partly teneral], Gutianshan National Nature Reserve, 13.–18.III.2008, leg. Aßmann (cFel, cAss, cSch). **Jiangsu:** 1♂, 1♀, Zhenjiang ["Chinkiang"] (FMNH, cAss). **Sichuan:** 1♀, 60 km W Cheng-



Figs 125–139. *Lobrathium hongkongense* (**125–132**; **130–131**: lectotype) and *L. tortile* (**133–139**). **125, 133:** habitus; **126, 134:** forebody; **127, 135:** male sternite VII; **128, 136–137:** male sternite VIII; **129–132, 138:** aedeagus in lateral and in ventral view; **139:** apex of ventral process of aedeagus in ventral view. Scale bars: 125–126, 133–134: 1.0 mm; 127–132, 135–138: 0.5 mm; 139: 0.2 mm.

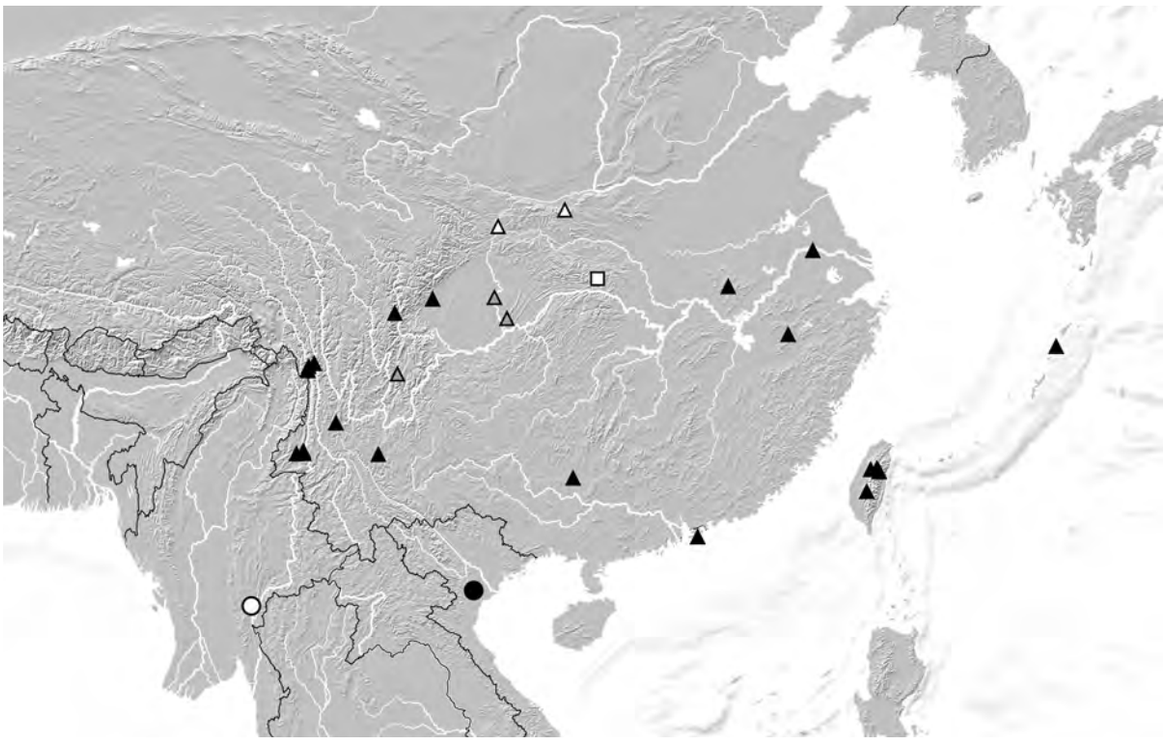


Fig. 140. Distributions of *Lobrathium guttula* (open circle), *L. discrepans* (filled circle), *L. ablectum* (open square), and *L. hongkongense* (triangles), based on revised male-based records (black triangles), revised female-based records (white triangles), and literature records by Zheng (1988) (grey triangles).

du, 1000 m, V.1997, leg. Reuter (cFel); 1♀, Daxue Shan, river valley 5 km E Kangding, 30°03'N, 102°00'E, 2500–2800 m, 20.–23.V.1997, leg. Wrase (cSch). **Yunnan:** 8 exs., 100 km W Kunming, Diaolin Nat. Res., 22.V.–2.VI.1993, leg. Jendek & Sausa (NHMW, cAss); 1♂, Baoshan Pref., Gaoligong Shan, 29 km ESE Tengchong, 24°56'N, 98°45'E, 2350 m, degraded deciduous forest with shrubs, sifted, 1.VI.2007, leg. Wrase (cAss); 1♂, 2♀♀, Baoshan Pref., Gaoligong Shan, 33 km SE Tengchong, 24°51'N, 98°46'E, 2100–2200 m, creek bank in pasture, under gravel and stones, 31.V.2007, leg. Schülke & Wrase (cSch, cAss); 1♂, Nujiang Lisu Aut. Pref., Gongshan Co., Gaoligong Shan, tributary of Salween river, 1 km above Gongshan, 27°46'N, 98°39'E, 1500 m, old flood debris, 20.VI.2005, leg. Schülke (cSch); 2♂♂, 3♀♀ [partly teneral], Nujiang Lisu Aut. Pref., Gongshan Co., 17 km N Gongshan, small creek valley, 27°55'N, 98°40'E, 1525–1600 m, creek bank, 20.VI.2005, leg. Schülke (cAss); 1♂, Baoshan Pref., mountain range 22 km S Tengchong, 24°49'N, 98°29'E, 1750 m, loamy banks of fish ponds, 2.VI.2007, leg. Wrase (cSch); 1♂, Dali Bai Aut. Pref., Diancang Shan, E pass, 44 km NW Dali, 26°02'N, 99°57'E, 2110 m, loamy river bank with gravel and decaying debris, 23.VIII.2009, leg. Wrase (cSch); 1♀, Yanmen, 13.–23.VI.2005, leg. Kučera (cSch). **Guangxi:** 22 exs., 10 km N Liuzhou, 150–200 m, 11.XI.1993, leg. Schillhammer (NHMW, cAss). **Hubei:** 16 exs. [partly teneral], Dabie Shan, Wujianshan Forest Park, 31.1°N, 115.8°E, 17.–18.VI.2003, leg. Turna (NHMW, cAss). **Shaanxi:** 1♀, Lueyang, 23.–26.VI.2004, leg. Kučera (cSch); 1♀, ca. 35 km S Xian, Nan Wutai, 19.IX.1980, leg. Hammond (BMNH).

Redescription. Body length 6.3–7.3 mm; length of forebody 3.4–3.9 mm. Habitus as in Fig. 125. Coloration: head, pronotum, and abdomen black; elytra of very variable coloration, black, mostly with weak bluish hue, posteriorly with pale-reddish to dark-reddish spot of variable size: small, transverse, weakly delimited, and reaching neither posterior margins nor suture in specimens from Taiwan, larger, subcircular, well-delimited, often reaching posterior margin, but not suture and lateral margins in specimens from mainland China; legs blackish, with reddish tibial bases and tarsi; antennae brown with infuscate antennomere I.

Head (Fig. 126) 1.00–1.10 times as long as broad, usually widest across eyes, somewhat narrowed behind eyes; posterior angles broadly rounded; punctation of dorsal surface coarse and moderately dense, in median dorsal portion somewhat sparser (but not impunctate); interstices without microsculpture. Eyes large and prominent, of somewhat variable size, slightly to distinctly more than half as long as distance from posterior margin of eye to neck. Antenna 1.7–2.0 mm long.

Pronotum (Fig. 126) slender, 1.25–1.30 times as long as broad and slightly narrower than head, lateral margins very weakly convex, subparallel or weakly converging posteriad in dorsal view; punctation similar to that of head.

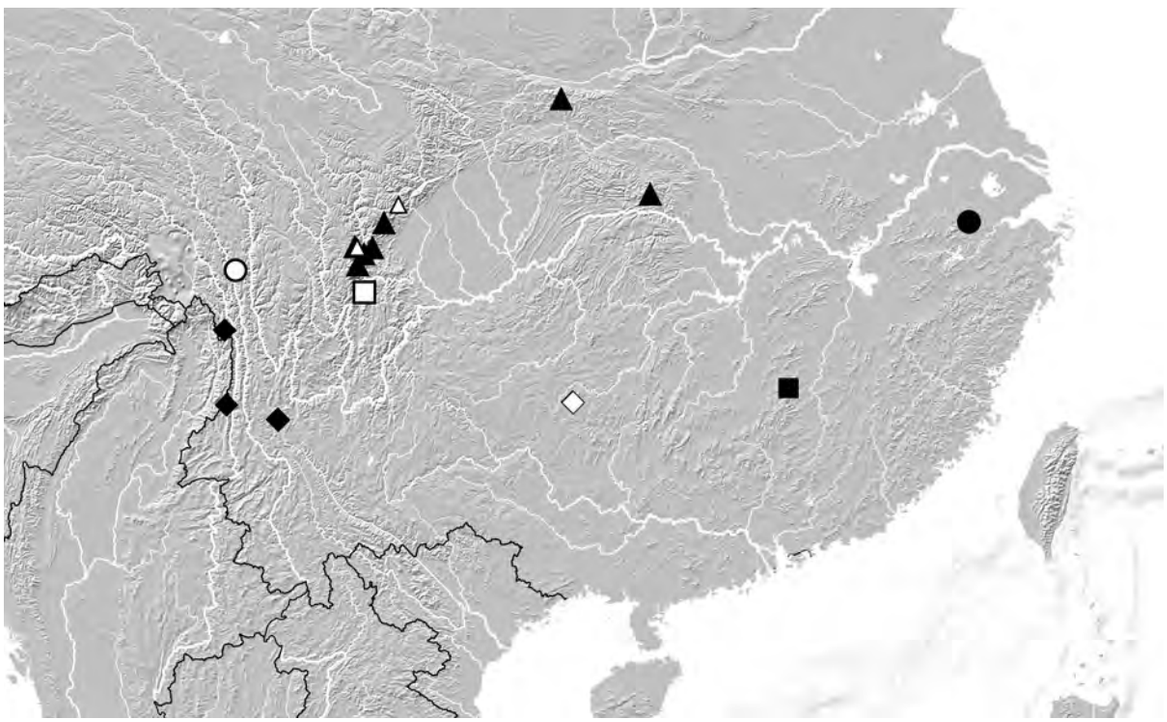


Fig. 141. Distributions of *Lobrathium* species in China: *L. cholaicum* (open circle); *L. bimembre* (filled diamonds); *L. domenoides* (open square); *L. bispinosum* (open diamonds); *L. tuberosum* (filled square); *L. rotundiceps* (filled circle); *L. tortile* (triangles), based on revised records (filled triangles) and literature records by Zheng (1988) (open triangles).

Elytra (Fig. 126) long, usually at least slightly longer than pronotum; humeral angles marked; punctation coarse, dense, and arranged in somewhat irregular series; interstices without microsculpture and glossy. Hind wings fully developed.

Abdomen usually slightly narrower than elytra; punctation fine and dense; interstices with fine microsculpture; posterior margin of tergite VII with palisade fringe; tergite VIII with sexual dimorphism.

♂: tergite VIII broadly convex posteriorly; sternite VII with moderately deep median impression without pubescence posteriorly, posterior margin broadly concave (Fig. 127); sternite VIII weakly transverse, posteriorly with distinct median impression, this impression with numerous modified, short and stout black setae, posterior excision relatively small, with truncate anterior margin (Fig. 128); aedeagus approximately 1 mm long, ventral process blade-shaped, symmetric, bisinuate and dorso-ventrally flattened in lateral view (Figs 129–132).

♀: posterior margin of tergite VIII convexly produced in the middle.

Intraspecific variation. This widespread species is highly variable, more so than most other East Palaearctic congeners, particularly regarding the coloration and length of the elytra, head shape, and eye size.

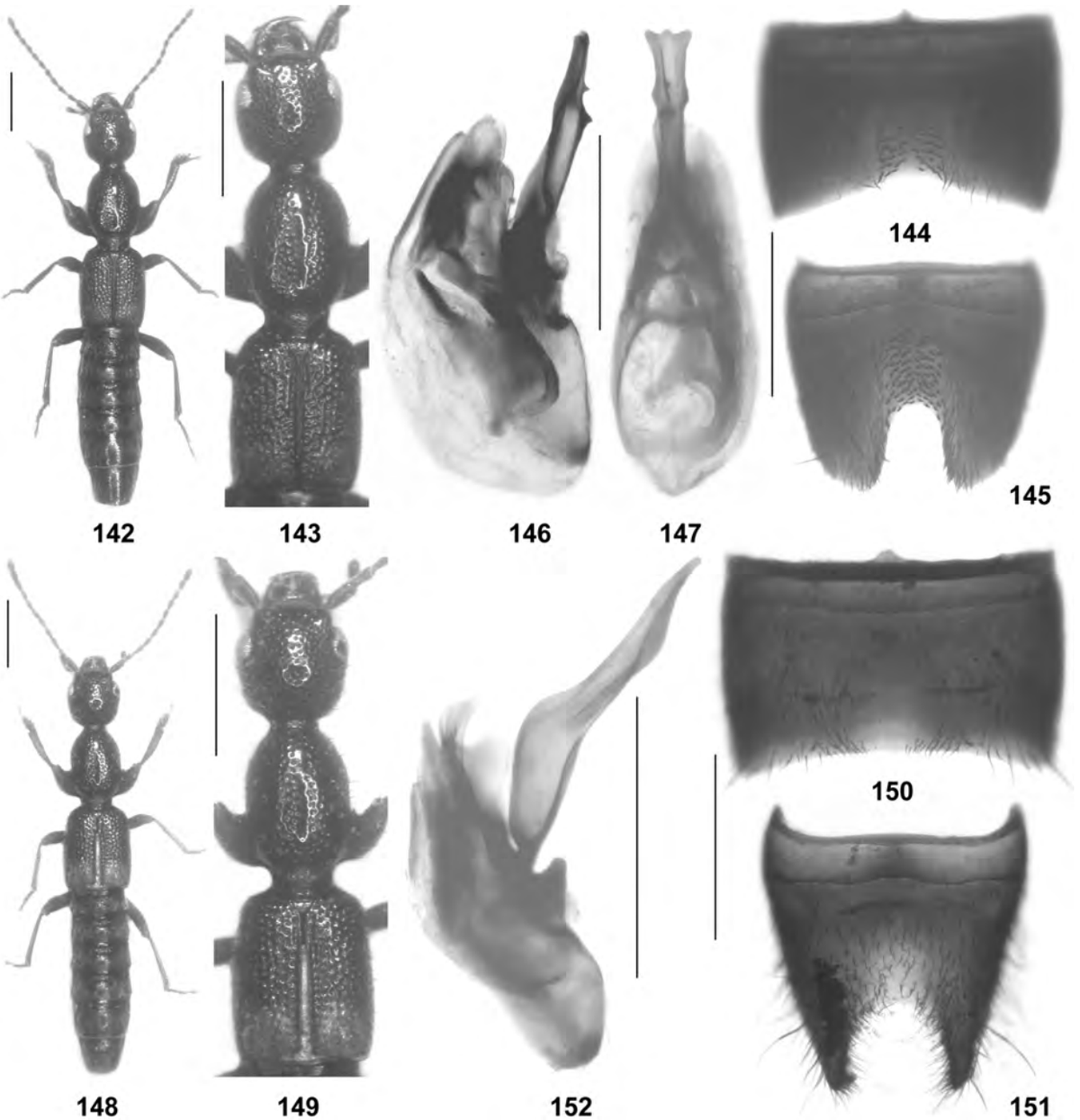
Comparative notes. *Lobrathium hongkongense* is distinguished from its congeners particularly by the shape and chaetotaxy of the male sternite VIII, as well as by the morphology of the aedeagus, from some Chinese species also by the shape of the female tergite VIII.

Distribution and natural history. This species was originally described Hong Kong and subsequently reported from Sichuan and Taiwan (as *L. sibynium*) (Assing 2010, Zheng 1988). The above records from Zhejian, Jiangsu, Yunnan, Guangxi, and Hubei, as well as the localities of the types of *L. ryukyuense* suggest that *L. hongkongense* is widespread and not uncommon in the southeast of the East Palaearctic (Fig. 140). The female-based records from Shaanxi require confirmation. For additional records from the Ryukyu Islands (as *L. ryukyuense*) see Watanabe (1998a) and Ito (2010). Teneral specimens were found in March and June.

Lobrathium tortile Zheng, 1988 (Figs 133–140)

Lobrathium tortile Zheng, 1988: 187 ff.

Comment. The original description is based on 57 type specimens from two localities in Sichuan (Zheng 1988). The types were not examined, but, based on the illustra-



Figs 142–152. *Lobrathium hebeatum* (**142–147**) and *L. gladiatum* (**148–152**). **142, 148:** habitus; **143, 149:** forebody; **144, 150:** male sternite VII; **145, 151:** male sternite VIII; **146–147, 152:** aedeagus in lateral and in ventral view. Scale bars: 142–143, 148–149: 1.0 mm; 144–147, 150–152: 0.5 mm.

tions and descriptive details provided by Zheng (1988), there is no doubt that the material listed below is conspecific with the holotype.

Material examined. China: Sichuan: 5♂♂, 3♀♀, Daxue Shan, W env. Kangding, 30°03'N, 101°57'E, 2600–2700 m, 22.–24.V.1997, leg. Wrase (cSch, cAss); 6♂♂, 2♀♀, same data, but 2700–2800 m, 24.V.1997, leg. Schülke (cSch, cAss); 1♂, Ya'an Pref., Tianquan Co., Jiajin Shan, 54 km W Ya'an, valley below Labahe N. R. St., 30°03'N, 102°27'E, 1500 m, river bank, 12.VII.1999, leg. Wrase (cSch); 1♂, Ya'an Pref., Baoxing Co., Jiajin Shan, 78 km NNW Ya'an, river valley 3 km S Qiaoqi, 30°40'N, 102°45'E, 1950 m, river bank, 11.VII.1999, leg. Wrase (cSch); 1♂, 1♀, Ganzi Tibet. Aut. Pref., Luding Co., 7 km S Luding, tributary of Dadu He, 29°53'N, 102°13'E, 1250 m, river bank, 21.VI.1999, leg. Wrase (cSch); 1♂, Daxue Shan, Hailuogou Glacier Park, Camp 1, 29°36'N, 102°04'E, 2100 m, 27.–31.V.1997, leg. Schülke (cAss). **Shaanxi:** 5♂♂, 1♀, Qinling Shan, 115 km WSW Xi'an, river bank above Houzhenzi, 33°50'N, 107°47'E, 1450 m, gravel bank, 15.VII.2001, leg.

Schülke & Wrase (cSch, cAss). **Hubei:** 3♂♂ [2 teneral], Daba Shan, creek valley 8 km NW Muyuping, 31°29'N, 110°22'E, 1540 m, stream bank, 18.VII.2001, leg. Schülke & Wrase (cSch); 5♂♂, 2♀♀ [4 teneral], same data, but 1550–1650 m (cSch).

Redescription. Body length 6.5–7.5 mm; length of forebody 3.4–3.9 mm. Habitus as in Fig. 133. Coloration: head, pronotum, and abdomen black; elytra black, without bluish hue, posteriorly with reddish spot of variable size and coloration, moderately large, bright-reddish, and distinctly contrasting with the remainder of elytral surface to small, dark-reddish and weakly delimited; legs dark-brown to blackish, with reddish tarsi; antennae dark-brown with infuscate antennomere I.

Head (Fig. 134) approximately as long as broad, usually slightly narrowed behind eyes; posterior angles broadly rounded; punctation of dorsal surface coarse and moderately dense, in median dorsal portion somewhat sparser (but not impunctate); interstices without microsculpture. Eyes moderately large and prominent, usually slightly more than half as long as distance from posterior margin of eye to neck. Antenna 1.7–2.0 mm long.

Pronotum (Fig. 134) approximately 1.25 times as long as broad and approximately as wide as head, lateral margins straight in the middle and weakly converging posteriad in dorsal view; punctation similar to that of head or slightly coarser.

Elytra (Fig. 134) moderately long, 0.90–0.95 times as long as pronotum; humeral angles marked; punctation coarse, dense, and arranged in somewhat irregular series; interstices without microsculpture and glossy. Hind wings fully developed.

Abdomen approximately as wide as elytra; punctation fine and dense; interstices with fine microsculpture; posterior margin of tergite VII with palisade fringe; tergite VIII without sexual dimorphism, posterior margin weakly convex to indistinctly angled in the middle.

♂: sternites V–VI unmodified; sternite VII with shallow median impression with sparse pubescence posteriorly, posterior margin broadly concave (Fig. 135); sternite VIII weakly transverse, posteriorly with distinct median impression, this impression with numerous modified, short and stout black setae, posterior margin of distinctive shape: distinctly asymmetric and with tooth-like projection on either side of the small sub-median excision (Figs 136–137); aedeagus approximately 1.5 mm long, ventral process conspicuously long, asymmetric, and of distinctive shape (Figs 138–139).

Comparative notes. This species is characterised particularly by the shape of the male sternite VIII and the conspicuous morphology of the ventral process of the aedeagus. It is additionally distinguished from the widespread *L. hongkongense* by the coloration (absence of a bluish hue) and length of the elytra (distinctly shorter than pronotum).

Distribution and natural history. This species is currently known from Sichuan, Shaanxi, and Hubei provinces (Fig. 140), where it was found on banks of rivers and streams at altitudes of 1250–2800 m. Several specimens collected in July are teneral.

***Lobrathium hebeatum* Zheng, 1988** (Figs 142–147, 153)

Lobrathium hebeatum Zheng, 1988: 189 f.

Comment. The original description is based on 16 type specimens from four localities in Sichuan (Zheng 1988). The types were not examined, but, based on the illustrations and descriptive details provided by Zheng (1988), there is no doubt that the material listed below is conspecific with the holotype.

Material examined. China: Sichuan: 5♂♂, 1♀, Daxue Shan, river valley 5 km E Kangding, 30°03'N, 102°00'E, 2500–2800 m, 20.–23.V.1997, leg. Wrase (cSch, cAss); 7♂♂, 1♀, Ganzi Tibet. Aut. Pref., Kangding Co., Daxue Shan, stream valley 5 km E Kangding, 30°03'N, 102°00'E, 2500–2600 m, 24.VI.1999, leg. Wrase (cSch, cAss); 1♀, Daxue Shan, 10 km S Kangding, 29°59'N, 101°55'E, 3150 m, river valley, 25.V.1997, leg. Wrase (cSch). **Shaanxi:** 1♂, 1♀ [teneral], Qinling Shan, 47 km S Xi'an, autoroute km 70, mountain W pass, 33°51'N, 108°47'E, 2300–2500 m, 26.–29.VIII.1995, leg. Wrase & Schülke (cSch). **Yunnan:** 1♂, 1♀, Dali Bai Nat. Aut. Pref., Diancang Shan, 5 km SSW Dali old town, creek valley above cable car, 25°39'N, 100°08'E, 2800 m, 26.VIII.2003, leg Schülke (cSch).

Redescription. Body length 6.5–7.5 mm; length of forebody 3.5–4.0 mm. Habitus as in Fig. 142. External morphology as in *L. tortile* (Figs 142–143), except as follows:

Antenna longer and more slender, 2.0–2.2 mm long.

♂: sternites III–VI with long, narrow, and glossy median keel; sternite VII with large and distinct median impression, this impression with numerous distinctly modified, short and stout black setae, posterior margin distinctly and broadly concave (Fig. 144); sternite VIII weakly transverse, with distinct median impression, this impression with numerous modified, short and stout black setae, posterior excision conspicuously deep and U-shaped (Fig. 145); aedeagus approximately 1.2 mm long, ventral process straight, with distinct ventral teeth, and apically of distinctive shape, particularly in ventral view (Figs 146–147).

Comparative notes. This species is characterised particularly by the presence of median keels on the male sternites III–VI (unique), the shape and chaetotaxy of the male sternite VII and VIII, as well as by the distinctive shape of the ventral process of the aedeagus.

Distribution and natural history. *Lobrathium hebeatum* is currently known from Sichuan, Shaanxi, and Yunnan provinces (Fig. 153), where it was found on banks of rivers

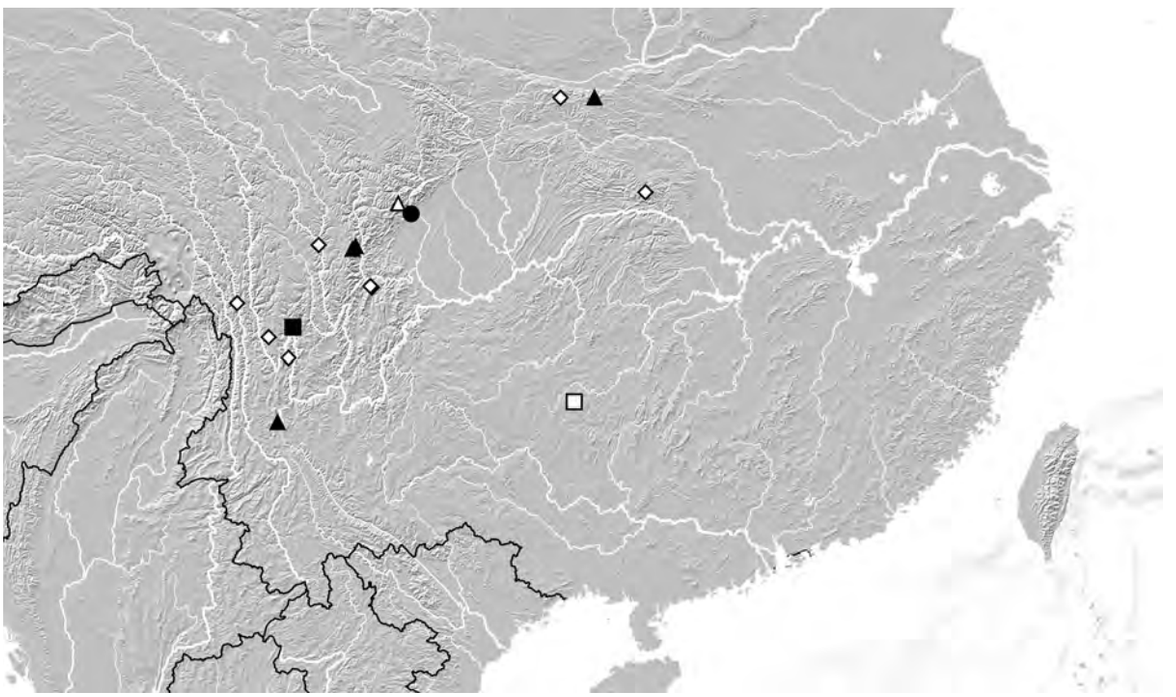


Fig. 153. Distributions of *Lobrathium* species in China: *L. configens* (open diamonds); *L. retrocarinatum* (filled square); *L. gladiatum* (filled circle); *L. radens* (open square); *L. hebeatum* (triangles), based on revised records (filled triangles) and a literature record by Zheng (1988) (open triangle).

and streams at altitudes of 2500–3150 m, in one locality together with *L. hongkongense*. Teneral adults were collected in August.

Lobrathium gladiatum Zheng, 1988 (Figs 148–153)

Lobrathium gladiatum Zheng, 1988: 190.

Comment. The original description is based on a unique holotype from Qingcheng Shan in Sichuan. This specimen was not examined, but, based on the illustrations and descriptive details provided by Zheng (1988), there is no doubt that the material listed below, all of which was collected in the Qingcheng Shan, is conspecific with the holotype.

Material examined. China: Sichuan: 3♂♂, 1♀ [partly teneral], Qingcheng Shan, NW Chengdu, 30°54'N, 103°32'E, 650–700 m, 3.–4.VI.1997, leg. Schülke (cSch); 4♂♂, 3♀♀, Wenjiang Distr., Dujiangyan Co., Qingcheng Shan, 56 km NW Chengdu, 30°54'N, 103°32'E, 975 m, stream bank, 975 m, 18.VI.1999, leg. Schülke (cSch, cAss).

Description. Body length 5.8–6.8 mm; length of forebody 3.2–3.6 mm. Habitus as in Fig. 148. Coloration: head, pronotum, and abdomen black; elytra black, without bluish hue, posteriorly with moderately large reddish-yellow spot reaching posterior, but not lateral margins; legs reddish-brown with reddish tarsi, usually at least the profemora infuscate; antennae dark-reddish, antennomere I not infuscate.

Head (Fig. 149) weakly oblong, widest across eyes, narrowed behind eyes; posterior angles broadly rounded; punctation of dorsal surface coarse and moderately dense, in median dorsal portion somewhat sparser (but not impunctate); interstices without microsculpture. Eyes large and prominent, slightly more than half as long as distance from posterior margin of eye to neck. Antenna 1.9–2.0 mm long.

Pronotum (Fig. 149) slender, 1.30–1.35 times as long as broad and slightly narrower than head, lateral margins indistinctly convex in the middle and weakly converging posteriad in dorsal view; punctation similar to that of head.

Elytra (Fig. 149) moderately long, approximately as long as pronotum; humeral angles marked; punctation coarse, dense, and arranged in somewhat irregular series; interstices without microsculpture and glossy. Hind wings fully developed.

Abdomen usually slightly narrower than, more rarely approximately as wide as elytra; punctation fine and dense; interstices with fine microsculpture; posterior margin of tergite VII with palisade fringe; tergite VIII without pronounced sexual dimorphism, posterior margin on average slightly more strongly convex in female than in male.

♂: sternites V and VI with shallow median impressions; sternite VII with pronounced, deep and extensive median impression (Fig. 150); sternite VIII with pronounced impression posteriorly, on either side of impression and of posterior excision strongly bulging, almost carinate, posterior excision very deep and broad (Fig. 151); aedeagus 0.9–1.0 mm long, ventral process with very thin base and with pronounced median carina dorsally (Fig. 152).

Comparative notes. This species is characterised particularly by the shape and chaetotaxy of the male sternite VIII and the conspicuous morphology of the ventral process of the aedeagus. It is additionally distinguished from the externally similar *L. hebeatum* and *L. tortile* by the more slender head and pronotum, and by the longer elytra.

Distribution and natural history. This species is currently known only from the Qingcheng Shan in central Sichuan province, China (Fig. 153). The recently collected material was found at an altitude of 650–975 m, the holotype at 1600 m. Teneral adults were observed in June.

Lobrathium emeiense Zheng, 1988

Lobrathium emeiense Zheng, 1988: 191.

Comment. The original description is based on a unique female holotype from the Emei Shan, Sichuan. Since a reliable identification and interpretation of the vast majority of *Lobrathium* species is possible only based on the male sexual characters, the identity of this species must remain doubtful at least until males from the vicinity of the type locality become available.

Lobrathium configens sp. n. (Figs 153–165)

Type material. Holotype ♂: "China (S-Shaanxi) Qinling Shan, river bank above Houzhenzi, 115 km WSW Xi'an, 1450 m, 33°50'N, 107°47'E (coarse gravel bank with plants and leaves) 4.VII.2001 Wrase [06a] / Holotypus ♂ *Lobrathium configens* sp. n., det. V. Assing 2011" (NHMW). Paratypes: 2♂♂, 2♀♀ [partly teneral]: "China: Sichuan Gongga Shan, Hailuogou, in front of Glacier 1, 2850 m, 29°35N, 102°00E, 7.VII.1998, A. Smetana [C76] / 1998 China Expedition J. Farkač, D. Král, J. Schneider & A. Smetana" (cSme, cAss); 1♂ [slightly teneral]: "China W.Sichuan (Ganzi Tibet. Aut. Pref., Yajiang Co.), Shalui Shan, river valley 6 km WSW Yajiang, 3250 m, 30°01N, 100°57E (river bank, bank slope), 4.VII.1999 D.W. Wrase" (cSch); 1♂ [slightly teneral]: "China: S-Sichuan 1999, Ya'an Prefecture, Shimian Co., Xiaoxiang Ling, Pass zw. Shimian u. Ganluo, 27 km SE Shimian, 29°03N, 102°31E, 2450 m, Quellsumpf, Bachufer, 8.VII., leg. M. Schülke (cSch); 1♀: "China S.Sichuan (Ya'an Pref., Shimian Co.) Xiaoxiang Ling, road Shimian-Ganluo, 20 km SE Shimian (bank limit), 29°05N, 102°29E, 1850 m, 8.VII.1999 D.W. Wrase" (cSch); 4♂♂, 3♀♀: "China: W-Hubei, 2002, Dashenongjia mts., 2100–2900 m, 10.–14.6., 31.5N, 110.3E, leg. J. Turna" (NHMW, cAss); 1♂: "China, Yunnan prov., 18.6.–4.7.1993, Heishui=35 km N Lijiang, 27,13 N, 100,19 E, lgt. S. Becvar" (NHMW); 1♂, 5♀♀ [partly teneral]: "China, Yunnan prov., 1.–19.7.1992, Heishui, 35 km N Lijiang, 27,13N, 100,19E, lgt. S. Becvar" (NHMW, cAss); 1♀: same data, but 27.–28.VI.1992 (NHMW); 2♂♂ [1 teneral]: "China (N-Yunnan), Zhongdian Co., 16 km SSE Zhongdian, 3100 m, 27°40.7'N, 99''44.2'E (river bank, gravel), 17.VIII.2003 Wrase [06]" (cSch); 1♂, 3♀♀: "China (N-Yunnan) Diqing Tibet. Aut. Pref., Deqin Co., Meili Xue Shan, E-side, 14 km W Deqin, 28°27.47'N, 98°46.35'E, 2700 m / small creek valley, glacier outlet (under stones and gravel along glacier stream) 11.VI.2005 D.W.Wrase [09A]" (cSch, cAss).

Etymology. The specific epithet (Latin, present participle of configere: to sting) refers to the long and acute ventral process of the aedeagus.

Description. Body length 6.0–7.2 mm; length of forebody 3.6–4.0 mm. Habitus as in Fig. 155. Coloration: head, pronotum, and abdomen black; elytra black with bluish hue, posterior third with yellowish spot reaching posterior and lateral margins; legs blackish with dark-reddish tarsi; antennae dark-brown.

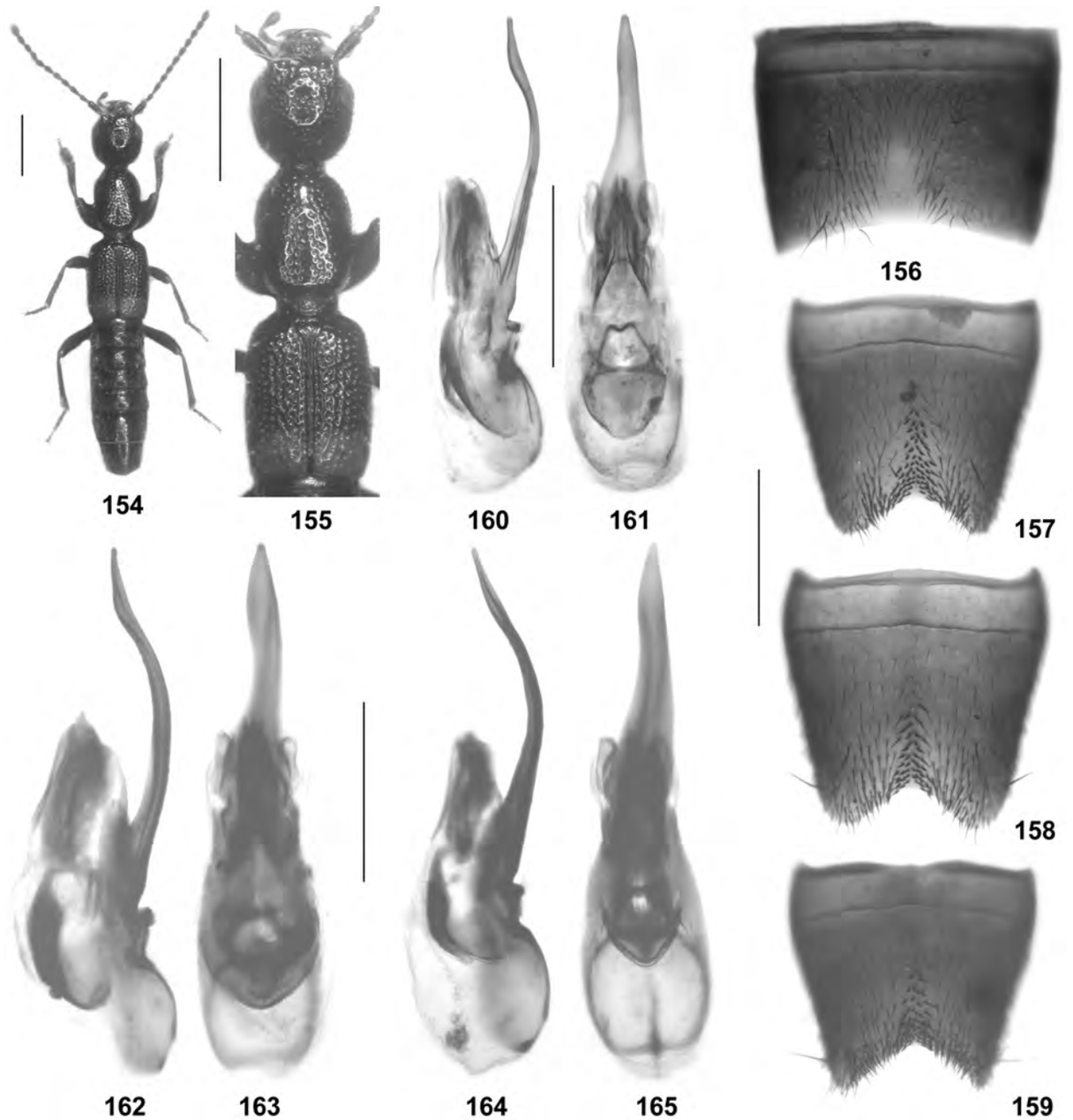
Head (Fig. 156) approximately as long as broad, widest across eyes, somewhat narrowed behind eyes; posterior angles broadly rounded; punctation of dorsal surface coarse and moderately dense, in median dorsal portion somewhat sparser (but not impunctate); interstices without microsculpture. Eyes large and prominent, more than half as long as distance from posterior margin of eye to neck. Antenna 2.0–2.2 mm long.

Pronotum (Fig. 156) slender, approximately 1.3 times as long as broad and 0.90–0.95 times as broad as head, lateral margins almost straight and weakly converging posteriad in dorsal view; punctation similar to that of head.

Elytra (Fig. 156) long, approximately 1.1 times as long as, and distinctly broader than pronotum; humeral angles marked; punctation coarse, dense, and arranged in somewhat irregular series; interstices without microsculpture and glossy. Hind wings fully developed.

Abdomen distinctly narrower than elytra; punctation fine and dense; posterior margin of tergite VII with palisade fringe; tergite VIII without sexual dimorphism, posterior margin strongly convex to obtusely pointed in both sexes.

♂: sternite V with small and very shallow median impression posteriorly; sternite VI with shallow median impression not confined to posterior half; sternite VII with



Figs 154–165. *Lobrathium configens*. **154:** habitus; **155:** forebody; **156:** male sternite VII; **157–159:** sternite VIII of males from Shaanxi (**157**), Hubei (**158**), and Yunnan (**159**); **160–165:** aedeagus in lateral and in ventral view of males from Shaanxi (**160–161**), Hubei (**162–163**), and Yunnan (**164–165**). Scale bars: 154–155: 1.0 mm; 156–165: 0.5 mm.

moderately deep median impression posteriorly, this impression without pubescence, posterior margin broadly concave (Fig. 156); sternite VIII weakly transverse, posteriorly with median impression of triangular shape, this impression with numerous modified, short and stout black setae, posterior excision broad and not very deep, on either side of this impression with dense black setae (Figs 157–159); aedeagus of variable size, 1.3–1.5 mm long, ventral process of somewhat variable shape, long, slender, dorso-ventrally flattened, apically acute, almost symmetric to distinctly asymmetric, and dorso-ventrally flattened.

Intraspecific variation. The ventral process of the aedeagus of this species is remarkably variable. This particularly applies to the degree of asymmetry, the degree to which it is twisted apically, and to the width of the base (ventral aspect) (Figs 160–165). Also, to a lesser extent, the chaetotaxy of the male sternite VIII is somewhat variable (Figs 157–159). However, in view of the general character divergence in *Lobrathium* species and the presence of transitional conditions, the observed differences are attributed to intra- rather than interspecific variation.

Comparative notes. In external characters, *L. configens* is highly similar to the widespread *L. hongkongense*, but distinguished from this species by the male primary and secondary sexual characters, especially the completely different shape of the ventral process of the aedeagus.

Distribution and natural history. The type specimens were collected in several localities in Shaanxi, Sichuan, Hubei, and Yunnan provinces (Fig. 153) at altitudes of 1450–3250 m. At least part of the type specimens was found on stream banks. The specimens from the Gongga Shan were found in sandy areas near a river leaving a glacier (Smetana pers. comm.) together with *L. daxuense*. Teneral adults were repeatedly observed in July and once in August. The holotype was collected together with numerous specimens of *L. tortile*.

Lobrathium spathulatum sp. n. (Figs 166–173, 180)

Type material. Holotype ♂: "China – Sechuan, Pingwu, 2.6.–4.6.2001, lgt. E. Kučera / Holotypus ♂ *Lobrathium spathulatum* sp. n., det. V. Assing 2011" (cAss). Paratypes: 1♂, ♀: "China c. 25.V., Xiexian [=Xiaxian], 111,6'–34,8' [sic], 20 km NE Yuncheng, leg. J. Halada 1996" (NHMW, Ass); 1♂ [slightly teneral]: "E-China: Zhejiang, Gutianshan National Nature Reserve, 13.–18.III.2008, leg. Th. Assmann" (cFel); 1♂: "China-Shaanxi, Lüeang, 22.5.–25.5.2000, lgt. E. Kučera (cFel); 1♀: "China-N.Sechuan, Wangcang, 18.–20.5.2002, lgt. E. Kučera" (cFel); 1♂ [teneral], 1♀: "China: Sichuan (18), Qingcheng-Shan, NW Chengdu, 600 m, Flussufer, 30.55N, 103.30E, 4.06.1997, M. Schülke" (cSch, cAss); 1♂: "China: W-Hubei (Daba Shan), creek valley 8 km NW Muyuping, 31°29'N, 110°22'E, 1550–1650 m, 18.VII.2001, leg. M. Schülke [C01–16A]" (cSch).

Etymology. The specific epithet (Latin, adjective derived from the noun spathula: spattle, applicator) alludes to the shape of the ventral process of the aedeagus.

Description. Body length 6.0–8.0 mm; length of forebody 3.7–4.5 mm. Habitus as in Fig. 166. Coloration: head, pronotum, and abdomen black; elytra black with bluish hue, posterior third with yellowish spot reaching posterior, but not lateral margins; legs blackish with dark-reddish tarsi and reddish-brown tibial bases; antennae dark-brown with blackish antennnomere I.

Head (Fig. 167) approximately as long as broad and of variable shape; temples behind eyes subparallel or converging posteriad; posterior angles broadly rounded; punctation of dorsal surface coarse and moderately dense, in median dorsal portion somewhat sparser (but not impunctate); interstices without microsculpture. Eyes large and prominent, more than half as long as distance from posterior margin of eye to neck. Antenna 2.2–2.5 mm long.

Pronotum (Fig. 167) slender, approximately 1.3 times as long as broad and 0.90–0.95 times as broad as head, lateral margins almost straight and subparallel in dorsal view; punctation similar to that of head.

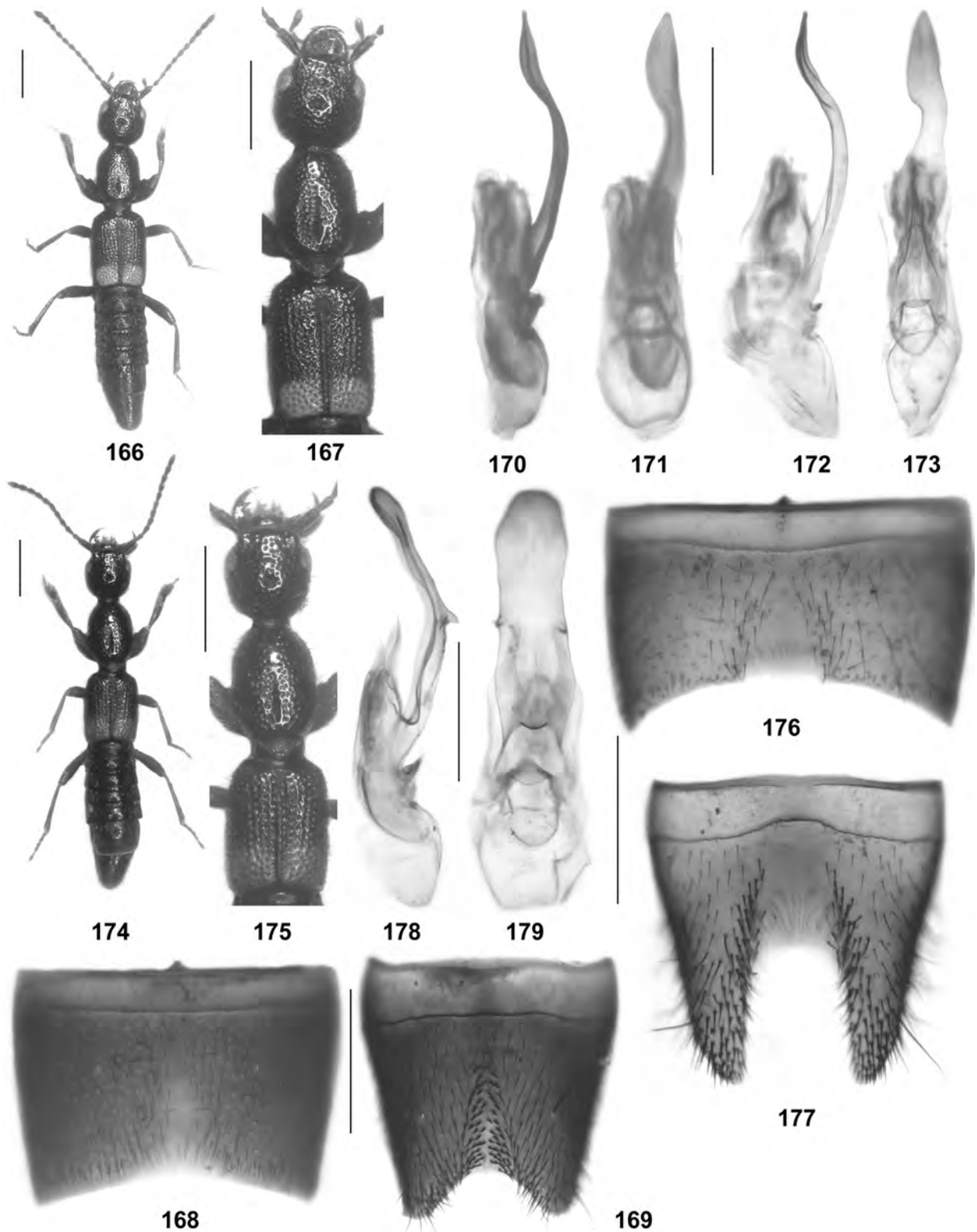
Elytra (Fig. 167) long, approximately 1.1 times as long as, and distinctly broader than pronotum; humeral angles marked; punctation coarse, dense, and arranged in somewhat irregular series; interstices without microsculpture and glossy. Hind wings fully developed.

Abdomen distinctly narrower than elytra; punctation fine and dense; posterior margin of tergite VII with palisade fringe; tergite VIII without sexual dimorphism, posterior margin strongly convex in both sexes.

♂: sternite VI, sometimes also sternites IV–V, with small median impression posteriorly; sternite VII moderately transverse, with shallow median impression of triangular shape posteriorly, this impression without pubescence, posterior margin broadly and not very deeply concave (Fig. 168); sternite VIII weakly transverse, with long and not very extensive median impression, this impression with numerous modified, stout and short black setae, posterior excision broad and moderately deep, margins of excision with dense black setae (Fig. 169); aedeagus 1.6–1.8 mm long, ventral process long, slender, apically acute, distinctly asymmetric, and somewhat twisted.

Comparative notes. As can be inferred from the similarly derived shape and chaetotaxy of the male sternite VIII, from the similar general morphology of the aedeagus, as well as from the similar external characters, *L. spathulatum* is closely allied to *L. configens*. It is distinguished from this species by larger size (no overlap), the smaller elytral spot (not reaching lateral margins), and by the distinctly larger aedeagus with a ventral process of somewhat different shape.

Distribution. *Lobrathium spathulatum* is currently known from several localities in Sichuan, Shaanxi, Shanxi, Hubei, and Zhejiang (Fig. 180), suggesting that the species is widespread at least in China. Two specimens were collected on a river bank. One teneral male was found in March, another in early June.



Figs 166–179. *Lobrathium spathulatum* (**166–173**) and *L. bispinosum* (**174–179**). **166, 174:** habitus; **167, 175:** forebody; **168, 176:** male sternite VII; **169, 177:** male sternite VIII; **170–173, 178–179:** aedeagus in lateral and in ventral view (**170–171**: male from Sichuan; **172–173**: male from Shaanxi). Scale bars: 166–167, 174–175: 1.0 mm; 168–173, 176–179: 0.5 mm.

***Lobrathium bispinosum* sp. n.** (Figs 141, 174–179)

Type material. Holotype ♂ [slightly teneral]: "China: Guizhou, Leishan Co., SE Kaili, 15 km E Leishan, Leigong Shan, S-slope, 26°22.40'N, 108°08.83'E / 12.6.2001, ca. 1000 m, leg. Schillhammer & Wang (CWBS 431) / Holotypus ♂ *Lobrathium bispinosum* sp. n., det. V. Assing 2011" (NHMW). Paratypes: 3♀♀ [partly slightly teneral]: same data as holotype (NHMW, cAss); 1 ex. [abdomen heavily damaged]: "China: Guizhou, Leishan Co., SE Kaili, NE Leishan, Leigong Shan, SE-slope, 26°21.42'N, 108°09.36'E / 21.6.2001, ca. 1200 m, nr. Park gate, leg. Wang (15)" (NHMW).

Etymology. The specific epithet (Latin, adjective: with two spines) alludes to the pair of spines on the ventral process of the aedeagus.

Description. Body length 6.0–6.5 mm; length of forebody 3.5–3.8 mm. Habitus as in Fig. 174. Coloration: body black, posterior third of elytra with yellowish spot reaching posterior and lateral margins; legs reddish (teneral?) to blackish with dark-reddish tarsi; antennae reddish-brown to dark-brown, antennomere I infuscate.

Head (Fig. 175) approximately as long as broad, widest across eyes, behind eyes convexly tapering towards neck, posterior angles obsolete; punctation of dorsal surface coarse and moderately dense, in median dorsal portion somewhat sparser (but not impunctate); interstices without microsculpture. Eyes large and prominent, slightly more than half as long as distance from posterior margin of eye to neck. Antenna 1.9–2.2 mm long.

Pronotum (Fig. 175) slender, approximately 1.35 times as long as broad and 0.95 times as broad as head, lateral margins in the middle almost straight and subparallel in dorsal view; punctation similar to that of head.

Elytra (Fig. 175) moderately long and of somewhat variable length, 0.9–1.0 times as long as, and distinctly broader than pronotum; humeral angles marked; punctation coarse, dense, and arranged in somewhat irregular series; interstices without microsculpture and glossy. Hind wings apparently fully developed.

Abdomen distinctly narrower than elytra; punctation fine and dense, finer and sparser on posterior than on anterior tergites; posterior margin of tergite VII with palisade fringe; tergite VIII without sexual dimorphism, posterior margin strongly convex to obtusely pointed in both sexes.

♂: sternites III–VI unmodified; sternite VII strongly transverse and with distinct median impression of triangular shape and without pubescence, posterior margin distinctly and broadly concave (Fig. 176); sternite VIII approximately as broad as long, weakly sclerotised (semitransparent) anteriorly, and with pronounced median impression without setae, posterior excision conspicuously deep, broad, and of subrectangular shape, on either side of this excision and of median impression with dense black setae (Fig. 177); aedeagus 1.5 mm long, ventral process symmetric, broad (ventral view), apically rounded (ventral view), and bisinuate (lateral view), in the middle with pair of pronounced tooth-like processes (Figs 178–179).

Comparative notes. *Lobrathium bispinosum* is readily distinguished from all its congeners by the conspicuous morphology of the male sternite VIII and of the aedeagus. From *L. hongkongense*, *L. configens*, and *L. mordens*, it is additionally separated by the absence of a bluish hue on the elytra, as well as by the shorter elytra.

Distribution and natural history. The species is currently known only from two localities in the Leigong Shan in the southeast of Guizhou province, southern China (Fig. 141). The specimens were collected at altitudes of 1000 and 1200 m; some of them are teneral.

***Lobrathium demptum* sp. n.** (Figs 180, 271–275)

Type material. Holotype ♂: "China: E - Hubei, Dabie Shan, Wujiashan Forest Park, 31.1 N 115.8 E, 17.–18.6.2003, leg. J. Turna / Holotypus ♂ *Lobrathium demptum* sp. n., det. V. Assing 2012" (NHMW). Paratypes: 1♂, 1♀: same data as holotype (NHMW, cAss).

Etymology. The specific epithet (past participle of the Latin verb demere: to take away) alludes to the small number of modified setae on the male sternite VIII.

Description. Body length 6.3–7.0 mm; length of forebody 3.6–3.9 mm. Coloration: body black, without bluish hue, elytra posteriorly with relatively large yellowish spot reaching posterior and lateral margins; legs dark-brown with reddish tarsi; antennae reddish with infuscate antennomere I.

Head (Fig. 271) approximately as long as broad, widest across eyes, behind eyes convexly tapering towards neck, posterior angles obsolete; punctation of dorsal surface coarse and moderately dense, in median dorsal portion somewhat sparser (but not impunctate); interstices without microsculpture. Eyes large and prominent, slightly more than half as long as distance from posterior margin of eye to neck. Antenna 2.0–2.2 mm long.

Pronotum (Fig. 271) moderately slender, approximately 1.25–1.30 times as long as broad and 0.95–1.00 times as broad as head, lateral margins weakly convex in the middle and slightly converging in dorsal view; punctation similar to that of head.

Elytra (Fig. 271) approximately 0.95 times as long as, and distinctly broader than pronotum; humeral angles marked; punctation coarse, dense, and arranged in some-

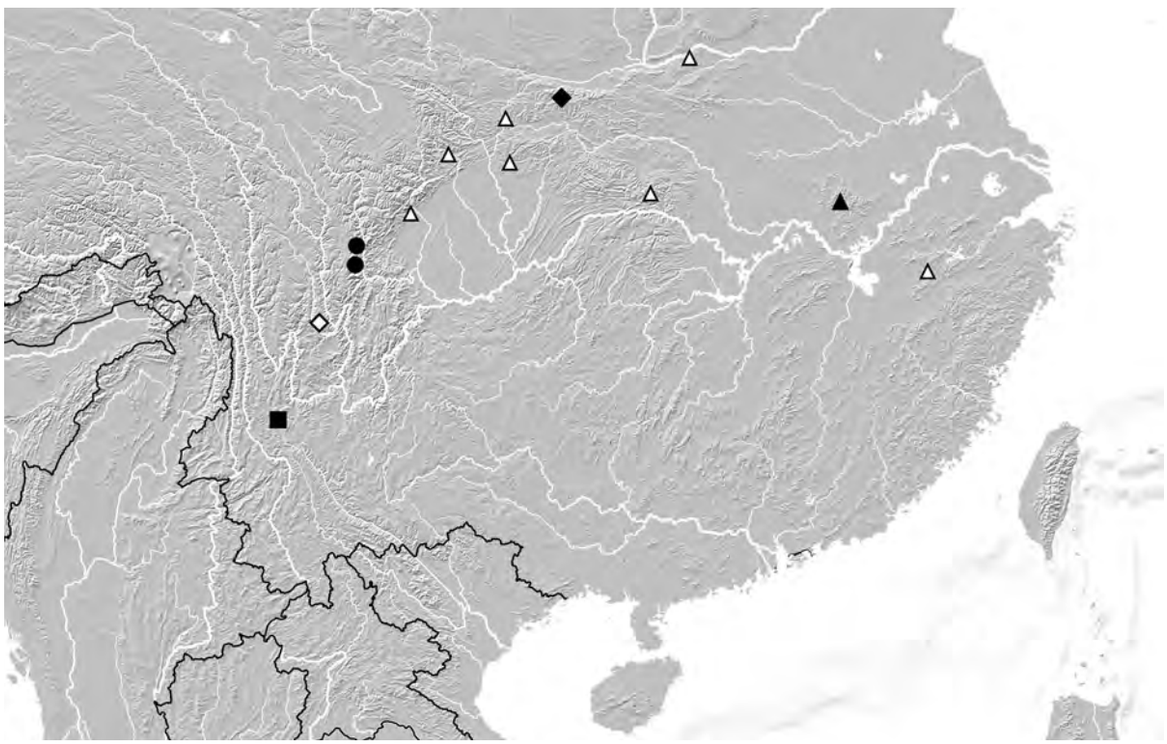


Fig. 180. Distributions of *Lobrathium* species in China: *L. excisissimum* (filled square); *L. lamellatum* (open diamond); *L. daxuense* (filled circles); *L. spathulatum* (open triangles); *L. schuelkei* (filled diamond); *L. demptum* (filled triangle).

what oblique series; interstices without microsculpture and glossy. Hind wings apparently fully developed.

Abdomen distinctly narrower than elytra; punctation fine and moderately dense; interstices without appreciable microsculpture and glossy, posterior margin of tergite VII with palisade fringe; tergite VIII without sexual dimorphism, posterior margin broadly convex in both sexes.

♂: sternites III–VI unmodified; sternite VII strongly transverse and with shallow median impression posteriorly, pubescence unmodified, posterior margin distinctly and broadly concave (Fig. 272); sternite VIII approximately as broad as long, median impression long and broad, anteriorly and posteriorly with few modified, short and stout black setae, posterior excision moderately broad and not very deep (Fig. 273); aedeagus 1.4 mm long, ventral process symmetric, large (ventral view) and long, somewhat domed and with short median spine ventrally (Figs 274–275).

Comparative notes. *Lobrathium demptum* is readily distinguished from all its congeners particularly by the shape and chaetotaxy of the male sternites VII and VIII, as well as by the distinctive morphology of the ventral process of the aedeagus. From *L. hongkongense*, *L. configens*, and *L. mordens*, it is additionally separated by the absence of a bluish hue on the elytra, as well as by the shorter elytra.

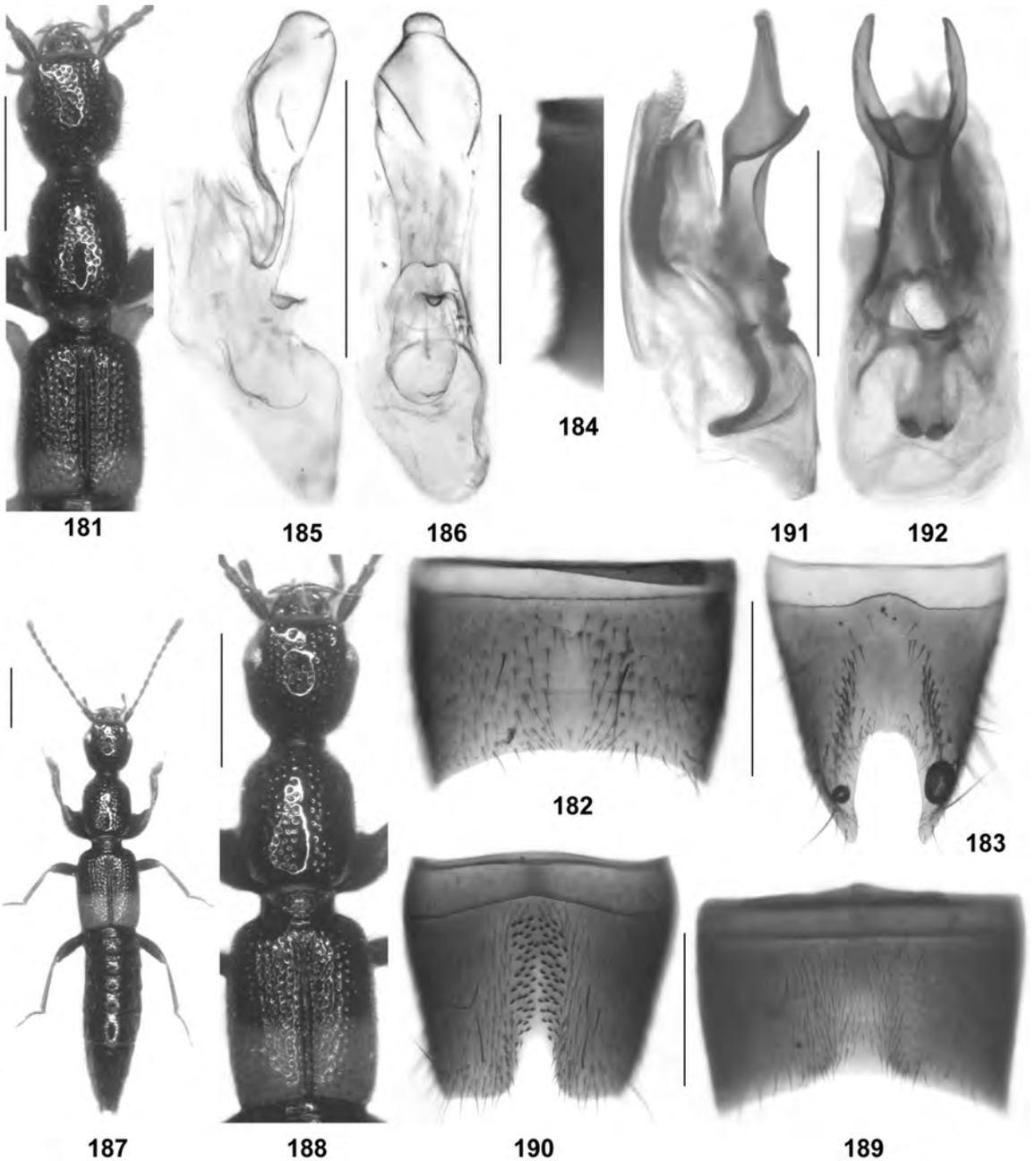
Distribution and natural history. The type locality is situated in the northeast of Hubei province, very close to the border with Anhui province (Fig. 180). The specimens appear to be slightly teneral. Additional data are not available.

Lobrathium tuberosum **sp. n.** (Figs 141, 181–186)

Type material. Holotype ♂ [teneral]: "China Jiangxi W Jinggang Shan, Ciping env., 2–14.VI.1994 / Holotypus ♂ *Lobrathium tuberosum* sp. n., det. V. Assing 2011" (NHMW).

Etymology. The specific epithet (Latin, adjective: with tubercles) alludes to presence of minute tubercles on the male sternites IV–VII.

Description. Body length 6.0 mm; length of forebody 3.6 mm. In external characters highly similar to *L. bispinosum* (Fig. 181), reliably distinguished only by the male sexual characters:



Figs 181–192. *Lobrathium tuberosum* (**181–186**) and *L. taureum* (**187–192**). **181, 188:** forebody; **182, 189:** male sternite VII; **183, 190:** male sternite VIII; **184:** male sternite VII in lateral view; **185–186, 191–192:** aedeagus in lateral and in ventral view; **187:** habitus. Scale bars: 181, 187–188: 1.0 mm; 182–186, 189–192: 0.5 mm.

♂: sternites IV–VI with small sharp median tubercle; sternite VII moderately transverse and with extensive median impression, this impression without pubescence in the middle, anterior to impression with tubercle (Fig. 184), posterior margin broadly concave (Fig. 182); sternite VIII oblong, weakly sclerotised (semi-transparent) anteriorly, and with pronounced median impression without setae, posterior excision conspicuously deep, broad, and of subrectangular shape, on either side of this excision and of median impression with dense black setae (Fig. 183); aedeagus 1.2 mm long, ventral process symmetric, conspicuously massive both in lateral and in ventral view, and apically rounded (ventral view) (Figs 185–186).

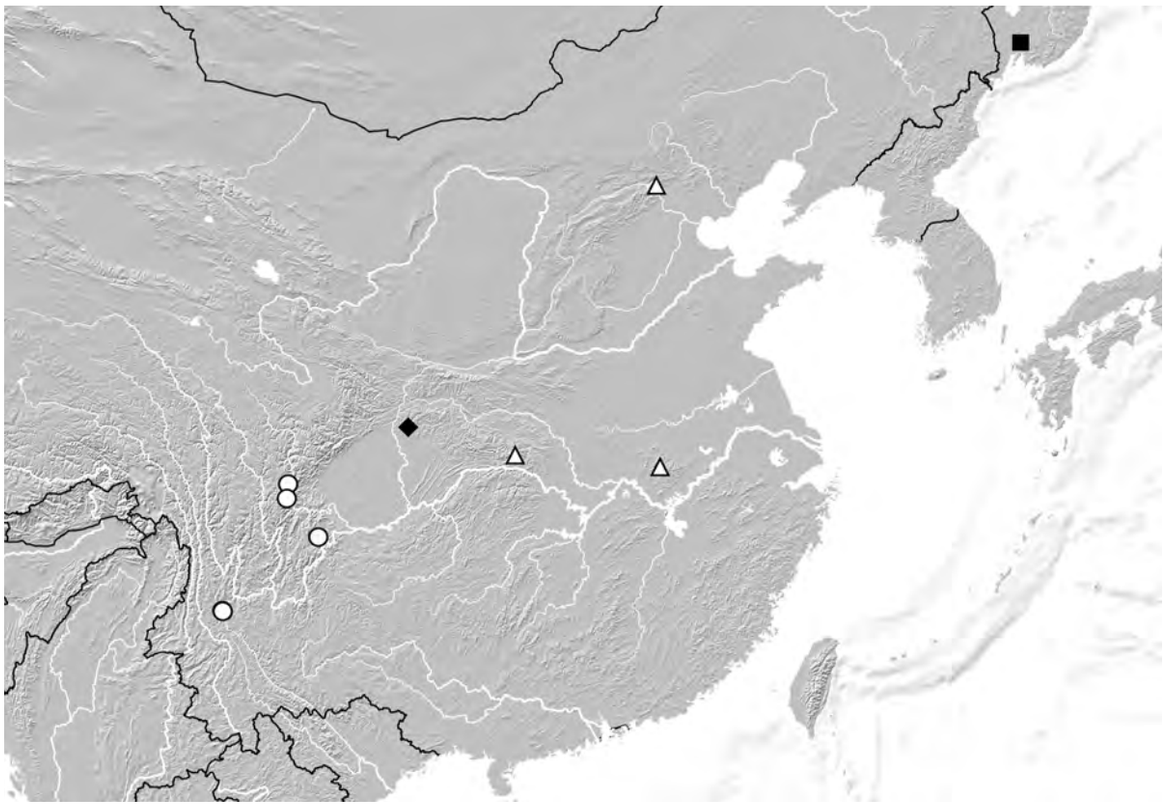


Fig. 193. Distributions of *Lobrathium* species in China and the Russian Far East: *L. duplex* (open circles); *L. feldmanni* (filled diamond); *L. taureum* (open triangles); *L. semiflavum* (filled square).

Comparative notes. *Lobrathium tuberosum* is readily distinguished from all its congeners by the presence of small sharp tubercles on the male sternites IV–VII, the conspicuous morphology of the male sternite VIII, and by the characteristic shape of the ventral process of the aedeagus. The similarly derived shape and chaetotaxy of the male sternite VIII, as well as the similar external characters suggest that *L. tuberosum* is closely allied to *L. bispinosum*.

Distribution and natural history. The type locality is situated in Jiangxi province in southeastern China (Fig. 141). The holotype is teneral.

***Lobrathium taureum* sp. n.** (Figs 187–193)

Type material. Holotype ♂: "China: W-Hubei (Daba Shan), creek valley 8 km NW Muyuping, 31°29'N, 110°22'E, 1550–1650 m, 18.VII.2001, leg. M. Schülke [C01–16A] / creek valley, deciduous forest, moss (sifted) [C01–16A] / Holotypus ♂ *Lobrathium taureum* sp. n., det. V. Assing 2011" (cAss). Paratypes: 17 exs. [partly slightly teneral]: same data as holotype; 1♂: "China: W-Hubei (Daba Shan), creek valley 8 km NW Muyuping, 31°29'N, 110°22'E, 1540 m, 18.VII.2001, moss sifted, leg. M. Schülke [C01–16]" (cSch); 1♂: same data, but leg. D. Wrase (cSch); 6♂♂, 1♀ [1♂ teneral]: China: E-Hubei, Dabie Shan, Wujiashan Forest Park, 31.1 N 115.8 E, 17.–18.6.2003, leg. J. Turna" (NHMW, cAss); 2♂♂, 3♀♀ [previously with type labels "*Lobrathium pekingi*" by V. Gusarov attached to pins, but these labels removed; 1 teneral]: "China: B.M. 1980–491, P.M. Hammond / Peking, Badaling, 9.ix.80" (BMNH, cAss).

Etymology. The specific epithet (Latin, adjective derived from taurus: bull) alludes to the conspicuous shape of the ventral process of the aedeagus.

Description. Body length 6.5–7.8 mm; length of forebody 3.7–4.3 mm. Habitus as in Fig. 187. Coloration: head, pronotum, and abdomen black; elytra black, usually with faint bluish hue and with almost all of posterior half completely (including lateral parts and margins) yellowish;

legs blackish-brown with pale-reddish tarsi; antennae reddish to dark-brown, antennomere I infuscate.

Head (Fig. 188) approximately as long as broad, widest across eyes, behind eyes convexly tapering towards neck, posterior angles obsolete or nearly so; punctation of dorsal surface coarse and rather dense, in median dorsal portion and on frons distinctly sparser; interstices without microsculpture. Eyes large and prominent, more than half as long as distance from posterior margin of eye to neck. Antenna 2.0–2.3 mm long.

Pronotum (Fig. 188) approximately 1.25 times as long as broad and approximately as broad as head (or nearly so), lateral margins in the middle almost straight and subparallel or weakly converging in dorsal view; punctation similar to that of head, but less dense than in lateral dorsal portions of head.

Elytra (Fig. 188) 1.05–1.10 times as long as, and distinctly broader than pronotum; humeral angles marked; punctation coarse, dense, and arranged in somewhat irregular series; interstices without microsculpture and glossy. Hind wings fully developed.

Abdomen distinctly narrower than elytra; punctation fine and dense, finer and sparser on posterior than on anterior tergites; posterior margin of tergite VII with palisade fringe; tergite VIII without distinct sexual dimorphism, posterior margin slightly more convex in female than in male.

♂: sternites V–VI with shallow median impression posteriorly; sternite VII strongly transverse and with distinct median impression with pubescence, posterior margin broadly concave (Fig. 189); sternite VIII transverse, with pronounced long median impression, this impression with numerous modified, short and stout black setae, posterior excision deep and almost V-shaped (Fig. 190); aedeagus 1.2–1.3 mm long, ventral process symmetric and apically with two long processes (Figs 191–192).

Comparative notes. *Lobrathium taureum* is characterised particularly by the coloration pattern of the elytra and by the distinctive shape of the ventral process of the aedeagus. It shares the elytral coloration only with *L. schuelkei*, with *L. semiflavum* (Russian Far East), and with *L. partitum* (Japan).

Distribution and natural history. The species is currently known from the Daba Shan (altitude 1540–1650 m) and the Dabie Shan in Hubei province, as well as from Beijing province, China (Fig. 193). Teneral specimens were collected in June, July, and September.

Lobrathium schuelkei sp. n. (Figs 180, 194–199)

Type material. Holotype ♂ [teneral]: "China (S-Shaanxi) Qinling Shan, river bank above Houzhenzi, 115 km WSW Xi'an, 1450 m, 33°50'N, 107°47'E (coarse gravel bank with plants and leaves) 4.VII.2001 Wrase [06a] / Holotypus ♂ *Lobrathium schuelkei* sp. n., det. V. Assing 2011" (cAss).

Etymology. The species is dedicated to my friend and colleague Michael Schülke, whose most remarkable material from China, which included also the holotype of this species, represented a major, invaluable contribution to the present paper.

Description. Body length 7.8 mm; length of forebody 4.2 mm. In external characters practically identical to *L. taureum* (Figs 194–195), distinguished only by the male sexual characters:

♂: sternites V–VI with shallow median impression posteriorly; sternite VII strongly transverse and with distinct median impression with pubescence, posterior margin broadly concave (Fig. 196); sternite VIII weakly transverse, with pronounced long median impression, this impression with numerous modified, short and stout black setae, posterior excision small and almost V-shaped (Fig. 197); aedeagus 1.1 mm long, ventral process symmetric and apically truncate in ventral view (Figs 198–199).

Comparative notes. Among Chinese *Lobrathium*, *L. schuelkei* is most similar to *L. taureum*, from which it is reliably distinguished only by the less deep posterior excision of the male sternite VIII and by the completely different morphology of the aedeagus.

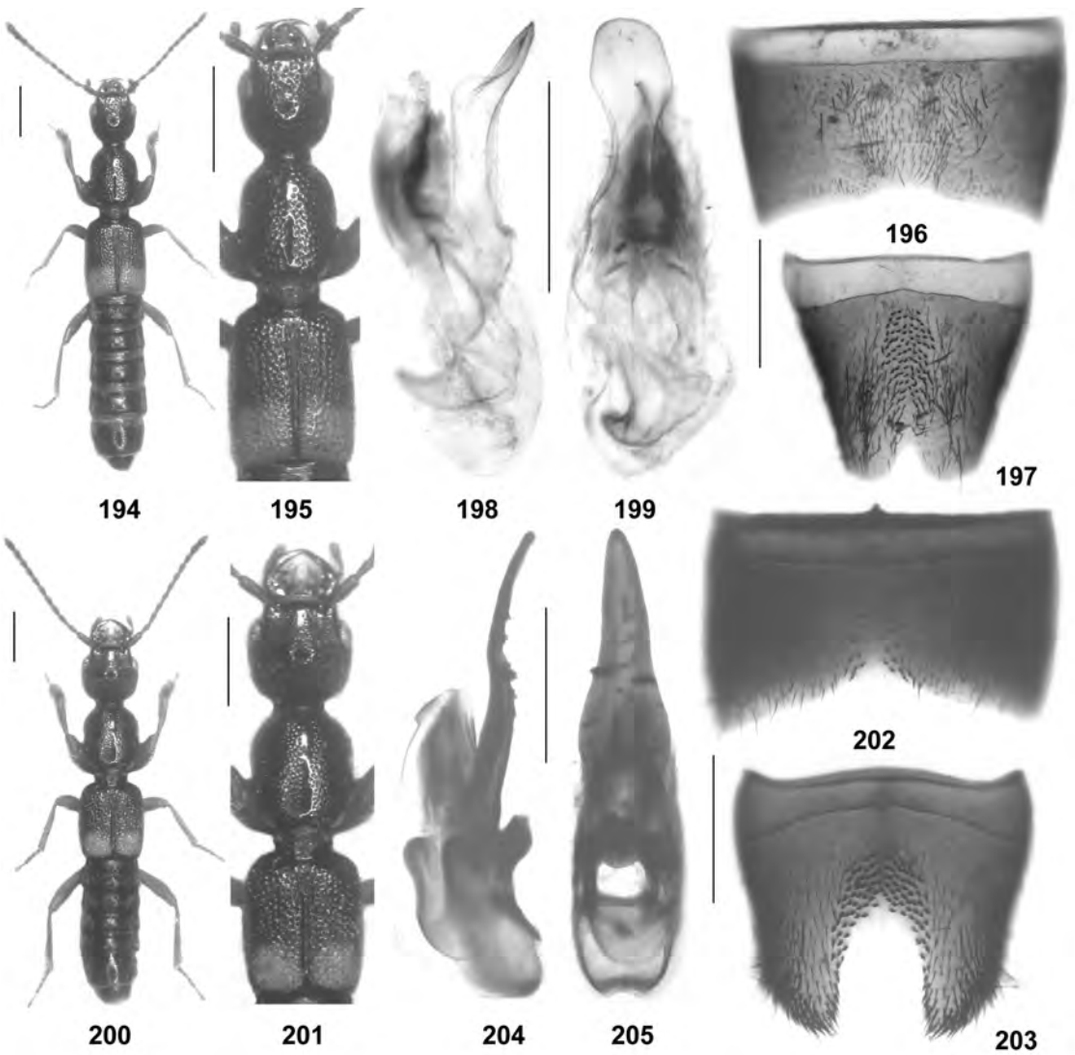
Distribution and natural history. The type locality is situated in the Qinling Shan in the south of Shaanxi province, China (Fig. 180). The somewhat teneral holotype was collected on a gravel bank at an altitude of 1450 m, together with *L. hongkongense* and *L. configens*.

Lobrathium radens sp. n. (Figs 153, 200–205)

Type material. Holotype ♂: "China: Guizhou, Leishan Co., SE Kaili, NE Leishan, Leigong Shan, E-slope, 1700–1800 m, 14.–24.6.2001 / env. of pass between Leishan and Fangxiang (26°22.74'N 108°12.99'E), leg. Schillhammer (7) / Holotypus ♂ *Lobrathium radens* sp. n., det. V. Assing 2011" (NHMW). Paratypes: 2♂♂: same data as holotype (NHMW, cAss).

Etymology. The specific epithet (Latin, present participle of radere: to scrape) alludes to the presence of distinct spines and carinae on the ventral process of the aedeagus.

Description. Large species, body length 8.0–9.2 mm; length of forebody 4.9–5.2 mm. Habitus as in Fig. 200. Coloration: body black, elytra with large yellowish spot



Figs 194–205. *Lobrathium schuelkei* (**194–199**) and *L. radens* (**200–205**). **194, 200:** habitus; **195, 201:** forebody; **196, 202:** male sternite VII; **197, 203:** male sternite VIII; **198–199, 204–205:** aedeagus in lateral and in ventral view. Scale bars: 194–195, 200–201: 1.0 mm; 196–199, 202–205: 0.5 mm.

posteriorly not reaching lateral and posterior margins; legs reddish; antennae dark-reddish to reddish-brown.

Head (Fig. 201) weakly transverse, behind eyes strongly convex; posterior angles weakly marked; punctation of dorsal surface moderately coarse and very dense, with interstices reduced to narrow ridges, small spot in median dorsal portion and frons impunctate and glossy. Eyes moderately large, approximately half as long as distance from posterior margin of eye to neck. Antenna 2.8–3.0 mm long.

Pronotum (Fig. 201) relatively short and broad, approximately 1.15–1.20 times as long as broad and almost as broad as head, lateral margins almost straight in the middle and converging posteriad in dorsal view; punctation sparser and slightly coarser than that of head.

Elytra (Fig. 201) approximately 0.95 times as long as, and distinctly broader than pronotum; humeral angles marked; punctation coarse, dense, and not arranged in series; interstices without microsculpture and glossy. Hind wings fully developed.

Abdomen distinctly narrower than elytra; punctation fine and dense; posterior margin of tergite VII with palisade fringe; posterior margin of tergite VIII weakly convex.

♂: sternites III–VI unmodified; sternite VII with small and V-shaped median impression with cluster of approximately 10 modified, short and stout black setae on either side, posterior margin distinctly and broadly concave (Fig. 202); sternite VIII weakly transverse, with pronounced median impression, this impression with numerous mod-

ified, short and stout black setae, posterior excision deep, broad, and somewhat U-shaped, on either side of this excision with dense black setae (Fig. 203); aedeagus approximately 1.5 mm long, ventral process blade-shaped and apically acute, on ventral surface with two tooth-like processes and additional tranverse carinae (Figs 204–205).

Comparative notes. *Lobrathium radens* is characterised particularly by its large size, broad body, the dense punctation of the head, the short and broad pronotum, and particularly by the shape and chaetotaxy of the male sternite VII and VIII, as well as by the morphology of the aedeagus.

Distribution and natural history. The type locality is situated in the Leigong Shan in eastern Guizhou province, China (Fig. 153). The type specimens were collected at an altitude 1700–1800 m.

Lobrathium retrocarinatum sp. n. (Figs 153, 206–211)

Type material. Holotype ♂ [teneral]: "China: Yunnan province, Shanzhi env., 22.–24.VI.2007, Jizu Shan Mt., 2180–2580 m, along the path to the summit, 27°57.7–8'N, 100°22.1–23.6'E, J. Hájek & J. Ružička leg. / sifted detritus and leaves, dense mixed forest (with dominant *Pinus*, *Quercus* and *Rhododendron*) near stream [CH45–47] / Holotypus ♂ *Lobrathium retrocarinatum* sp. n., det. V. Assing 2011" (cAss).

Etymology. The specific epithet (Latin, adjective) is composed of retro (back, backwards) and carinatum (carinate); it refers to the long dorsal carina of the ventral process of the aedeagus.

Description. Species of moderate size, body length 7 mm; length of forebody 3.7 mm. Habitus as in Fig. 206. Coloration: whole body blackish, elytra with weak purple hue and with relatively small, circular yellowish spot posteriorly not reaching lateral and posterior margins, nor suture.

Head (Fig. 207) weakly transverse, 1.07 times as wide as long, of subrectangular shape, widest across eyes; posterior angles moderately marked; punctation of dorsal surface coarse and dense; vertex and frons less densely punctate; interstices without microsculpture. Eyes large and bulging, approximately 0.8 times as long as distance from posterior margin of eye to neck in dorsal view. Antenna 2.1 mm long.

Pronotum (Fig. 207) moderately oblong, approximately 1.2 times as long as broad and about 0.95 times as broad as head, lateral margins almost straight in the middle and weakly converging posteriad in dorsal view; punctation similar to that of head.

Elytra (Fig. 207) long, 1.05 times as long as, and distinctly broader than pronotum; humeral angles marked; punctation coarse, dense, and not arranged in distinct series; interstices without microsculpture and glossy. Hind wings fully developed.

Abdomen slightly narrower than elytra; punctation moderately fine and dense; interstices with distinct transverse microsculpture; posterior margin of tergite VII with palisade fringe; posterior margin of tergite VIII weakly convex.

♂: sternites V and VI with shallow median impression posteriorly; sternite VII strongly transverse and with pronounced, extensive median impression, this impression with a cluster of distinctly modified, short and stout black setae on either side of the impunctate middle, posterior margin broadly and distinctly concave (Fig. 208); sternite VIII approximately as long as broad and with pronounced, deep and oblong median impression, this impression with numerous distinctly modified, short and stout black setae, except for the impunctate posterior median portion, posterior excision relatively deep and almost U-shaped, on either side of this excision with dense black setae (Fig. 209); aedeagus 1 mm long, ventral process basally broad, gradually tapering towards apex, apically acute, without distinct spines, but with pronounced, long median carina dorsally (Figs 210–211).

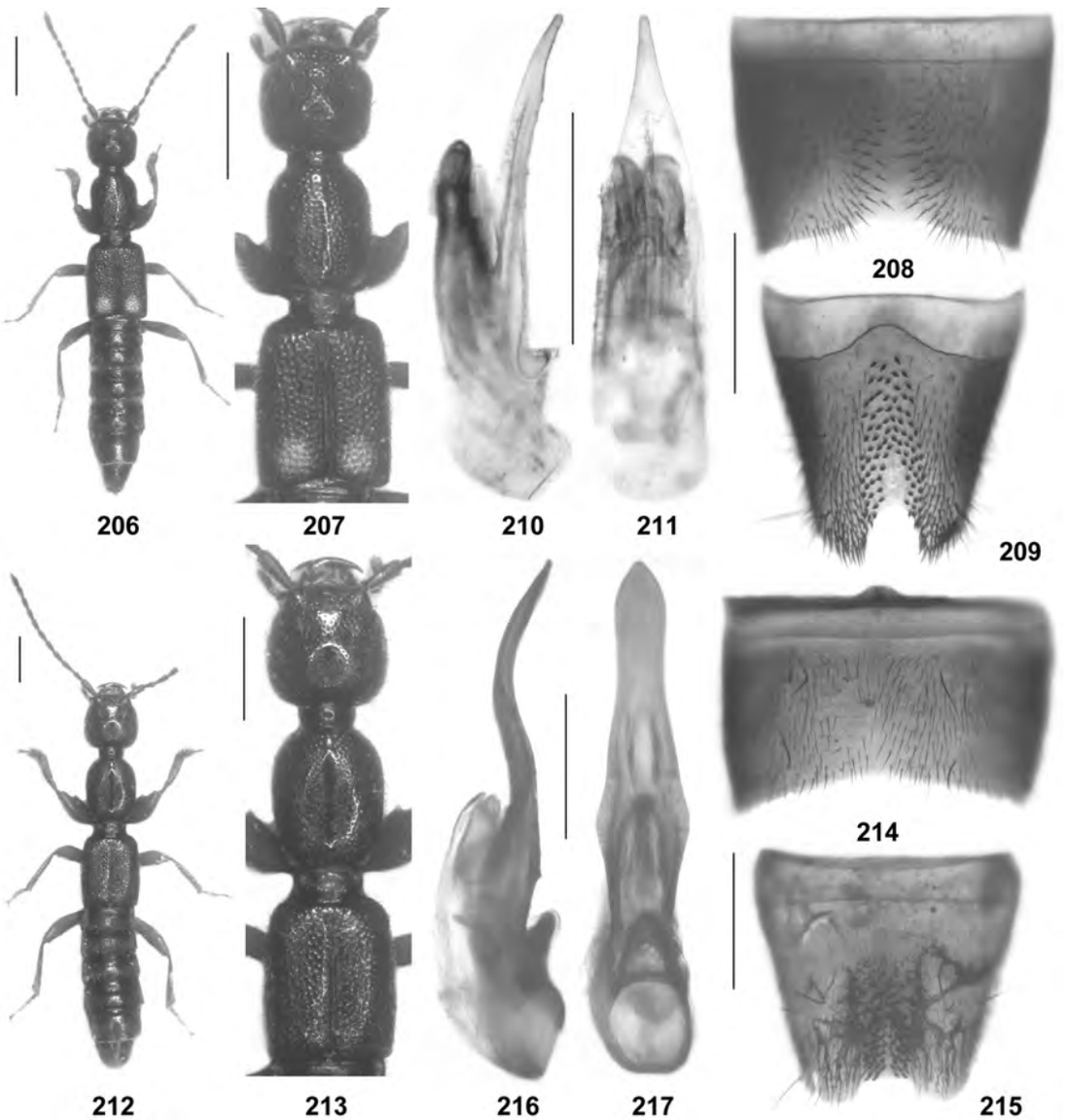
Comparative notes. *Lobrathium retrocarinatum* is distinguished from other spotted *Lobrathium* species particularly by the pronounced modifications of the male sternites VII and VIII, as well as by the distinctive morphology of the ventral process of the aedeagus. From many Chinese representatives of the genus with spotted elytra, it is additionally distinguished by the relatively small and subcircular elytral spots.

Distribution and natural history. The type locality is situated in the Jizu Shan in northern Yunnan, China (Fig. 153). The latitude indicated on the label of the holotype is evidently erroneous and should read 25° rather than 27°. The somewhat teneral type specimen was collected in a mixed forest near a stream at an altitude of 2180–2580 m.

Lobrathium feldmanni sp. n. (Figs 193, 212–217)

Type material. Holotype ♂: "China-N.Sechuan, Wangcang, 18.–20.5.2002, Lgt E Kučera / Holotypus ♂ *Lobrathium feldmanni* sp. n., det. V. Assing 2011" (cAss).

Etymology. The species is dedicated to my friend and colleague Benedikt Feldmann, to whom I owe the holotype.



Figs 206–217. *Lobrathium retrocarinatum* (**206–211**) and *L. feldmanni* (**212–217**). **206, 212:** habitus; **207, 213:** forebody; **208, 214:** male sternite VII; **209, 215:** male sternite VIII; **210–211, 216–217:** aedeagus in lateral and in ventral view. Scale bars: 206–207, 212–213: 1.0 mm; 208–211, 214–217: 0.5 mm.

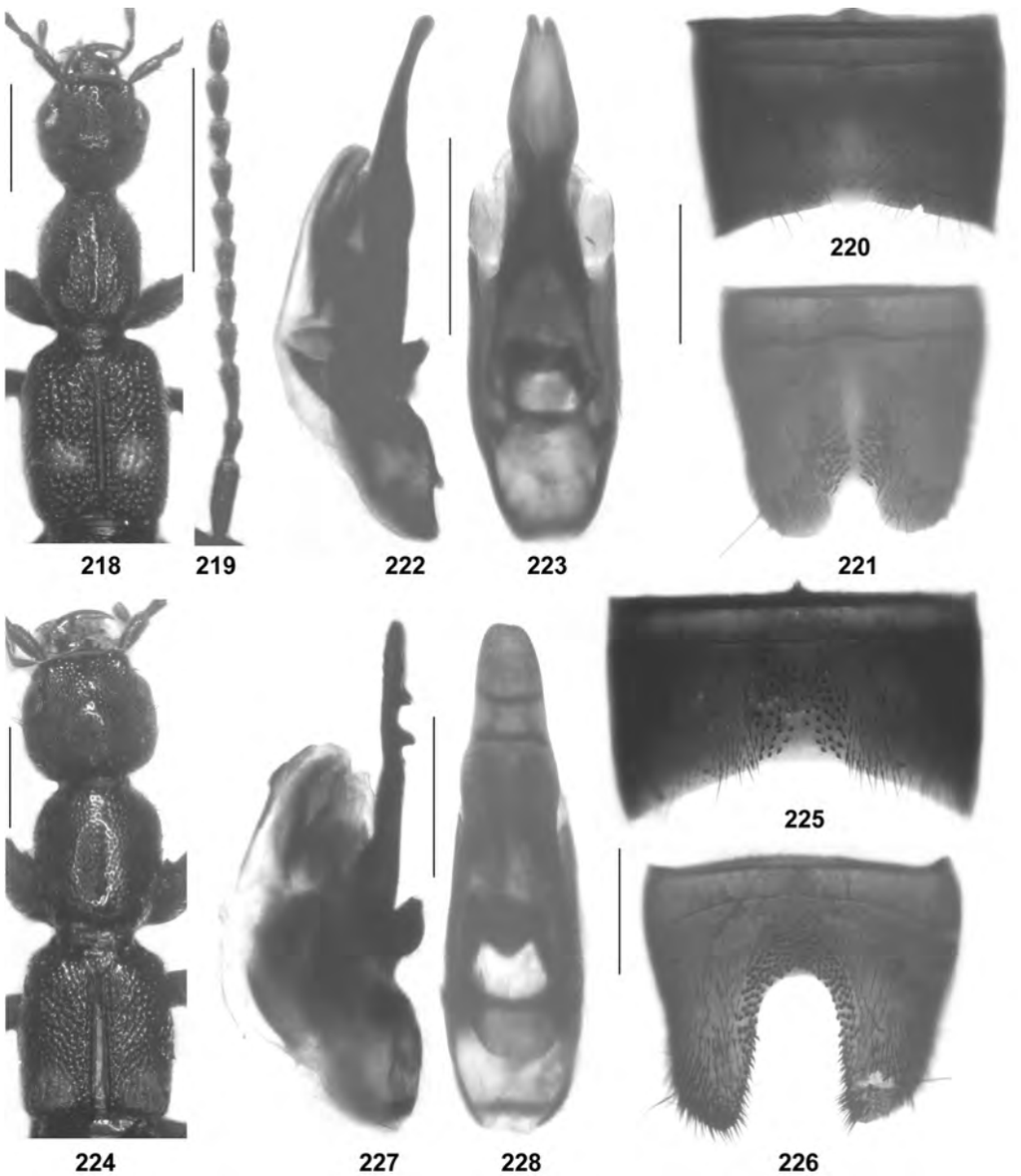
Description. Large species, body length 8.6 mm; length of forebody 4.8 mm. Habitus as in Fig. 212. Coloration: body dark-brown; legs brown; antennae dark-brown.

Head (Fig. 213) approximately as long as wide, behind eyes convexly rounded towards neck; posterior angles not marked; punctation of dorsal surface relatively fine and dense; interstices narrow, narrower than diameter of punctures, and glossy, without microsculpture; transverse patch in median dorsal portion and frons impunctate. Eyes relatively small, approximately one third as long as distance from posterior margin of eye to neck. Antenna slender, 3.2 mm long.

Pronotum (Fig. 213) 1.27 times as long as broad and 0.93 times as broad as head, widest in anterior half, convexly tapering posteriorly; punctation dense, slightly coarser than that of head.

Elytra (Fig. 213) 0.92 times as long as, and distinctly broader than pronotum; humeral angles marked; punctation coarse, dense, and not arranged in series; interstices without microsculpture and glossy. Hind wings apparently fully developed.

Abdomen as broad as elytra; punctation fine and dense; posterior margin of tergite VII with palisade fringe; posterior margin of tergite VIII distinctly convex.



Figs 218–228. *Lobrathium ablectum* (**218–223**) and *L. excisissimum* (**224–228**). **218, 224:** forebody; **219:** antenna; **220, 225:** male sternite VII; **221, 226:** male sternite VIII; **222–223, 227–228:** aedeagus in lateral and in ventral view. Scale bars: 218–219, 224: 1.0 mm; 220–223, 225–228: 0.5 mm.

♂: sternite VII with shallow median impression posteriorly, without modified setae (Fig. 214); sternite VIII moderately transverse and with distinct median impression posteriorly, this impression with numerous modified, short and stout black setae, posterior excision shallow, subrectangular, and with somewhat bisinuate anterior margin (Fig. 215); aedeagus 1.8 mm long, ventral process long, slender, and bisinuate in lateral view (Figs 216–217).

Comparative notes. *Lobrathium feldmanni* is distinguished from its congeners particularly by the shape and chaetotaxy of the male sternite VIII, as well as by the morphology of the aedeagus. In addition, it is characterised by rather large body size, slender antennae, and the uniformly dark-brown coloration of the body.

Distribution and natural history. The type locality, Wangcang Xian, is situated in the northeast of Sichuan province, China (Fig. 193). Additional data are not available.

***Lobrathium ablectum* sp. n.** (Figs 140, 218–223)

Type material. Holotype ♂: "China: W-Hubei (Daba Shan), creek valley 8 km NW Muyuping, 31°29'N, 110°22'E, 1550–1650 m, 18.VII.2001, leg. M. Schülke [CH01–16A] / creek valley, deciduous forest, moss (sifted) [CH01–16A] / Holotypus ♂ *Lobrathium ablectum* sp. n., det. V. Assing 2011" (cAss). Paratypes: 2♀♀: same data as holotype (cSch).

Etymology. The specific epithet (Latin, past participle of the verb ablegere: to send or move away) alludes to the characteristic position of the elytral spot.

Description. Relatively large species, body length 7.7–9.3 mm; length of forebody 4.4–4.6 mm. Coloration: whole body black, except for the dark-brown tarsi and apical antennomeres; elytra with a subcircular reddish spot situated in anterior portion of posterior half (i.e., at some distance from posterior margin).

Head (Fig. 218) approximately as wide as long or weakly transverse, widest across eyes; lateral margins behind eyes convexly rounded towards neck; posterior angles obsolete; dorsal surface between eyes uneven, with shallow median and lateral impressions; punctation of dorsal surface moderately coarse, but extremely dense, interstices reduced to very narrow ridges; frons and a transverse, somewhat elevated patch on vertex glossy and with sparser macropunctures, remainder of dorsal surface matt; interstices without microsculpture. Eyes rather large and strongly convex, distinctly more than half as long as distance from posterior margin of eye to neck. Antenna (Fig. 219) slender, approximately 2.5 mm long, antennomeres VI–IX at least 1.5 times as long as broad.

Pronotum (Fig. 218) long and slender, 1.3 times as long as broad and approximately 0.9 times as broad as head; lateral margins in the middle almost parallel, only indistinctly converging posteriad; punctation coarse and conspicuously dense, except for a glossy, impunctate, oblong and somewhat bulging lateral patch on either side and for the impunctate glossy midline.

Elytra (Fig. 218) long, approximately 1.1 times as long as, and distinctly broader than pronotum; humeral angles marked; punctation very coarse, dense, not arranged in series, and somewhat rugosely confluent near anterior portion of suture; interstices without microsculpture and glossy. Hind wings apparently fully developed.

Abdomen narrower than elytra; punctation fine and dense; interstices at most with traces of microsulpture and glossy; posterior margin of tergite VII with palisade fringe.

♂: posterior margin of tergite VIII truncate; sternites IV–V indistinctly depressed in the middle; sternite VI with shallow median impression posteriorly; sternite VII moderately transverse, with median impression without pubescence, posterior margin distinctly concave and in the middle weakly convex (Fig. 220); sternite VIII weakly transverse, in the middle with long and pronounced impression, this impression with a cluster of numerous distinctly modified, short and stout black setae on either side, posterior excision moderately deep and almost U-shaped (Fig. 221); aedeagus 1.35 mm long, ventral process strongly sclerotised and apically bifid (Figs 222–223).

♀: posterior margin of tergite VIII weakly convex.

Comparative notes. *Lobrathium ablectum* is readily distinguished from all its congeners not only by the male sexual characters, but also by several distinctive external characters, particularly the punctation and impressions of the head, the punctation and impunctate lateral patches of the pronotum, and the position of the elytral spot.

Distribution and natural history. The type locality is situated in the Daba Shan in the west of Hubei province, China (Fig. 140). The type specimens were sifted from moss in a deciduous forest, together with *L. taureum* and *L. spathulatum*, at an altitude of 1550–1650 m.

***Lobrathium excisissimum* sp. n.** (Figs 180, 224–228)

Type material. Holotype ♂: "China (N-Yunnan) Dali Bai Nat. Aut. Pref., Diancang Shan, 3 km W Dali old town, creek valley at "Cloud Road", right upper chairlift station, 25°41.1'N, 100°06.8'E, 2750 m (under stones, leaf litter along creek), 17.VI.2005 D.W. Wrase [11C] / Holotypus ♂ *Lobrathium excisissimum* sp. n., det. V. Assing 2011" (cAss). Paratype ♀: same data as holotype (cSch).

Etymology. The specific epithet (Latin, superlative of excisus) alludes to the pronounced posterior excision of the male sternite VIII.

Description. Large species, body length 9.0–9.5 mm; length of forebody 4.9–5.1 mm. Coloration: body black, elytra with subcircular yellowish spot reaching neither posterior nor lateral margins; legs blackish-brown with reddish tarsi; antennae blackish-brown.

Head (Fig. 224) approximately 1.1 times as wide as long; lateral margins behind eyes convexly rounded towards neck; posterior angles not marked; punctation of dorsal surface relatively fine and dense; interstices narrow, narrower than diameter of punctures, and glossy, without microsculpture; median dorsal portion and frons impunctate or sparsely punctate. Eyes moderately large and weakly convex, slightly more than half as long as distance from posterior margin of eye to neck in dorsal view. Antenna moderately slender, approximately 3.2 mm long.

Pronotum (Fig. 224) short and broad, 1.10–1.15 times as long as broad and approximately 0.95 times as broad as head, widest anteriorly; punctation similar to that of head, but somewhat less dense; interstices glossy.

Elytra (Fig. 224) approximately 0.9 times as long as, and distinctly broader than pronotum; humeral angles marked; punctation coarse, dense, and not arranged in series; interstices without microsculpture and glossy. Hind wings apparently fully developed.

Abdomen approximately as broad as elytra; punctation fine and dense; posterior margin of tergite VII with palisade fringe; posterior margin of tergite VIII distinctly convex.

♂: sternite VI with shallow median impression posteriorly; sternite VII with extensive median impression, this impression with numerous distinctly modified, short and stout black setae, posterior margin strongly and broadly convex (Fig. 225); sternite VIII moderately transverse, with distinct median impression and remarkably deep, U-shaped posterior excision, the margins of this impression and the median excision with numerous distinctly modified, short and stout black setae (Fig. 226); aedeagus 1.6 mm long, ventral process straight in lateral view, with two pairs of pronounced ventral teeth (Figs 227–228).

Comparative notes. *Lobrathium excisissimum* is readily distinguished from all its congeners by the combination of large size, broad body (short and compact pronotum), the relatively fine and dense punctation of the head, the coloration, and particularly by the distinctive male primary and secondary sexual characters. The similarly derived shapes and chaetotaxy of the male sternite VII and VIII, as well as the similar general morphology of the aedeagus suggest that *L. excisissimum* is closely allied to *L. radens*.

Distribution and natural history. The type locality is situated in the Diancang Shan in northern Yunnan, China (Fig. 180). The type specimens were collected on a stream bank at an altitude of 2750 m.

***Lobrathium rotundiceps* (Koch, 1939)** (Figs 141, 229–230)

Lathrobium rotundiceps Koch, 1939: 163 f.

Type material examined. Holotype ♀ [dissected prior to present study]: "Tienmuschan, N.W. [sic] China Rtt. / Type / Lathrobium rotundiceps Koch, det. C. Koch / Holotypus 1956, det. Kamp / Holotypus Lathrobium rotundiceps Koch / Domene rotundiceps (Koch) ♀, V.I. Gusarov det. 1993 / Lobrathium rotundiceps Koch, det. V. Assing 2012" (NHMB).

Comment. The original descriptions is based on "ein Weibchen aus Tienmuschan (Nordwestlichen China)" (Koch 1939). The specimen is deposited in the collections of the NHMB.

Redescription. Large species, body length 10.2 mm; length of forebody 6.0 mm. Habitus as in Fig. 229. Coloration: body dark reddish-brown; legs dark-yellowish; antennae brown.

Head (Fig. 230) approximately 1.1 times as long as wide; lateral margins behind eyes convexly rounded towards neck; posterior angles completely obsolete; punctation of dorsal surface relatively fine and conspicously dense, not sparser in median dorsal portion; interstices reduced to narrow ridges everywhere; dorsal surface matt. Eyes relatively small and weakly convex, barely one third as long as distance from posterior margin of eye to neck in dorsal view. Antenna slender, approximately 4 mm long.

Pronotum (Fig. 230) slender, approximately 1.25 times as long as broad and approximately 0.95 times as broad as head, widest anteriorly, weakly tapering posteriad; punctation much coarser and less dense than that of head; interstices glossy, on average slightly narrower than diameter of punctures.

Elytra (Fig. 230) 0.92 times as long as, and distinctly broader than pronotum; humeral angles marked; punctation somewhat coarser and denser than that of pronotum, not arranged in distinct series, but partly somewhat obliquely confluent. Hind wings present and probably fully developed.

Abdomen approximately as broad as elytra; punctation fine and dense; posterior margin of tergite VII with palisade fringe; posterior margin of tergite VIII obtusely pointed in the middle.

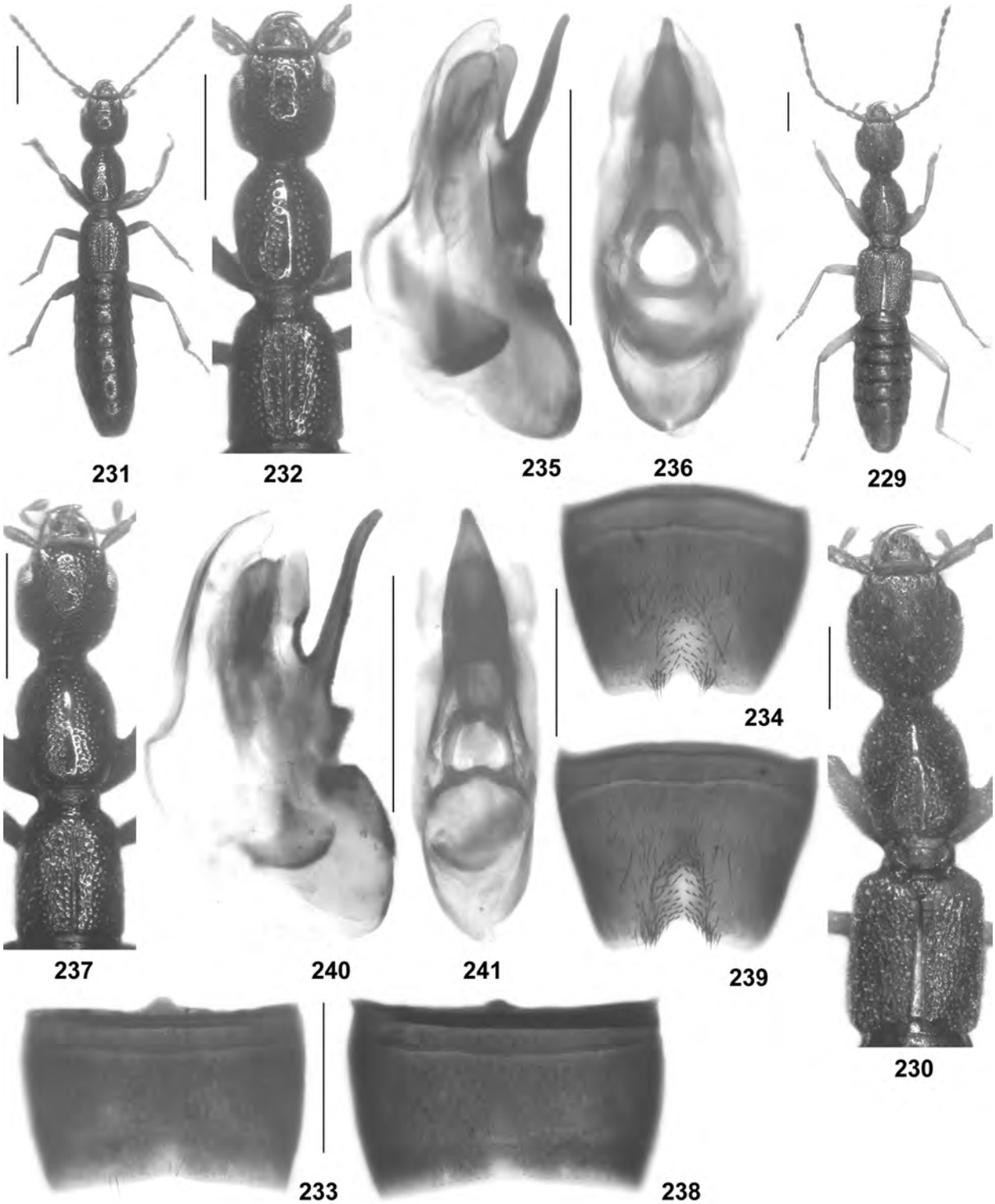
♂: unknown.

Comparative notes. *Lobrathium rotundiceps* is characterised especially by its large body size, the ovoid shape of the distinctly oblong head (similar to the condition in many *Domene* species), as well as by the relatively fine and very dense punctation of the head.

Distribution and natural history. The type locality Zhejiang is situated in Zhejiang province, northeastern (not northwestern, as indicated on the label!) China (Fig. 141). Additional data and records are unknown.

***Lobrathium cholaicum* sp. n.** (Figs 141, 231–236)

Type material. Holotype ♂: "SE Tibet, "Chola Shan" pass, road Yanjing – Markam, 50 km S Markam, 4400 m, 29°16'N, 98°38'E, mixed forest, 24.–27.VI.1997, Jaroslav Turna leg. / Holotypus ♂ *Lobrathium cholaicum* sp. n., det. V. Assing 2011" (cAss). Paratypes: 5♂♂, 1♀: same data as holotype (cSch, cAss).



Figs 229–241. *Lobrathium rotundiceps*, holotype (**229–230**), *L. cholaicum* (**231–236**), and *L. daxuense* (**237–241**). **229, 231:** habitus; **230, 232, 237:** forebody; **233, 238:** male sternite VII; **234, 239:** male sternite VIII; **235–236, 240–241:** aedeagus in lateral and in ventral view. Scale bars: 229–232, 237: 1.0 mm; 233–236, 238–241: 0.5 mm.

Etymology. The specific epithet (adjective) is derived from the name of the pass where the types were collected.

Description. Species of moderate size, body length 6–7 mm; length of forebody 3.4–3.6 mm. Habitus as in Fig. 231. Coloration: body blackish-brown, with the elytra usually slightly paler; legs reddish to reddish-brown; antennae reddish.

Head (Fig. 232) approximately as long as broad or weakly oblong; lateral margins behind eyes convexly rounded towards neck; posterior angles not marked; punctation of dorsal surface coarse and moderately dense, somewhat sparser on vertex and on frons; interstices glossy, without microsculpture. Eyes moderately large and moderately convex, clearly less than half as long as distance from posterior margin of eye to neck in dorsal view. Antenna moderately slender, approximately 2 mm long.

Pronotum (Fig. 232) moderately oblong, 1.20–1.25 times as long as broad and approximately 0.95 times as broad as head, widest anteriorly and noticeably tapering posteriad; punctation similar to that of head, or slightly coarser; interstices glossy.

Elytra (Fig. 232) relatively short, approximately 0.85 times as long as pronotum, distinctly widened posteriad; humeral angles weakly marked; punctation approximately as coarse as that of pronotum, but distinctly denser; interstices without microsculpture and glossy. Hind wings reduced.

Abdomen widest at segments VI/VII, distinctly broader than elytra; punctation not particularly fine and defined, dense on anterior tergites, somewhat sparser on tergite VII; interstices with very shallow, almost obsolete microsculpture and glossy; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII truncate to very weakly convex.

♂: sternite VI with shallow median impression posteriorly; sternite VII moderately transverse, with relatively shallow median impression posteriorly, without modified setae, posterior margin broadly and weakly concave (Fig. 233); sternite VIII moderately concave, with distinct median impression, this impression with relatively sparse, distinctly modified, short and stout black setae, posterior excision rather shallow and concave, on either side of this excision with tuft of long black setae (Fig. 234); aedeagus approximately 0.9 mm long, ventral process short, almost straight in lateral view, and apically acute in ventral view (Figs 235–236).

Comparative notes. *Lobrathium cholaicum* is readily distinguished from all its congeners by the male sexual characters (shape and chaetotaxy of the male sternite VIII, morphology of the aedeagus), and from other Chinese *Lobrathium* species additionally by the absence of a palisade fringe at the posterior margin of the abdominal tergite VII.

Together with the five following species, *L. cholaicum* belongs to a group of species distributed from Nepal to western China and including also the Himalayan *L. wittmeri* and *L. kosiense*. For characters constituting this species group see the comparative notes in the section on *L. wittmeri*.

Distribution and natural history. The type locality is situated in the extreme southeast of Tibet, close to the border with Sichuan (Fig. 141). The type specimens were collected in a mixed forest at an altitude of 4400 m.

Lobrathium daxuense sp. n. (Figs 180, 237–241)

Type material. Holotype ♂: "China (W Sichuan) (4) Daxue Shan, river valley 5 km E Kangding [sic], 2500–2800 m, 30.03N, 102.00E, 20./23.V.1997 Wrase / Holotypus ♂ *Lobrathium daxuense* sp. n., det. V. Assing 2011" (cAss). Paratypes: 2♂♂, 1♀: same data as holotype (cSch, cAss); 2♂♂: "China, Sichuan, Gongga Shan, abv. Camp 3, 3300–3350 m, 23.VII.1994, A. Smetana [C19] (cSme, cAss); 1♂: "China: Sichuan Gongga Shan, Hailuogou, in front of Glacier 1, 2850 m, 29°35N, 102°00E, 7.VII.1998, A. Smetana [C76]" (cAss).

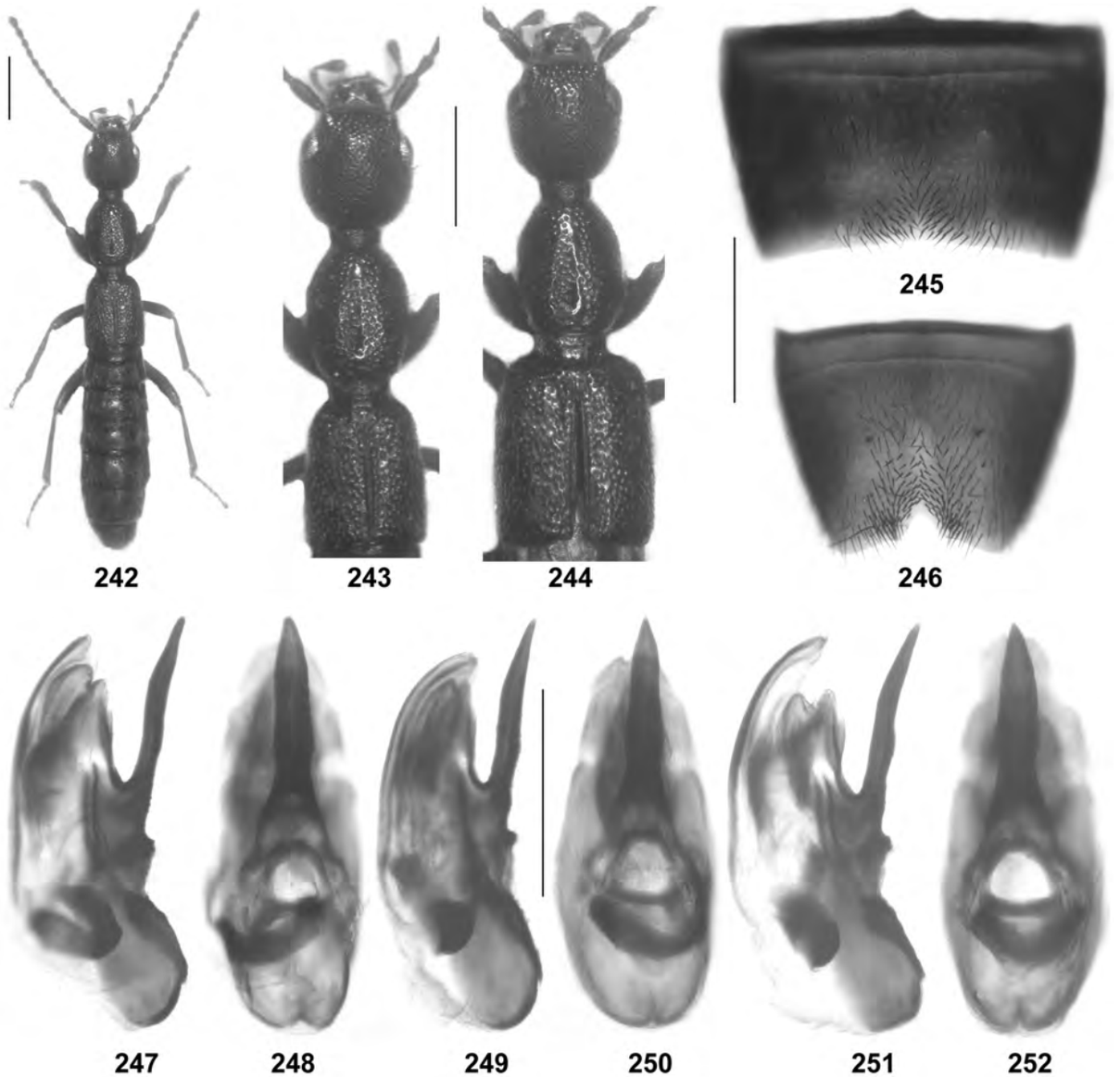
Etymology. The specific epithet (adjective) is derived from the name of the mountain range where the types were collected.

Description. Habitus as in Fig. 266. Externally highly similar to *L. cholaicum*, but distinguished as follows:

Head (Fig. 237) with less coarse and distinctly denser punctation; vertex at most with very small patch with sparse punctation. Eyes slightly larger, but still less than half as long as distance from posterior margin of eye to neck in dorsal view. Pronotum (Fig. 237) with less coarse and somewhat denser punctation. Elytra (Fig. 237) with slightly less coarse and slightly denser punctation. Abdomen with much finer and much denser punctation; posterior margin of tergite VII with narrow rudiment of a palisade fringe.

♂: sexual characters similar to those of *L. cholaicum*; sternite VII as in Fig. 238; sternite VIII in median impression with denser setae, posterior excision broader and deeper (Fig. 239); aedeagus with longer and apically less acute ventral process in different position (base closer to ventral opening) (Figs 240–241).

Comparative notes. As can be inferred from the similar external characters, the similar modifications of the male sternites VII and VIII, as well as from the similar morphology of the aedeagus, *L. daxuense* is closely related to *L. cholaicum*; for characters distinguishing these two species see the description above. From other Chinese con-



Figs 242–252. *Lobrathium bimembre*. **242:** habitus (holotype); **243–244:** forebody of micropterous (**243**) and of macropterous specimen (**244**); **245:** male sternite VII; **246:** male sternite VIII; **247–252:** aedeagus in lateral and in ventral view of males from Yanmen (**247–248**), Gaoligong Shan (**249–250**), and Diancang Shan (**251–252**). Scale bars: 242–244: 1.0 mm; 245–252: 0.5 mm.

geners, except *L. domenoides*, *L. daxuense* is separated additionally by the combination of moderate size and the short and posteriorly widened elytra. For comments on species group affiliations see the comparative notes in the sections on *L. wittmeri* and *L. cholaicum*.

Distribution and natural history. The species is currently known from two localities in the Daxue Shan in Sichuan province, China (Fig. 180). The specimens from the type locality were collected in a river valley at an altitude of 2500–2800 m, those from the Gongga Shan at elevations of 2850–3350 m. In the Gongga Shan, *L. daxuense* was collected at the edge of an original coniferous forest (mainly fir) by sifting various leaf litter and in sandy areas near a river leaving a glacier (Smetana pers. comm.) together with *L. configens*, close to where *L. duplex* was found.

***Lobrathium bimembre* sp. n.** (Figs 141, 242–252)

Type material. Holotype ♂ [micropterous]: "China (Yunnan), Dali Bai Nat. Aut. Pref., Diancang Shan, 4 km W Dali old town, 2900–3000 m, 25°41.4'N, 100°06.7'E, E slope, former stone pit (in overgrown gravel/soil/plant roots), 31.VIII.2003 Wrase [20] / Holotypus ♂ *Lobrathium bimembre* sp. n., det. V. Assing 2011" (cAss). Paratypes: 1♀ [micropterous]: same data as holotype (cSch); 1♂, 1♀ [micropterous]: "China (Yunnan), Dali Bai Nat. Aut. Pref., Diancang Shan, 4 km W Dali old town, 2900–3000 m / 25°41.4'N, 100°06.7'E, E slope, former stone pit (in overgrown gravel/soil/plant roots/und. stones), 18.VI.2005 D.W. Wrase [12]" (cSch); 1 ♀ [micropterous]: "China (Yunnan), Dali Bai Auton. Pref., Diancang Shan W Dali, 25°41'33''N, 100°06'36''E, 2927 m (former stone pit, in gravel /under stones), 28.V.2007 D.W. Wrase [05]" (cSch); 1♂, 2♀♀ [1♂ macropterous, 2♀♀ micropterous]: "China (Yunnan) Nujiang Lisu Aut. Pref., Gaoligong Shan, pass 21 km NW Liuku, 3150 m, 25°58'22''N, 98°41'00''E (bamboo, shrubs, under stones along road), 9.VI.2007 D.W. Wrase [26]" (cSch, cAss); 1♀ [micropterous]: "China (Yunnan) Nujiang Lisu Aut. Pref., Gaoligong Shan, valley 21 km W Gongshan, 3320 m, 27°47'03''N, 98°27'39''E (moss, alder, bamboo, Rhodod., sifted), 6. VI.2007 D.W. Wrase [22]" (cSch); 1♀ [micropterous]: "China (Yunnan), Dali Bai Auton. Pref., Diancang Shan W Dali, 25°41'49''N, 100°06'24''E, 2970 m (under stones), 28.V.2007 D.W. Wrase [03]" (cSch); 1♂ [micropterous]: "China-Yunnan, 13.6.–23.6.2005, lgt. E. Kučera" (cSch).

Etymology. The specific epithet (Latin, adjective: two-shaped) alludes to the conspicuous wing-dimorphism.

Description. Wing-dimorphic species of moderately large size; body length 6.5–7.5 mm; length of forebody 3.7–4.1 mm (micropterous morph) and 4.4 mm (macropterous morph), respectively. Habitus of micropterous specimen as in Fig. 242. Externally highly similar to the slightly smaller *L. daxuense*, but distinguished as follows:

Head (Figs 243–244) with very dense punctation, also on vertex, almost completely matt. Antenna 2.3–2.5 mm long. Pronotum (Figs 243–244) with denser and slightly coarser punctation. Elytra 0.85 times (micropterous morph, Fig. 243) or 1.13 times as long as pronotum (macropterous morph, Fig. 244). Posterior margin of abdominal tergite VII with palisade fringe in both morphs.

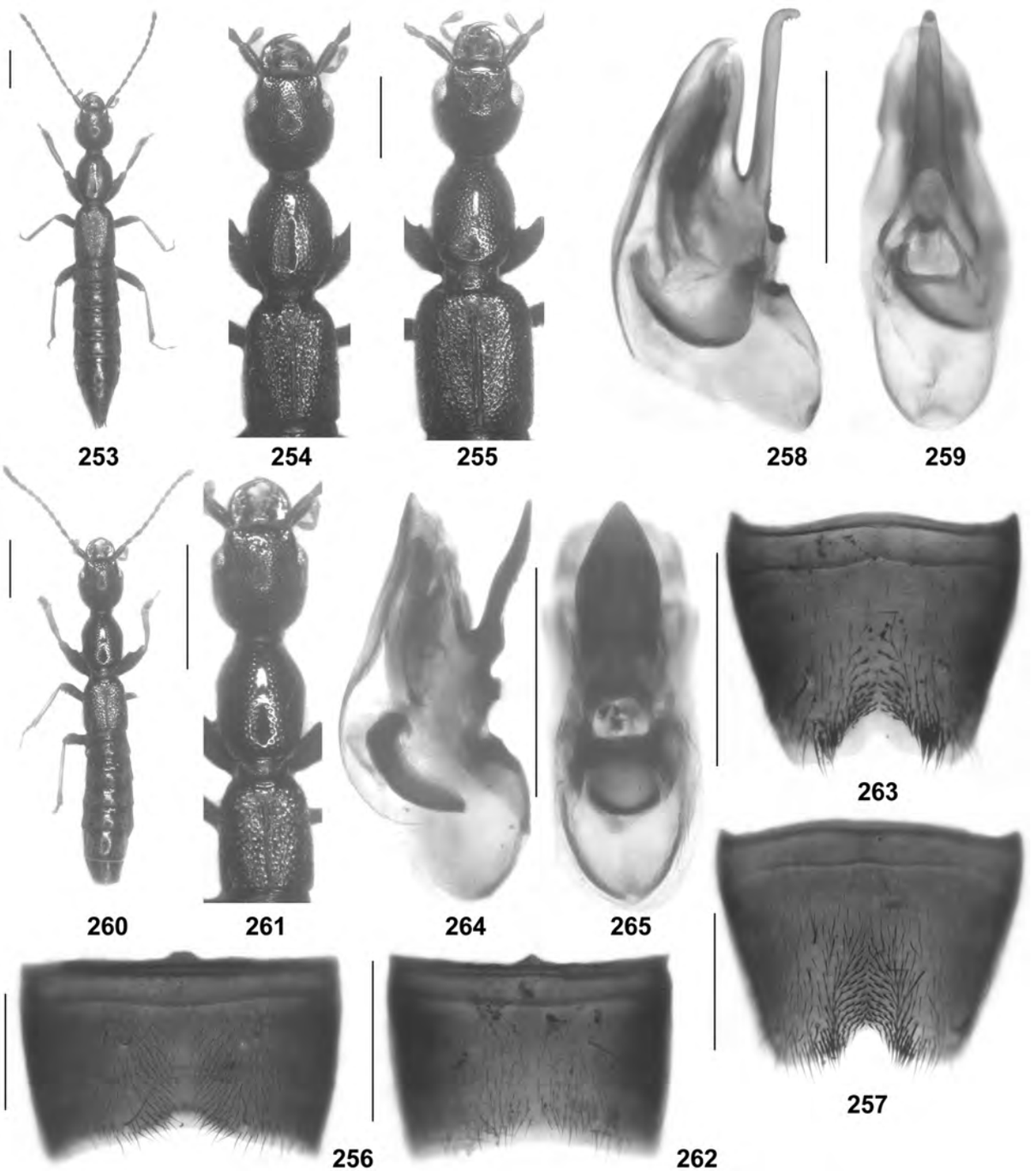
♂: sternites III–VI unmodified; sternite VII moderately transverse, with shallow median impression posteriorly, this impression with numerous short black setae directed postero-mediad, posterior margin only indistinctly concave (Fig. 245); sternite VIII moderately tranverse, with rather long and relatively narrow median impression, this impression with numerous distinctly modified, short and stout black setae, posterior exision small, on either side with tuft of black setae (Fig. 246); aedeagus approximately 1 mm long, ventral process relatively longer than in *L. daxuense*, apically more acute (lateral view), and narrower in ventral view (Figs 247–252).

Comparative notes. *Lobrathium bimembre* is distinguished from all its congeners particularly by the male sexual characters. It is additionally separated from the syntopic, externally similar, and similarly wing-dimorphic *L. duplex* by slightly smaller size, much denser punctation of the head, shorter antennae, and by the less distinctly convex posterior margin of the abdominal tergite VIII. For comments on species group affiliations see the comparative notes in the sections on *L. wittmeri* and *L. cholaicum*.

Distribution and natural history. This species is known from several localities in the Diancang Shan, the Gaoligong Shan, and one in the environs of Yanmen, all of them in Yunnan province (Fig. 141). The specimens were collected from under stones, from gravel, and by sifting litter and debris at altitudes of 2900–3320 m. Only one male in a total of eleven specimens is macropterous.

***Lobrathium duplex* sp. n.** (Figs 193, 253–259)

Type material. Holotype ♂ [micropterous]: "China (Yunnan), Dali Bai Auton. Pref., Diancang Shan W Dali, 25°41'49''N, 100°06'24''E, 2970 m (under stones), 28.V.2007 D.W. Wrase [03] / Holotypus ♂ *Lobrathium duplex* sp. n., det. V. Assing 2011" (cAss). Paratypes: 1♂, 3♀♀ [micropterous]: same data as holotype (cSch, cAss); 1♂, 3♀♀ [micropterous]: "China (Yunnan), Dali Bai Auton. Pref., Diancang Shan W Dali, 25°41'33''N, 100°06'36''E, 2927 m (former stone pit, in gravel /under stones), 28.V.2007 D.W. Wrase [05]" (cSch); 1♂ [micropterous]: "China: N-Yunnan [C03–19], Dali Bai Nat. Aut. Pref., Diancang Shan, 3 km W Dali old town, creek valley and pine forest at "Cloud Road", right upper chairlift station, 25°41.1'N, 100°06.8'E, 2650–2750 m / [C03–19] litter, pine needles, moss (dry and wet), mushrooms, 29.VIII.2003, leg. M. Schülke" (cSch); 5♂♂, 1♀ [micropterous; 4 exs. teneral]: "China (Yunnan), Dali Bai Nat. Aut. Pref., Diancang Shan, 4 km W Dali old town, 2900–3000 m, 25°41.4'N, 100°06.7'E, E slope, former stone pit (in overgrown gravel/soil/plant roots), 31.VIII.2003 Wrase [20]" (cSch); 3♀♀ [micropterous]: "China (Yunnan), Dali Bai Nat. Aut. Pref., Diancang Shan, 4 km W Dali old town, 2900–3000 m / 25°41.4'N, 100°06.7'E, E slope, former stone pit (in overgrown gravel/soil/plant roots/und. stones), 18.VI.2005 D.W. Wrase [12]" (cSch, cAss); 9♂♂, 11♀♀ [1♂, 1♀ macropterous]: "China (W Sichuan) (4) Daxue Shan, river valley 5 km E



Figs 253–265. *Lobrathium duplex* (**253–259**) and *L. domenoides* (**260–265**). **253, 260:** habitus (**253:** micropterous morph); **254–255, 261:** forebody (**254**: micropterous morph; **255**: macropterous morph); **256, 262:** male sternite VII; **257, 263:** male sternite VIII; **258–259, 264–265:** aedeagus in lateral and in ventral view. Scale bars: 253–255, 260–261: 1.0 mm; 256–259, 262–265: 0.5 mm.

Kanding [sic], 2500–2800 m, 30.03N, 102.00E, 20./23.V.1997 Wrase" (cSch, cAss); 10♂♂, 1♀: "China: W-Sichuan (4a), Daxue Shan, Bachtal 5 km E Kangding, 30.03.28N, 102.00.15E, 2500–2800 m, 23.V.1997, M. Schülke" (cSch, cAss); 2♂♂, 3♀♀ [micropterous]: "China W.Sichuan (Ganzi Tibet. Aut. Pref., Kangding Co.) Daxue Shan, brook valley 5 km E Kangding, 2500–2600 m, 30°03N, 102°00E, 24.VI.1999 D.W. Wrase" (cSch, cAss); 1♀ [micropterous]: same data, but leg. M. Schülke (cSch); 1♀: "China, S Sichuan 27.VII.1997, Daliang Shan mts., road Meigu-Leibo, pass 15 km NE Meigu, 28°25'N, 103°17'E, Jaroslav Turna leg." (cSch); 3♀♀: "China Sichuan, Gongga Shan, Hailuogou, head of Glacier 1, 2850 m, 9.VII.96, 29°35N, 102°00E, C57 / collected by A. Smetana, J. Farkač and P. Kabátek" (cSme, cAss).

Etymology. The specific epithet (Latin, adjective: twofold) refers to the conspicuous wing-dimorphism of this species.

Description. Relatively large, wing-dimorphic species, body length 7.3–9.5 mm; length of forebody 4.1–4.8 mm (micropterous morph) and 5.0 mm (macropterous morph). Habitus of holotype as in Fig. 253. Coloration: body blackish; legs with femora dark-brown to blackish, tibiae reddish-brown to blackish-brown, and tarsi reddish to dark-reddish; antennae usually reddish to reddish-brown with more or less distinctly infuscate antennomere I.

Head (Figs 254–255) usually 1.05–1.10 times as long as broad; lateral margins behind eyes smoothly curving towards neck; posterior angles usually obsolete, rarely weakly marked; punctation of dorsal surface moderately coarse and dense, slightly less dense on frons and on vertex; interstices without microsculpture, distinctly narrower than diameter of punctures (except on frons and on small patch of vertex). Eyes slightly larger and more convex in macropterous than in micropterous morph, approximately half as long as distance from posterior margin of eye to neck, or slightly longer in dorsal view. Antenna long and slender, 3.0–3.3 mm long; antennomeres IV–VIII at least twice as long as broad.

Pronotum (Figs 254–255) strongly oblong, usually 1.30–1.35 times as long as broad and approximately 0.90–0.95 times as broad as head, distinctly tapering posteriad; punctation distinctly coarser and somewhat less dense than that of head; interstices without microsculpture and glossy.

Elytra dimorphic; micropterous morph (Fig. 254): moderately short and slender, approximately 0.9 times as long as pronotum, weakly widened posteriad, and weakly convex in cross-section; humeral angles practically obsolete; macropterous morph (Fig. 255): long and broad, approximately 1.1 times as long as pronotum, with parallel lateral margins, and distinctly convex in cross-section; punctation dense and at least slightly coarser than that of pronotum, deep and well-defined to shallow and ill-defined; interstices without microsculpture and glossy. Hind wings reduced (micropterous morph) or fully developed (macropterous morph).

Abdomen widest at segment VI, distinctly broader than (micropterous morph) or approximately as broad as elytra (macropterous morph); punctation very fine and dense; interstices with distinct microsculpture and subdued shine; posterior margin of tergite VII with palisade fringe in both morphs; posterior margin of tergite VIII convex to indistinctly angled in the middle.

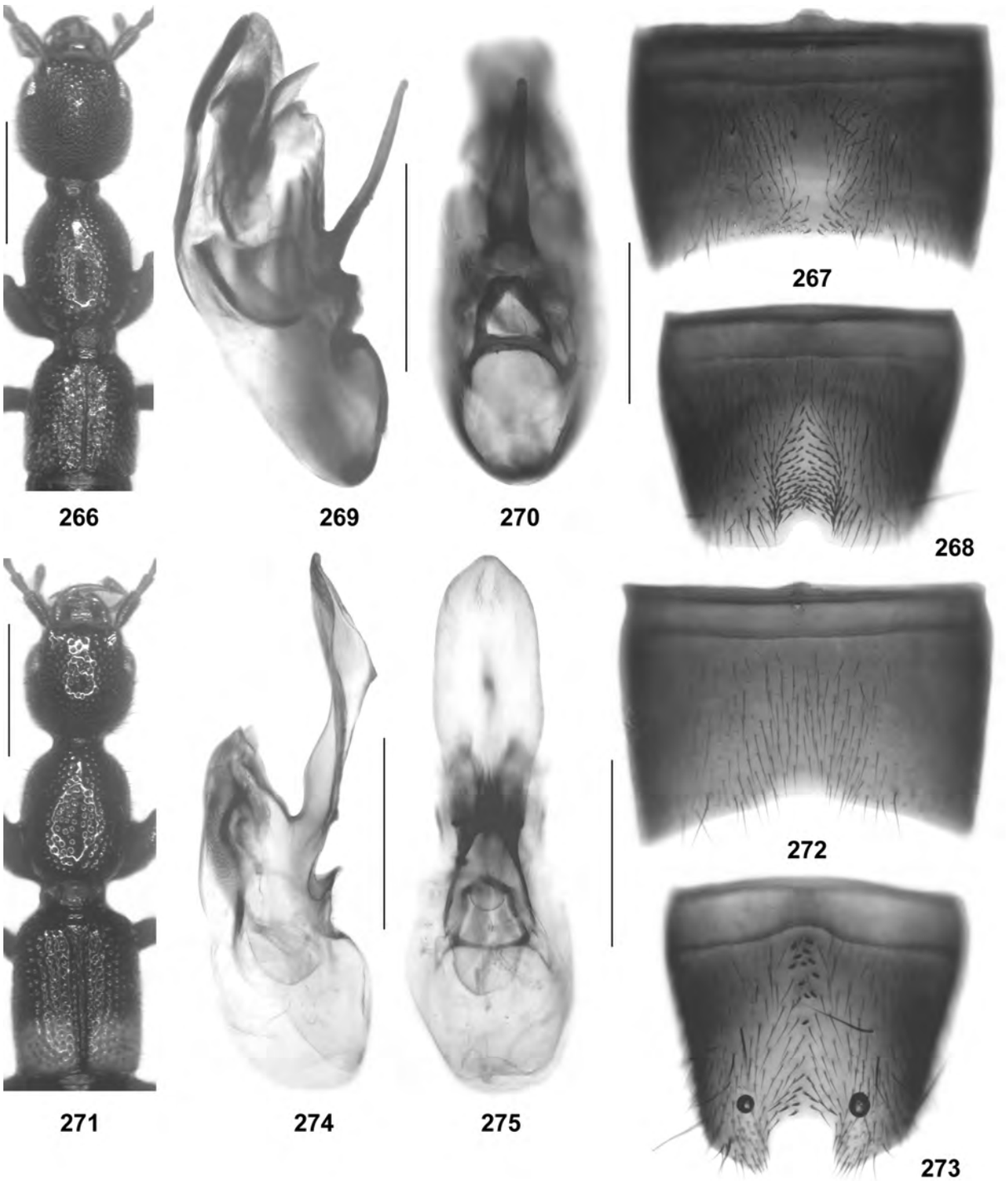
♂: sternites III–V unmodified; sternite VI with shallow median impression posteriorly; sternite VII strongly transverse, in the middle with impression, this impression impunctate in the middle and on either side of middle with pubescence diagonally directed postero-mediad, posterior margin broadly concave (Fig. 256); sternite VIII weakly transverse and with median impression posteriorly, this impression with numerous distinctly modified, short and stout black setae, posterior excision relatively small, on either side with dense black setae (Fig. 257); aedeagus approximately 1.1 mm long, with slender, straight, and apically curved (lateral view) ventral process (Figs 258–259).

Comparative notes. *Lobrathium duplex* is similar to the syntopic *L. daxuense* and *L. bimembr*e, but distinguished by larger body size, the longer and more slender antennae, the more strongly convex posterior margin of the abdominal tergite VIII, and by the male sexual characters, particularly the completely different shape of the ventral process of the aedeagus, from *L. bimembre* additionally by the less coarse and on average less dense punctation of the head.

Distribution and natural history. The species is currently known from the Diancang Shan (Yunnan), the Daxue Shan (western Sichuan), and the Daliang Shan (southern Sichuan) (Fig. 193). Most of the specimens were collected from under stones and from gravel in a stream valley and in a stone pit; one male was sifted from moss and litter. The altitudes range from 2500 to 3000 m. Teneral adults were found in August. One male and one female, both from the same sample, are macropterous, the remaining 58 specimens are micropterous.

Lobrathium domenoides sp. n. (Figs 141, 260–265)

Type material. Holotype ♂ [right middle and hind leg missing]: "China S.Sichuan (Ya'an Pref., Shimian Co.) Xiaoxiang Ling, 7 km S Liziping, 35 km S Shimian, 28°56N, 102°18E, 1600 m (field ridge, bamboo) 7.VII.1999 D.W. Wrase / Holotypus ♂ *Lobrathium domenoides* sp. n., det. V. Assing 2011" (cAss).



Figs 266–275. *Lobrathium lamellatum* (**266–270**) and *L. demptum* (**271–275**). **266, 271:** forebody; **267, 272:** male sternite VII; **268, 273:** male sternite VIII; **269–270, 274–275:** aedeagus in lateral and in ventral view. Scale bars: 266, 271: 1.0 mm; 267–270, 272–275: 0.5 mm.

Etymology. The specific epithet (adjective) alludes the fact that the facies of this species somewhat resembles that of species of the genus *Domene* Fauvel, 1873.

Description. Small species, body length 6 mm; length of forebody 3.3 mm. Habitus as in Fig. 260. Coloration: body blackish-brown; legs brown with blackish-brown femora; antennae reddish-brown with infuscate antennomere I.

Head (Fig. 261) approximately 1.1 times as long as broad, of ovoid shape; lateral margins behind eyes evenly curving towards neck; posterior angles obsolete; punctation of dorsal surface relatively fine and, except for the sparsely punctate frons, very dense, not sparser on vertex than in lateral dorsal portions. Eyes small, approximately one third as long as distance from posterior margin of eye to neck in dorsal view. Antenna long and slender, approximately 2.2 mm long; antennomeres VI–IX at least 1.5 times as long as broad.

Pronotum (Fig. 261) strongly oblong, approximately 1.35 times as long as broad and approximately 0.9 times as broad as head, distinctly tapering posteriad; punctation distinctly sparser than that of head; interstices without microsculpture and glossy.

Elytra (Fig. 261) short and very slender, only 1.08 times as wide and approximately 0.7 times as long as pronotum, somewhat widened posteriad; humeral angles practically obsolete; punctation dense and much coarser than that of pronotum; interstices without microsculpture and glossy. Hind wings reduced.

Abdomen widest at segment VI, 1.15 times as broad as elytra; punctation very fine, barely noticeable, relatively dense on tergites III–VI, sparser on tergite VII; interstices with distinct microsculpture and subdued shine; posterior margin of tergite VII with palisade fringe; posterior margin of tergite VIII weakly convex.

♂: sternites III–VI unmodified; sternite VII with shallow median impression, posterior margin weakly and broadly concave (Fig. 262); sternite VIII weakly transverse, median impression shallow and with numerous distinctly modified, short and stout black setae; posterior excision relatively broad and not very deep, margins semimembranous, on either side of excision with tuft of long black setae (Fig. 263); aedeagus small, 0.75 mm long, with blade-shaped ventral process (Figs 264–265).

Comparative notes. *Lobrathium domenoides* is characterised by its small body size, the habitus (ovoid head, strongly oblong pronotum, slender and short elytra), and by the male sexual characters. For comments on species group affiliations see the comparative notes in the sections on *L. wittmeri* and *L. cholaicum*.

Distribution and natural history. The type locality is situated near Liziping in southern Sichuan province, China (Fig. 141). The holotype was collected in a field margin at an altitude of 1600 m. The rather low altitude and the presence of a distinct palisade fringe at the posterior margin of the abdominal tergite VII suggest that the species may be wing-dimorphic and more widespread.

***Lobrathium lamellatum* sp. n.** (Figs 180, 266–270)

Type material. Holotype ♂: "China: Sichuan, 24.7.1995, 28°07'N, 101°05'E, 30 km NW Muli/Bowa, 3500 m, leg. J. Turna / Holotypus ♂ *Lobrathium lamellatum* sp. n., det. V. Assing 2012" (NHMW).

Etymology. The specific epithet (adjective) alludes to the thin ventral process of the aedeagus (lateral view), one of the characters distinguishing this species from its closest relatives.

Description. Species of moderate size, body length 7 mm; length of forebody 3.8 mm. Coloration: body blackish; legs dark-brown with reddish tarsi; antennae dark-brown.

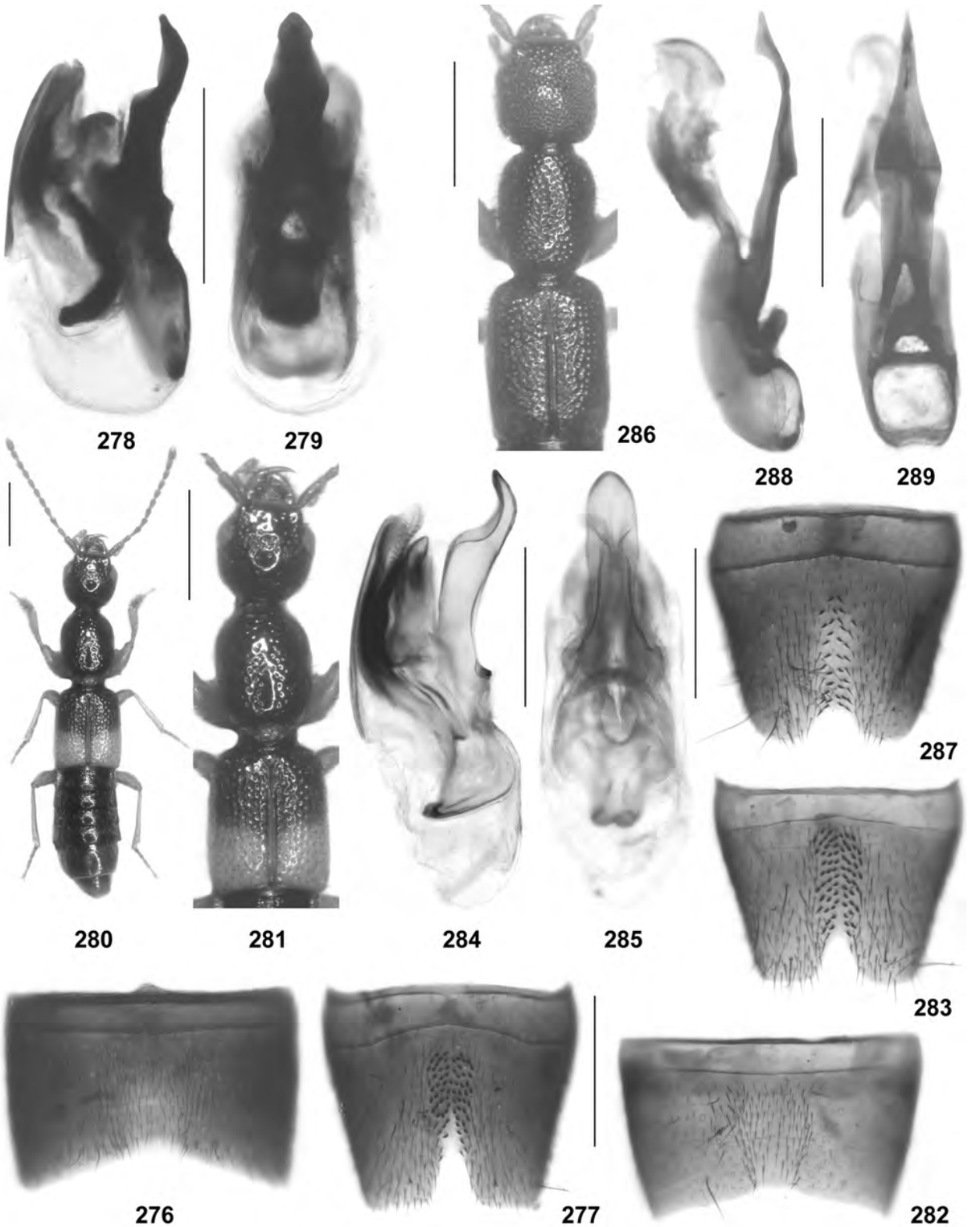
Head (Fig. 266) approximately 1.05 times as long as broad, of ovoid shape; lateral margins behind eyes evenly curving towards neck; posterior angles obsolete; punctation of dorsal surface relatively coarse and, except for the sparsely punctate frons, very dense, not distinctly sparser on vertex than in lateral dorsal portions; dorsal surface matt. Eyes small, little more than one fourth as long as distance from posterior margin of eye to neck in dorsal view. Antenna moderately slender approximately 2.2 mm long; antennomeres VI–IX less than 1.5 times as long as broad.

Pronotum (Fig. 266) moderately oblong, approximately 1.25 times as long as broad and approximately 0.9 times as broad as head, distinctly tapering posteriad; punctation distinctly sparser and somewhat coarser than that of head; interstices without microsculpture and glossy.

Elytra (Fig. 266) short and narrow, only 1.05 times as wide and approximately 0.7 times as long as pronotum, slightly widened posteriad; humeral angles practically obsolete; punctation similar to that of pronotum, but shallower and less defined; interstices without microsculpture and glossy. Hind wings reduced.

Abdomen widest at segment VI, about 1.15 times as broad as elytra; punctation fine, dense on tergites III–VI, slightly sparser on tergite VII; interstices with distinct microsculpture and subdued shine; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII weakly convex.

♂: sternites III–VI unmodified; sternite VII with shallow median impression posteriorly, this impression with about 15 modified, short and stout black setae posteriorly, anterior to these setae with a small area without pubescence, posterior margin broadly concave (Fig. 267);



Figs 276–289. *Lobrathium partitum* (**276–279**), *L. semiflavum* (**280–285**) and *L. cribricolle*, lectotype (**286–289**). **276, 282:** male sternite VII; **277, 283, 287:** male sternite VIII; **278–279, 284–285, 288–289:** aedeagus in lateral and in ventral view; **280:** habitus; **281, 286:** forebody. Scale bars: 280–281, 286: 1.0 mm; 276–279, 282–285, 287–289: 0.5 mm.

sternite VIII weakly transverse, median impression oblong and with numerous distinctly modified, short and stout black setae; posterior excision small (Fig. 267); aedeagus 1.0 mm long, with slender, slightly asymmetric, and, in lateral view, very thin ventral process (Figs 269–270).

Comparative notes. *Lobrathium lamellatum* is characterised by numerous characters, particularly its small eyes, the extremely dense and relatively coarse punctation of the head, the short elytra, the absence of a palisade fringe at the posterior margin of tergite VII, the chaetotaxy of the male sternite VII, and by the morphology of the aedeagus. For comments on species group affiliations see the comparative notes in the sections on *L. wittmeri* and *L. cholaicum*.

Distribution and natural history. The type locality is situated in the southwest of Sichuan province, not far from the border with Yunnan (Fig. 180). Morphological characters (small eyes, reduced wings, absence of a palisade fringe) and the altitude of the type locality (3500 m) suggest that the species may have a restricted distribution.

Lobrathium sp. n. 1

1♀ [micropterous]: "China, S Sichuan 27.VII.1997, Daliang Shan mts., road Meigu-Leibo, pass 15 km NE Meigu, 28°25'N, 103°17'E, Jaroslav Turna leg." (cSch).

This evidently undescribed species is similar to *L. daxuense*, but distinguished by broader habitus, slightly larger size, and a denser and less coarse punctation of the head.

Lobrathium sp. n. 2

1♀: "China, W-Hubei, 20.6.–12.7.2003, Muyuping S env., pitfall traps, 31.45N, 110.4E, ca. 1300 m, J. Turna" (NHMW).

This species is distinguished from all described Chinese representatives of the genus by the following characters combination: body size moderate, 6.5 mm; length of forebody 4.0 mm; punctation of head, except for the sparsely punctate frons, extremely dense, without sparsely impunctate patches, and matt; eyes large and protruding, lateral margins of head smoothly curved towards neck behind eyes; pronotum slender; coloration of forebody blackish-brown, elytra indistinctly reddish in posterior 2/3.

SPECIES FROM OTHER EAST PALAEARCTIC REGIONS

Lobrathium partitum (Sharp, 1874) (Figs 276–279)

Lathrobium partitum Sharp, 1874: 56 f.

Type material examined. Syntype ♀ [dissected prior to present study]: "Japan / Lathrobium partitum type D.S. / Type / Japan. G. Lewis. / Sharp Coll 1905–313. / Lectotypus Lathrobium partitum Sharp, V. Gusarov des. 1992 / Lobrathium partitum (Sharp) ♀, V.I. Gusarov det. 1992 / Syntype Lathrobium partitum Sharp, rev. V. Assing 2012 / Lobrathium partitum (Sharp), det. V. Assing 2012" (BMNH).

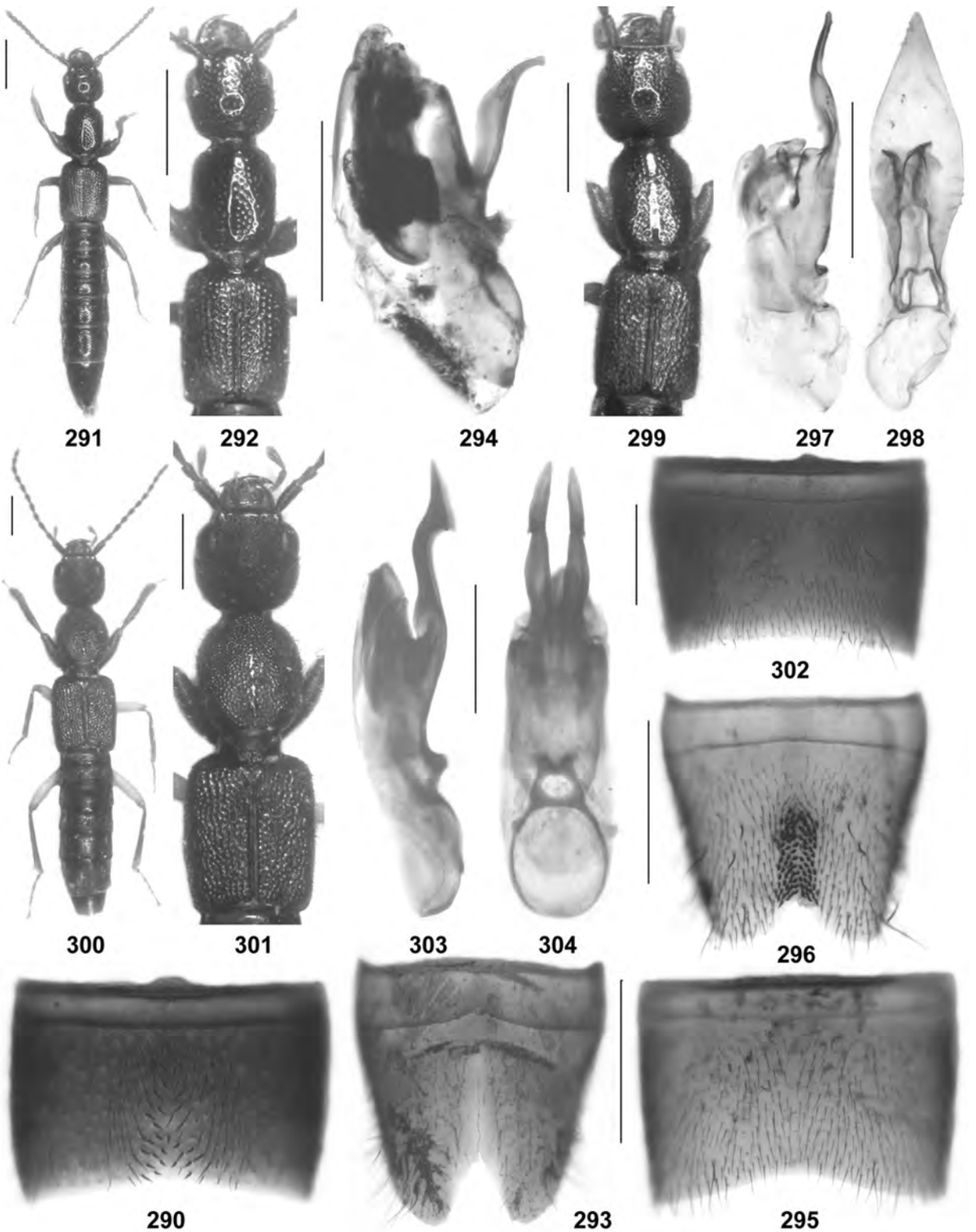
Comment. The original description is based on an unspecified number of syntypes from "under tidal refuse, Nagasaki harbour" (Sharp 1874). It can be inferred from Sharp´s statement that the species is "very local" that he had only few syntypes, possibly only one specimen before him. The single syntype in the Sharp collection at the BMNH, a female, has a lectotype label attached to it, but the designation has never been published. In view of the fact that *Lobrathium* species are usually reliably identified only based on the male sexual characters, the above type specimen is not designated as the lectotype.

Additional material examined. Japan: Kyushu: 1♂, Nagasaki Pref., Kunimi, Uematsu, 3.XI.1982, leg. Imasaka (cIto). **Shikoku:** 1♂: Ehime, Oku-Dogo, 22.XII.1991, leg. Okamoto (cAss). **Honshu:** 1♂ [teneral], Fukui Pref., Mana-gawa river, 1.VIII.1965, leg. Hayashi (cAss); 1♂ [teneral], Wakayama Pref., Mt. Iwawaki, 9.VI.1968, leg. Kimura (cAss); 1♂, Yokohama (BMNH).

Redescription. Body length 7.0–8.0 mm; length of forebody 3.5–4.1 mm. External characters as in *L. taureum*. Distinguished only by the male sexual characters.

♂: sternite V with small median depression posteriorly; sternite VI with moderately small and shallow median impression posteriorly; sternite VII strongly transverse and with distinct median impression with pubescence, posterior margin broadly concave (Fig. 276); sternite VIII weakly transverse, with pronounced long median impression, this impression with numerous modified, short and stout black setae, posterior excision moderately small and narrowly V-shaped (Fig. 277); aedeagus approximately 1.3–1.4 mm long, ventral process symmetric and of distinctive shape, in the middle distinctly dilated in ventral view (Figs 278–279).

Comparative notes. In external characters, *L. partitum* is highly similar to *L. taureum*, *L. schuelkei*, and *L. semiflavum*. The similar general morphology of the aedeagus as well as the similar male secondary sexual characters suggest that the species is most closely related to *L. semi-*



Figs 290–304. *Lobrathium cribricolle*, lectotype (**290**), *L. nudum* (**291–294**), *L. amamiense* (**295–298**), *L. indubium*, syntype (**299**), and *L. discrepans* (**300–304**). **290, 295, 302:** male sternite VII; **291, 300:** habitus; **292, 299, 301:** forebody; **293, 296:** male sternite VIII; **294, 297–298, 303–304:** aedeagus in lateral and in ventral view. Scale bars: 291–292, 299–301: 1.0 mm; 290, 293–398, 302–304: 0.5 mm.

flavum, from which it is reliably distinguished only by the shape of the ventral process of the aedeagus both in lateral and in ventral view (*L. semiflavum*: not distinctly dilated in the middle in ventral view) and the slightly narrower posterior excision of the male sternite VIII.

Distribution. *Lobrathium partitum* was originally described from the environs of Nagasaki, Kyushu, southern Japan, and subsequently also reported from Honshu (Kameyama et al. 2006); for additional records from these islands and from Shikoku see the additional material above.

***Lobrathium semiflavum* sp. n.** (Figs 193, 280–285)

Type material. Holotype ♂ [teneral]: "Russia or: Primorie, Ussurijsky Res., Komarovo Zapovednoe, 132°20'40''E, 43°38'48''N, 20.–29.VII.1999, leg. J. Sundukov / Holotypus ♂ *Lobrathium semiflavum* sp. n., det. V. Assing 2011" (cAss). Paratypes: 1♂, 1♀ [teneral]: same data as holotype (cSch).

Etymology. The specific epithet (Latin, adjective) refers to the fact that nearly all of the posterior half of the elytra is bright yellowish.

Description. Body length 5.8–7.8 mm; length of forebody 3.5–4.0 mm. Habitus as in Fig. 280. Coloration and other external characters as in *L. partitum*, except as follows:

Elytra without bluish hue and on average slightly shorter and narrower (Fig. 281); appendages paler: legs dark-yellowish; antennae pale-reddish (but note that all the type specimens are somewhat teneral).

♂: sternite V with very small and shallow impression posteriorly; sternite VI with moderately small and moderately shallow impression posteriorly; sternite VII strongly transverse and with distinct median impression with pubescence, posterior margin broadly concave (Fig. 282); sternite VIII weakly transverse, with pronounced long median impression, this impression with numerous modified, short and stout black setae, posterior excision relatively small and almost V-shaped (Fig. 283); aedeagus 1.2–1.4 mm long, ventral process symmetric and of distinctive shape (Figs 284–285).

Comparative notes. Based on the similar external and male sexual characters, *L. semiflavum* is presumably the adelphotaxon of *L. partitum*. For distinguishing characters see the description above and the comparative notes in the preceding section.

Distribution and natural history. The type locality is situated in Primorskiy Kray, Russian Far East (Fig. 193). All type specimens were collected in July and are teneral.

***Lobrathium cribricolle* (Sharp, 1889)** (Figs 286–290)
Lathrobium cribricolle Sharp, 1889: 256.

Type material examined. Holotype ♂: "Lathrobium cribricolle. Type D.S. [written on mounting label] / Japan. G. Lewis. 1910–320. / Suyama. 20.IV.–22.IV.80. / Type / aedeagus at rest is turned to 90° in abdomen / Lobrathium cribricolle (Sharp) ♂, V.I. Gusarov det. 1992 / Holotypus ♂ Lathrobium cribricolle Sharp, V. Gusarov des. [sic] 1992 / Lobrathium cribricolle (Sharp), det. V. Assing 2012" (BMNH).

Comment. The original description is based on a "unique" holotype from the "Plain under Fujisan" (Sharp 1889).

Redescription. Body length 6.6 mm; length of forebody 3.5 mm. Coloration: body blackish, elytra with yellowish spot posteriorly; legs and antennae pale-reddish.

Head (Fig. 286) approximately 1.05 times as long as broad, of subrectangular shape; lateral margins behind eyes subparallel in dorsal view; posterior angles moderately marked; punctation conspicuously coarse and dense, even in median dorsal portion; interstices reduced to narrow ridges. Eyes bulging and large, approximately 0.6–0.7 times as long as distance from posterior margin of eye to neck in dorsal view. Antenna relatively short, approximately 1.8 mm long.

Pronotum (Fig. 286) approximately 1.25 times as long as broad and 0.95 times as broad as head; punctation conspicuously coarse and dense, even along midline; only in posterior median portion with small impunctate patch.

Elytra (Fig. 286) 1.07 times as long as pronotum; punctation coarse, arranged in irregular series only laterally. Hind wings apparently fully developed.

Abdomen subparallel and slightly narrower than elytra; punctation fine and moderately dense, slightly less dense on tergites VII and VIII; interstices with distinct transverse microsculpture; posterior margin of tergite VII with palisade fringe.

♂: posterior margin of tergite VIII convex in the middle; sternite VI with shallow impression posteriorly; sternite VII with shallow median impression posteriorly, this impression with few (approximately 15–20) modified, short and stout black setae, posterior margin broadly and rather weakly concave (Fig. 290); sternite VIII weakly transverse, with oblong median impression, this impression with relatively sparse modified, short and stout black setae, posterior excision not very deep and of trapezoid shape (Fig. 287); aedeagus 1.3 mm long, with long ventral process of highly distinctive shape (Figs 288–289).

Comparative notes. *Lobrathium cribricolle* is characterised particularly by the coarse and dense punctation of the head and pronotum, by the shape and chaetotaxy of

the male sternites VII and VIII, as well as by the distinctive shape of the ventral process of the aedeagus.

Distribution. The distribution of *L. cribricolle* is confined to Japan (Honshu). For additional records see Ito (1996a).

***Lobrathium nudum* (Sharp, 1889)** (Figs 291–294)
Lathrobium nudum Sharp, 1874: 55 f.

Type material examined. Lectotype ♂ and paralectotype ♀ [glued on same label]: "Japan / Japan. G. Lewis. / Lathrobium nudum Type D.S. / Sharp Coll 1905–313. / Type / aedeagus at rest is turned to 90° in abdomen / Lobrathium nudum (Sharp) ♂, V.I. Gusarov det. 1992 / Lectotype ♂ Lathrobium nudum Sharp, V. Gusarov des. 1992 / Paralectotype ♀ Lathrobium nudum Sharp, V. Gusarov des. 1992 / Lobrathium nudum (Sharp), det. V. Assing 2012" (BMNH).

Comment. The original description is based on an unspecified number of syntypes ("not very rare"), among them at least one male, from "Nagasaki" (Sharp 1874). In referring to the above material as lecto- and paralectotype and illustrating the aedeagus as that of the lectotype, Ito (1996a) designated the male as the lectotype. The two type specimens have lectotype and paralectotype labels by V. Gusarov attached to them, who never published this designation.

Redescription. Body length 7.0–.7.5 mm; length of forebody 3.4–3.6 mm. Habitus as in Fig. 291. Coloration: head, pronotum, and abdomen blackish; elytra dark-brown to blackish-brown, posteriorly with a large yellowish spot reaching posterior margin; legs reddish, with the profemora and sometimes also the protibia darker; antennae reddish.

Head (Fig. 292) approximately as long as broad, weakly narrowed behind eyes in dorsal view; posterior angles moderately marked; punctation moderately coarse and moderately dense, rather sparse in median dorsal portion and on frons. Eyes moderately convex and large, approximately 0.6–0.7 times as long as the distance from posterior margin of eye to neck in dorsal view. Antenna relatively short, approximately 1.8 mm long.

Pronotum (Fig. 292) 1.25–1.30 times as long as broad and approximately 0.95 times as broad as head; punctation similar to that of head; midline impunctate.

Elytra (Fig. 292) approximately as long as pronotum; punctation coarse, arranged in irregular series. Hind wings fully developed.

Abdomen subparallel and slightly narrower than elytra; punctation fine and moderately dense; interstices without distinct microsculpture, except for shallow traces in posterior portions of tergites VII and VIII; posterior margin of tergite VII with palisade fringe; posterior margin of tergite VIII convex in both sexes.

♂: sternite VI unmodified; sternite VII anteriorly with pair of tubercles, in the middle with large impression without pubescence, posterior margin broadly and distinctly concave; sternite VIII approximately as broad as long, in the middle with oblong impression without modified setae, and with relatively deep and V-shaped posterior excision (Fig. 293); aedeagus approximately 1.0 mm long and with ventral process of distinctive shape (Fig. 294).

Comparative notes. *Lobrathium nudum* is characterised particularly by the relatively large yellowish spot on the elytra (reaching posterior margin), by the modifications of the male sternites VII and VIII, as well as by the shape of the ventral process of the aedeagus.

Distribution. *Lobrathium nudum* has been recorded from several localities in Japan (Kyushu, Honshu); for additional records see Ito (1996a), Watanabe (1998c), and Watanabe & Shibata (1972). Watanabe & Onoda (1997) report the species from Kuroshima Island (Ryukyu Islands). It has been reported also from the Russian Far East (Smetana 2004), but this record should be considered doubtful and requires confirmation. In the course of the present revision, none of the species from the main islands of Japan was recorded also from continental Asia. The only species whose presence in both Japan and continental Asia is confirmed is *L. hongkongense*, whose distribution in Japan is confined to the extreme south (Ryukyu Islands).

***Lobrathium amamiense* Ito, 1996** (Figs 295–298)
Lobrathium amamiense Ito, 1996: 116 ff.

Type material examined. Paratype ♂ [slightly teneral]: "Hatsuno, Amami Is., 4.IV.1966, T. Ito / Paratype Lobrathium amamiense T. Ito. sp. nov. " (cAss).

Comment. The original description of *L. amamiense* is based a male holotype and eleven paratypes from three localities in the "Amami-Oshima Is., Kagoshima Pref." (Ito 1996). For a detailed description of the external characters see Ito (1996).

Redescription of the male sexual characters. Posterior margin of tergite VIII obtusely pointed in the middle; sternite VII with shallow median impression and without modified pubescence, posterior margin broadly concave (Fig. 295); sternite VIII weakly transverse, in posterior half with well-defined oblong median impression, this impression with numerous modified, short and stout black setae, posterior excision moderately deep and moderately broad (Fig. 296); aedeagus approximately 1.2 mm long, ventral process blade-shaped and large, symmetric, subapically

with median carina, and basally with few lateral teeth (Figs 297–298).

Comparative notes. *Lobrathium amamiense* is distinguished from its congeners particularly by the shape and chaetotaxy of the male sternite VIII, by the shape of the ventral process of the aedeagus, and from most other macropterous species distributed in the East Palaearctic also by the coloration of the elytra (diffusely dark-reddish in posterior half, without defined spots).

Distribution and natural history. As far as is currently known, the distribution of *L. amamiense* is confined to the Amami Islands, southern Japan. The examined paratype is slightly teneral.

Lobrathium varium Ito, 1995, stat. n.

Lobrathium shibatai varium Ito, 1995: 43.

Material examined. Japan: 17 exs. [previously labelled as types of *L. kasuganum* Gusarov i.l., labels removed; partly teneral], Honshu, Nara, foot of Mt. Kasuga, 20.VIII.1980, leg. Hammond (BMNH, cAss).

Comment. According to the original descriptions of *L. shibatai shibatai* and *L. shibatai varium*, these taxa are subspecies distinguished by slight differences in the shape of the ventral process of the aedeagus, the slightly different shapes of the impressions of the male sternites VII and VIII, and the slightly more slender body of *L. varium* (Ito 1995). However, zoogeographic evidence (see distribution map in Ito 1995) renders the hypothesis that both morphs should represent subspecies highly implausible; both morphs were described from central Honshu. According to Ito (e-mail, 3.II.2012), who has seen more material in the meantime, the distributions of both taxa strongly overlap, so that they should be considered distinct species rather than subspecies.

Lobrathium indubium (Eppelsheim, 1893) (Fig. 299)

Lathrobium indubium Eppelsheim, 1893: 52 f.
Platydomene altaicus [sic] Coiffait, 1967: 355 f.; synonymy by Shavrin (2008).

Type material examined. Syntypes: 2♀♀: "Ost-Sibirien. Quellgebiet des Irkut. Leder 1891. / indubium Epp. / c. Epplsh. Steind. d. / Typus [one labelled as lectotype, the other as paralectotype by V. Gusarov]" (NHMW).

Comment. The original description, which is contained in a work on the southwestern Baikal region, is based on two females without specification of the locality (Eppelsheim 1893). Both syntypes are deposited in the Eppelsheim collection at the NHMW. They have (para-)lectotype labels by V. Gusarov attached to them, but this designation was never published.

Redescription. Body length: 6.0–6.8 mm; length of forebody 3.4–3.9 mm. Coloration: forebody reddish to reddish-brown, with the elytra often somewhat paler; elytra often with indistinct reddish spots posteriorly and/or with yellowish posterior margins; abdomen dark-brown; legs and antennae dark-reddish.

Head (Fig. 299) somewhat flattened, as long as broad or weakly oblong; punctation moderately coarse and dense; median dorsal portion with few scattered punctures, almost impunctate. Eyes weakly convex and small, approximately 1/3 the length of postocular region in dorsal view. Antenna 2.0–2.4 mm long.

Pronotum (Fig. 299) weakly convex in cross-section, almost flattened, and slender, approximately 1.3 times as long as broad and 0.9 times as broad as head; punctation similar to that of head, but slightly less dense; midline with broad and complete impunctate band.

Elytra (Fig. 299) weakly convex in cross-section, approximately as long as pronotum, or nearly so; punctation dense and moderately defined, not arranged in distinct series.

Abdomen approximately as broad as elytra; posterior margin of tergite VII with palisade fringe; posterior margin of tergite VIII broadly and rather weakly convex.

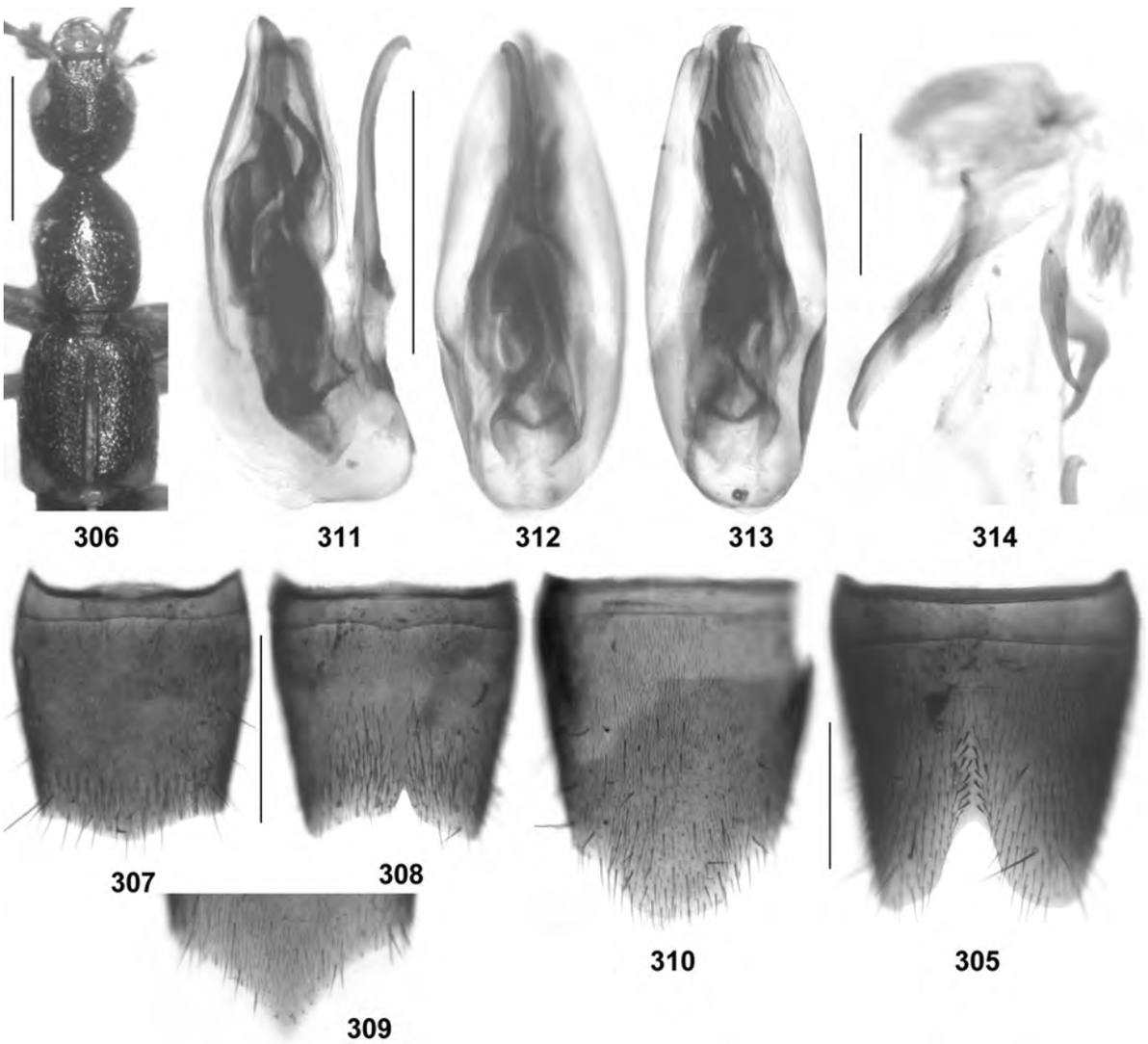
♂: sternite VIII with long median impression; this impression with numbers strongly modified, short and stout black setae, posterior excision of moderate size; aedeagus approximately 1.3 mm long, with long, symmetric, basally dilated (ventral view), and apically acute ventral process. For illustrations of the aedeagus see Coiffait (1967, 1982c) (as *Platydomene altaicus* [sic]).

Comparative notes. *Lobrathium indubium* somewhat resembles *L. multipunctum* in size and coloration, but is distinguished from that species by the flatter body and the irregular punctation of the elytra.

Distribution. The known distribution of this species includes the Baikal region (Altai, East Sayan) and the Russian Far East (Primorskiy Kray) (Assing 2007, Schülke 1990, Shavrin 2008).

Lobrathium discrepans sp. n. (Figs 140, 300–305)

Type material: Holotype ♂: "N-Vietnam, 120 km SW Hanoi, Cuc Phuong National Park, 13.04.2010, leg. A. Kleeberg / Holotypus ♂ *Lobrathium discrepans* sp. n., det. V. Assing 2011" (cAss).



Figs 305–314. *Lobrathium discrepans* (**305**) and *Tetartopeus gracilentus* (**306–314**). **305, 308:** male sternite VIII; **306:** forebody; **307:** male tergite VIII; **309:** posterior portion of female tergite VIII; **310:** female sternite VIII; **311–313:** aedeagus in lateral, ventral, and in dorsal view; **314:** internal structures of aedeagus extruded in lateral view. Scale bars: 306: 1.0 mm; 305, 307–313: 0.5 mm; 314: 0.2 mm.

Etymology. The specific epithet (Latin, adjective: deviant) refers to the fact that this species differs in many ways from the usual morphology of *Lobrathium* species.

Description. Large species, body length 10.3 mm; length of forebody 5.6 mm. Habitus as in Fig. 300. Coloration: body blackish, except for the reddish posterior margins of the abdominal segments VII and VIII; forelegs blackish with reddish tarsi; middle and hind legs with pale-yellowish femora, infuscate tibiae, and reddish tarsi; antenna in basal half blackish-brown, with antennomere I black and II dark-reddish; antennomeres in apical half gradually becoming reddish.

Head (Fig. 301) approximately as long as broad, posterior angles broadly convex; punctation moderately coarse and extremely dense; interstices reduced to narrow ridges. Eyes large, approximately 0.7 times as long as the distance from posterior margin of eye to neck in dorsal view. Antenna slender, approximately 3.2 mm long.

Pronotum (Fig. 301) short and broad, 1.12 times as long as broad and approximately as broad as head; punctation as dense as, and slightly coarser than head; impunctate midline reduced, narrow rudiment present only in posterior half.

Elytra (Fig. 301) as long as pronotum, with parallel margins in dorsal view, and marked humeral angles; puncta-

tion very coarse and arranged in irregular series. Hind wings fully developed. Metatarsomere I little more than half as long as the elongate metatarsomere II.

Abdomen subparallel and distinctly narrower than elytra; punctation very fine and dense; interstices with distinct microsculpture; posterior margin of tergite VII with palisade fringe; posterior margin of tergite VIII obtusely angled in the middle.

♂: sternite VII with shallow median impression posteriorly, pubescence unmodified, posterior margin weakly and broadly concave (Fig. 302); sternite VIII as long as broad, median impression narrow, rather long, and with approximately 12 distinctly modified, short and stout black setae, posterior excision deep and almost V-shaped (Fig. 305); aedeagus 1.8 mm long; ventral process conspicuously bifid, subapically with pronounced ventral teeth (Figs 303–304).

Comparative notes. Among its congeners, *L. discrepans* is characterised not only by the male sexual characters, but also by its large size, the extremely dense punctation of the head and the pronotum, the broad and short pronotum, the conspicuous coloration of the legs, the shape of the elytra, and by the morphology of the tarsi.

Distribution and natural history. The type locality is situated some 120 km to the southwest of Hanoi in North Vietnam (Fig. 140). According to the collector, the type specimen was found in dead banana trunks saturated with water, together with *Tachinomorphus fulvipes* (Erichson, 1840) and *Coproporus* sp. (Kleeberg, pers. comm.).

SPECIES BELONGING TO OTHER GENERA

***Tetartopeus gracilentus* (Kraatz, 1859), comb. n.** (Figs 306–314)
Lathrobium gracilentum Kraatz, 1859: 115 f.

Type material examined. Lectotype ♂, present designation: "Ceylon / Coll. Kraatz / Syntypus / Coll. DEI Eberswalde / Lathrobium gracilentum (Kr.) [sic], V.I. Gusarov det. 1994 / DEI Müncheberg, Col – 02763 / Lectotypus ♂ *Lathrobium gracilentum* Kraatz, desig. V. Assing 2011 / Tetartopeus gracilentus (Kraatz), det. V. Assing 2011" (SDEI). Paralectotypes: 1♂, 3♀♀: same data as lectotype, but "Col – 02764", "Col – 02765", "Col – 02766", "Col – 02767", respectively (SDEI).

Comment. The original description is based on an unspecified number of syntypes from "Ceylan" (Kraatz 1859). Five syntypes, two males and three females, are deposited in the Kraatz collection at the SDEI. All of them had lectotype or paralectotype labels by V. Gusarov ("des. 1993") attached to them. Since a lectotype designation was never published, these labels were removed and new (para-)lectotype labels were attached to the specimens. The lectotype is illustrated in Figs 306 and 314. Figs 307–313 are based on paralectotypes.

The species undoubtedly belongs to the genus *Tetartopeus* Czwalina, 1888 and represents clear evidence that the range of the genus, which was previously considered to be Holarctic (Assing 2011b), reaches deeply into the Oriental region.

Redescription. Body length 5.5–6.0 mm; length of forebody 3.1–3.4 mm. Coloration: body blackish-brown to black, elytra with distinct yellowish spots in postero-lateral angles; legs dark-yellowish to yellowish-brown with darker profemora and protibiae; antennae brown with reddish apical and basal antennomeres.

Head (Fig. 306) approximately 1.15 times as long as broad, widest across eyes; posterior angles not marked; punctation fine and very dense, dorsal surface almost matt; interstices reduced to narrow ridges; median dorsal portion often with small impunctate patch. Eyes large and bulging, approximately 0.7 times as long as distance from posterior margin of eye to neck in dorsal view. Antenna long and slender, approximately 2.4 mm long.

Pronotum (Fig. 306) approximately 1.3 times as long as broad and as wide as head; punctation coarser and less dense than that of head; interstices without microsculpture and glossy.

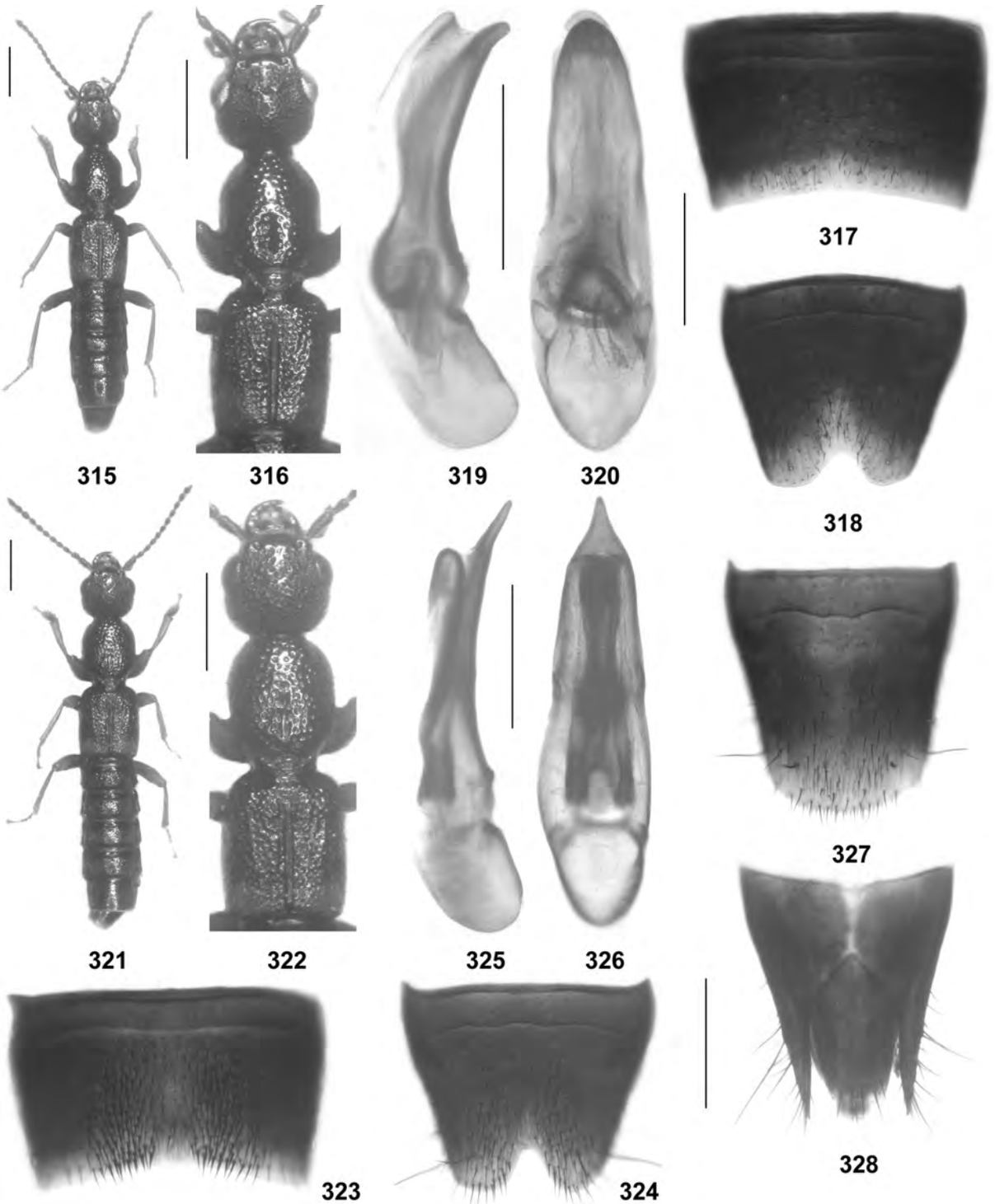
Elytra (Fig. 306) approximately 0.95 times as long as, and distinctly broader than pronotum, humeral angles marked; punctation dense and slightly finer than that of pronotum; interstices without microsculpture and glossy. Hind wings fully developed.

Abdomen narrower than elytra; punctation very fine and very dense, dorsal surface practically matt; posterior margin of tergite VII with palisade fringe.

♂: tergite VIII obtusely angled posteriorly (Fig. 307); sternite VIII with small posterior excision in somewhat asymmetric position (Fig. 308); aedeagus approximately 0.9 mm long, shaped as in Figs 311–314.

♀: posterior margin of tergite VIII acutely produced in the middle (Fig. 309); sternite VIII much longer than tergite VIII, its posterior margin convexly produced in the middle (Fig. 310); tergite X distinctly shorter than tergite IX in the middle.

Comparative notes. The species is highly similar and evidently closely related to *T. fragilis* (Sharp, 1889), *T. pallipes* (Sharp, 1889), and *T. wui* (Zheng, 2001), but distinguished by the larger eyes, head shape (posterior angles practically obsolete), the straight ventral process of the aedeagus, by the shapes of the internal structures of the aedeagus, and by the posteriorly acutely produced female tergite VIII.



Figs 315–328. *Lobrathium lobrathioides* (**315–320**) and *L. lobrathiforme* (**321–328**). **315, 321:** habitus; **316, 322:** forebody; **317, 323:** male sternite VII; **318, 324:** male sternite VIII; **319–320, 325–326:** aedeagus in lateral and in ventral view; **327:** female sternite VIII; **328:** female tergites IX–X. Scale bars: 315–316, 321–322: 1.0 mm; 317–320, 323–328: 0.5 mm.

Distribution. This species has become known only from Sri Lanka.

***Tetartopeus wui* (Zheng, 2001), comb. n.**
Lobrathium wui Zheng, 2001: 324 f.
Lobrathium bimaculatum Li, Tang & Zhu, 2007: 261 f.; **syn. n.**

Comment. The original description of *Lobrathium wui* is based on a male holotype from "Shanmuping, 780 m, Tianmushan, Zhejiang" and three paratypes from "Chanyuansi" (Zheng 2001).

Lobrathium bimaculatum was transferred to *Tetartopeus* by Assing (2010). The external and sexual characters were illustrated and additional records from China, among them also a male from Tianmushan, and Taiwan were reported by Assing (2011b).

As can be inferred from the illustration of the aedeagus of *L. wui*, the species belongs to *Tetartopeus* and there is little doubt that it is conspecific with *T. bimaculatus*. Hence the synonymy proposed above.

"*Lathrobium*" *sublaeve* Motschulsky, 1858
Lathrobium sublaeve Motschulsky, 1858: 647.

Comment. Based on the morphological details specified in the original description and on the type locality ("Indes orientales"), this species is most unlikely to belong to either *Lathrobium* or *Lobrathium*. Motschulsky (1858) compares *L. sublaeve* with "*Sunius filiformis*", today *Astenus procerus* (Gravenhorst, 1802), suggesting that *L. sublaeve* is not even a member of Lathrobiina.

***Lathrobium lobrathioides* sp. n.** (Figs 315–320)

Type material. Holotype ♂: "China: SE Sichuan, Jinfo Shan, 29°01N, 107°14E, 1800 m, 27.VI.1998, A. Smetana [C70] / 1998 China Expedition J. Farkač, D. Král, J. Schneider & A. Smetana / Holotypus ♂ *Lathrobium lobrathioides* sp. n., det. V. Assing 2011" (cAss).

Etymology. The specific epithet (Latin, adjective) alludes to the external resemblance of this species with species of the genus *Lobrathium*.

Description. Body length 7.2 mm; length of forebody 4.1 mm. Habitus as in Fig. 315. Coloration: body blackish, elytra with large reddish spot posteriorly reaching lateral and posterior margins; legs reddish with darker femora; antennae reddish, with slightly darker antennomere I.

Head (Fig. 316) transverse, 1.15 times as wide as long, widest across eyes; posterior angles broadly convex, very weakly marked; punctation coarse and, except in median dorsal portion and on frons, very dense; interstices with shallow microsculpture. Eyes large and bulging, somewhat shorter than distance between posterior margin of eye and neck, but distinctly more than half as long as this distance in dorsal view. Antenna not particularly slender, 2.1 mm long.

Pronotum (Fig. 316) 1.17 times as long as broad and 0.92 times as broad as head; punctation distinctly sparser and coarser than that of head; interstices without microsculpture and very glossy.

Elytra (Fig. 316) 0.93 times as long as, and distinctly broader than pronotum, lateral margins subparallel in dorsal view; humeral angles marked; punctation coarse and rather dense; interstices without microsculpture and glossy. Hind wings apparently fully developed.

Abdomen approximately as broad as elytra; punctation relatively coarse and dense on anterior, finer and sparser on posterior tergites; interstices with very shallow transverse microsculpture and glossy; posterior margin of tergite VII with palisade fringe; posterior margin of tergite VIII distinctly convex.

♂: sternite VII with small and shallow median impression without modified pubescence, posterior margin broadly and shallowly concave (Fig. 317); sternite VIII weakly transverse, with shallow median impression posteriorly, this impression without modified setae, posterior excision small and not very deep (Fig. 318); aedeagus 1.15 mm long, ventral process simple, dorsal plate lamellate and weakly sclerotised (Figs 319–320).

Comparative notes. *Lathrobium lobrathioides* is distinguished from other *Lathrobium* species particularly by its conspicuous coloration, the strongly transverse head with large and bulging eyes, and by the male sexual characters. It is additionally separated from externally similar *Lobrathium* species by the absence of a submarginal carina of the elytra.

Distribution and natural history. The type locality is situated in the Jinfo Shan in the south of Chongqing province, close to the border with Guizhou. The holotype was collected in an old deciduous forest at an altitude of 1800 m, by sifting moist to wet leaf litter and humus (Smetana pers. comm.).

***Lathrobium lobrathiforme* sp. n.** (Figs 321–328)

Type material. Holotype ♂: "China: Yunnan [CH07–24], Nujiang Lisu Aut. Pref., Gaoligong Shan, valley 18 km W Gongshan, 3020 m, 27°47'54''N, 98°30'13''E, mixed forest, litter, moss, wood sifted, 7.VI.2007, M. Schülke / Holotypus ♂ *Lathrobium lobrathiforme* sp. n., det. V. Assing 2011" (cAss). Paratypes: 2♀♀ [1 without head and pronotum]: same data as holotype (cSch).

Etymology. The specific epithet (Latin, adjective) alludes to the external resemblance of this species with species of the genus *Lobrathium*.

Description. Body length 7.5–8.0 mm; length of forebody 3.7–3.9 mm. Habitus as in Fig. 321. Coloration: body blackish, elytra with moderately large, transverse reddish spot in posterolateral angles reaching lateral and posterior margins, but not suture; legs reddish-yellow to reddish with slightly darker femora; antennae dark-brown to blackish-brown.

Head (Fig. 322) transverse, approximately 1.15 times as wide as long, widest across eyes; posterior angles broadly convex, weakly marked; dorsal surface uneven, with shallow lateral impressions; punctation coarse and, except on frons, very dense; interstices with shallow microsculpture. Eyes large and bulging, almost as long as distance between posterior margin of eye and neck in dorsal view. Antenna not particularly slender, 1.9–2.2 mm long.

Pronotum (Fig. 322) approximately 1.1 times as long as broad and about 0.95 times as broad as head; punctation distinctly sparser and slightly coarser than that of head; interstices without microsculpture and very glossy.

Elytra (Fig. 322) approximately 0.9 times as long as, and distinctly broader than pronotum, lateral margins subparallel in dorsal view; humeral angles marked; punctation coarse and rather dense; interstices without microsculpture and glossy. Hind wings fully developed.

Abdomen approximately as broad as elytra; punctation relatively coarse and dense on tergites III–VI, finer and sparser on tergite VII; interstices with very shallow transverse microsculpture and glossy; posterior margin of tergite VII with palisade fringe; posterior margin of tergite VIII distinctly convex.

♂: sternites IV–VI with shallow median impressions, with dense asperate punctation and dense black setae; sternite VII with median impression and dense black setae, posterior margin broadly and shallowly concave (Fig. 323); sternite VIII weakly transverse, with median impression posteriorly, posterior excision small and not very deep (Fig. 324); aedeagus 1.5 mm long, ventral process apically acutely pointed in ventral view, dorsal plate lamellate and weakly sclerotised (Figs 325–326).

♀: sternite VIII with broadly convex posterior margin (Fig. 327); anterior portion of tergite IX divided in the middle, tergite X approximately twice as long as tergite IX in the middle (Fig. 328).

Comparative notes. Both in external and sexual characters, *L. lobrathiforme* is similar to *L. lobrathioides*. It is distinguished from this species by the smaller and more transverse elytral spots, the coarser punctation of the head, the much denser punctation of the pronotum, the chaetotaxy of the male sternite VII, the deeper posterior excision of the male sternite VIII, and by the morphology of the aedeagus (much longer and more slender, ventral process apically acutely pointed in ventral view).

Distribution and natural history. The type locality is situated in the Gaoligong Shan, Yunnan province, China. The type specimens were sifted from litter and moss in a mixed forest at an altitude of 3020 m.

Acknowledgements. I am indebted to the colleagues indicated in the material section for the loan of material under their care. Special thanks are due to Benedikt Feldmann (Münster), Andreas Kleeberg (Berlin), Michael Schülke (Berlin), and Aleš Smetana (Ottawa) for the generous permission to retain several holotypes and single males needed for future reference purposes. Moreover, I am grateful to Tateo Ito (Kyoto) for the generous gift of paratypes of *L. amamiense* and *L. ryukyuense*, the gift of material of *L. partitum*, and help with the identification of Japanese localities. Lee H. Herman (New York) cross-checked the names treated in an early draft against his unpublished catalogue of Paederinae. Alfred F. Newton (Chicago) cross-checked the catalogue and the abstract of the final draft against his unpublished database. Harald Schillhammer (NHMW) assisted with the identification of localities in Myanmar. Benedikt Feldmann proofread the manuscript.

REFERENCES

Adachi T (1955) Systematic study on the subfamily Paederinae of Staphylinidae of Japan. Journal of the Toyo University 7: 11–36

Ahrens D (2004) Monographie der Sericini des Himalaya (Coleoptera: Scarabaeidae). Dissertation.de – Verlag im Internet GmbH, Berlin: 534 pp.

Assing V (2004) New species and records of Staphylinidae from Turkey III (Insecta: Coleoptera). Linzer Biologische Beiträge 36 (2): 669–733

Assing V (2005) A new species of *Lobrathium* Mulsant & Rey from Greece (Coleoptera: Staphylinidae, Paederinae). Entomologische Blätter 100: 197–200

Assing V (2006a) New species and records of Staphylinidae from Turkey IV, with six new synonymies (Coleoptera: Staphylinidae). Koleopterologische Rundschau 76: 223–276

Assing V (2006b) New species and records of *Pseudobium* Mulsant & Rey (Insecta: Coleoptera: Staphylinidae: Paederinae). Linzer Biologische Beiträge 38 (1): 385–391

Assing V (2007) A revision of Palaearctic *Lobrathium* Mulsant & Rey. III. New species, new synonyms, and additional records (Coleoptera: Staphylinidae, Paederinae). Linzer Biologische Beiträge 39 (2): 731–755

Assing V (2008) On the taxonomy and zoogeography of some Palaearctic Paederinae and Xantholinini (Coleoptera: Staphylinidae). Linzer biologische Beiträge 40 (2): 1237–1294

Assing V (2010) On the Lathrobiina of Taiwan (Coleoptera: Staphylinidae: Paederinae). Beiträge zur Entomologie, Keltern 60 (2): 301–361

Assing V (2011a) On the Staphylinidae (Coleoptera) of Iran. II. New species and additional records, with special reference to the Paederinae, Xantholinini, and Aleocharinae. Stuttgarter Beiträge zur Naturkunde Serie A, Neue Serie 4: 137–183

Assing V (2011b) On some East Palaearctic *Tetartopeus* species (Coleoptera: Staphylinidae: Paederinae). Linzer Biologische Beiträge 43 (2): 1179–1197

Assing V (2012) Unterfamilie Paederinae Fleming, 1821; pp. 322–369, 380–383. – In: Assing V & Schülke M (eds): Freude-Harde-Lohse-Klausnitzer – Die Käfer Mitteleuropas. Band 4. Staphylinidae I. Zweite neubearbeitete Auflage. Heidelberg and Berlin: Spektrum Akademischer Verlag, I–XII, 1–560

Assing V (in press a) On the *Pseudobium* species of the Palaearctic region. III. A new species from China, a new synonymy, a new combination, and additional records (Insecta: Coleoptera: Staphylinidae: Paederinae). Linzer Biologische Beiträge 44 (1) (2012)

Assing V (in press b) A revision of the *Lathrobium* species of the Himalaya (Coleoptera: Staphylinidae: Paederinae). Bonn Zoological Bulletin (2012)

Assing V (in press c) The *Pseudolathra* species of the East Palaearctic and the Oriental regions (Coleoptera: Staphylinidae: Paederinae). Beiträge zur Entomologie, Keltern 62 (2) (2012)

Assing V & Schülke M (2002) New species and records of *Lobrathium* Mulsant & Rey from Turkey, Albania, and Tajikistan (Coleoptera: Staphylinidae, Paederinae). Linzer Biologische Beiträge 34 (1): 277–287

Bernhauer M (1931) Zur Staphylinidenfauna des chinesischen Reiches. Wiener Entomologische Zeitung 48: 125–132

Bordoni A (1973) Nuovi stafilinidi della Turchia appartenenti al Museo civico di Storia naturale di Verona (Coleoptera). Fragmenta Entomologica 9: 35–39

Bordoni A (2009) Palaearctic Lathrobiina of the Museum of Zoology of Lund with description of *Lobrathium candicum* n. sp. from Crete (Coleoptera Staphylindae) [sic]. Bollettino della Società Entomologica Italiana 141 (3): 139–142

Cameron M (1921) New species of Staphylinidae from India. The Entomologist´s Monthly Magazine 57: 270–274.

Cameron M (1924) New species of Staphylinidae from India. The Transactions of the Entomological Society of London 1924: 160–198

Cameron M (1931) The Fauna of British India including Ceylon and Burma. Coleoptera. Staphylinidae. Volume 2. London, Taylor and Francis: viii + 257 pp.

Cameron M (1943) Descriptions of new Staphylinidae (Coleopt.). The Proceedings of the Royal Entomological Society of London (B) 12: 1–5, 32–36, 127–132

Champion GC (1922) Some Indian Coleoptera (7). The Entomologist´s Monthly Magazine 58: 31–34

Ciceroni A & Zanetti A (2000) Una nuova specie del genere *Lobrathium* Mulsant & Rey, 1877 dell'Italia meridionale (Coleoptera: Staphylinidae, Paederinae). Bollettino del Museo Civico di Storia Naturale di Verona 24: 123–128

Coiffait H (1967) Nouveaux Staphylinidae (sensu lato) d'Asie Centrale. Bulletin de la Société d'Histoire Naturelle de Toulouse 103 (3–4): 352–357

Coiffait H (1979) Staphylinides du Nouristan (Afghanistan) [Coleoptera]. Annales de la Société Entomologique de France (N. S.) 14 (1978): 551–569

Coiffait H (1982a) Contribution à la connaissance des staphylinides de l'Himalaya (Népal, Ladakh, Cachemir). Senckenbergiana Biologica 62 (1981): 21–179

Coiffait H (1982b) Staphylinides (Col.) de la région himalayenne et de l'Inde (I. Xantholininae, Staphylininae et Paederinae). Entomologica Basiliensia 7: 231–302

Coiffait H (1982c) Coléoptères Staphylinidae de la région paléarctique occidentale. IV. Sous famille Paederinae. Tribu Paederini 1 (Paederi, Lathrobii). Supplement à la Nouvelle Revue d´Entomologie 12 (4): 1–440

Eppelsheim E (1884) Diagnosen neuer Staphyliniden aus dem Caucasus und aus Lenkoran. Verhandlungen des Naturforschenden Vereins in Brünn 22 (1883): 11–16

Eppelsheim E (1893) Beitrag zur Staphylinen-Fauna des südwestlichen Baikal–Gebietes. Deutsche Entomologische Zeitschrift 1893 (1): 17–67

Fauvel A (1895) Staphylinides nouveaux de l'Inde et d la Malaisie. Revue d'Entomologie 14: 180–286

Gusarov VI (1993) New and little known Palearctic rove–beetles (Coleoptera, Staphylinidae). Entomological Review 72: 62–78

Gusarov VI (1995) New and little known Palearctic staphylinids (Coleoptera, Staphylinidae). Communication 6 [English translation of title]. Entomologicheskoe Obozrenie 74 (1): 81–96

Ito T (1995) Notes on the species of Staphylinidae from Japan VIII (Coleoptera). Descriptions of three new species and a new subspecies of the genus *Lobrathium* Mulsant et Rey. Entomological Review of Japan 50 (1): 37–44

Ito T (1996a) Notes on the species of Staphylinidae from Japan IX. The descriptions of three new species of *Lobrathium* Mulsant et Rey. (Coleoptera). Entomological Review of Japan 50 (2): 109–118

Ito T (1996b) Notes on the species of Staphylinidae (Coleoptera) from Japan X. Four new additional species of *Lobrathium* Mulsant et Rey. Entomological Review of Japan 51 (1): 1–8

Ito T (2007) A new species allied to *Lobrathium cribricolle* (Coleoptera: Staphylinidae) from Kii-Peninsula, Kinki District, Honshu in Japan. Entomological Review of Japan 62 (1): 87–90

Ito T (2009a) Notes on the species of Staphylinidae (Coleoptera) from Japan XIV. Descriptions of the two new species belonging to *Lathrobium* from Japan. Entomological Review of Japan 64 (1): 25–31

Ito T (2009b) Notes on the species of Staphylinidae (Coleoptera) from Japan XV. The description of a new species of *Lobrathium* Mulsant et Rey. Entomological Review of Japan 64 (1): 33–36

Ito T (2009c) Emendation of genus for *Lobrathium daibosatsu* T. Ito. Entomological Review of Japan 64 (2): 152

Ito T (2010) New records of *Lobrathium ryukyuense* T. Ito and redescription of its aedeagus (Coleoptera: Staphylinidae). Entomological Review of Japan 65 (1): 67–68

Kameyama T, Nishi M & Nakamura S (2006) The insects from Ota River, Hiroshima Prefecture, a result of survey in 2003. Miscellaneous Reports of the Hiwa Museum for Natural History 47: 1–184

Koch C (1939) Über neue und wenig bekannte paläarktische Paederinae (Col. Staph.). Entomologische Blätter 35: 156–172

Koch C (1936) Appunti sugli stafilinidi italiani. Bollettino della Società Entomologica Italiana 68: 131–133

Kraatz G (1859) Die Staphylinen-Fauna von Ostindien, insbesondere der Insel Ceylan. Archiv für Naturgeschichte 25: 1–196

Li L-Z, Tang L & Zhu L-L (2007) Staphylinidae. In: Li Z-Z, Yang M-F & Jin D-C (eds): Insects from Leigongshan landscape [English translation of Chinese title]. Guizhou Science and Technology House: 259–268

Motschulsky V (1858) Énumeration des nouvelles espèces de coléoptères rapportés de ses voyages. Bulletin de la Société Impériale des Naturalistes de Moscou 31 (2): 634–670

Newton AF, Thayer MK, Ashe JS & Chandler DS (2001) Superfamily Staphylinoidea Latreille, 1802, Staphyliniformia Lameere, 1900; Brachelytra auctorum. 22. Staphylinidae La-

treille, 1802. In: Arnett RH Jr. & Thomas MC: American Beetles. Archostemata, Myxophaga, Adephaga, Polyphaga: Staphyliniformia. Volume 1. CRC Press, Boca Raton etc.: 272–418

Normand H (1936) Nouveaux staphylinides de l'Afrique du nord. Revue Francaise d'Entomologie 2 (4) (1935): 193–195

Schülke M (1990) Zwei neue Lathrobii aus Transkaukasien (Coleoptera, Staphylinidae: Paederinae) nebst faunistischen Bemerkungen zu bekannten Arten. Novius 10 (2): 217–224

Sharp DS (1874) The Staphylinidae of Japan. The Transactions of the Entomological Society of London 1874: 1–103

Sharp DS (1889) The Staphylinidae of Japan. The Annals and Magazine of Natural History (6) 3: 28–44, 108–121, 249–267, 319–334, 406–419, 463–476

Shavrin AV (2008) On the identity of *Lobrathium indubium* (Eppelsheim, 1893) (Coleoptera, Staphylinidae, Paederinae). Baltic Journal of Coleopterology 8 (2): 1–3

Smetana A (2004) Subfamily Paederinae Fleming, 1821. In: Löbl I & Smetana A (eds): Catalogue of Palaearctic Coleoptera. Volume 2. Hydrophiloidea – Histeroidea – Staphylinoidea. Apollo Books, Stenstrup: 579–624

Solodovnikov AYu (2001) Revision of the little-known apterous Paederinae (Coloeptera: Staphylinidae) from "Circassia" (North-Western Caucasus), with description of *Lathrobium* (*Lobrathium*) *bettae* sp.n. Russian Entomological Journal 10: 1–11

Watanabe Y (1972) Some staphylinid beetles from the Hidaka mountains in Hokkaido, Japan. Memoirs of the National Science Museum 5: 111–121

Watanabe Y (1998a) The staphylinid beetles newly recorded from the ilsand of Okinoerabu-jima in the Ryukyus. Elytra, Tokyo 26 (1): 140

Watanabe Y (1998b) Two new apterous *Lathrobium* (Coleoptera, Staphylinidae) from the Ta-hsüeh Shan Mountains in Taiwan. Elytra, Tokyo 26 (2): 303–311

Watanabe Y (1998c) New records of staphylinid beetles (Coleoptera) from Shimo-koshiki-jima Island of the Koshiki IIslands off southwestern Kyushu, Japan. Elytra, Tokyo 26 (2): 313–314

Watanabe Y & Baba K (1973) Staphylinid beetles found in old gold mines of the island of Sado, central Japan. Annotationes Zoologicae Japonenses 46: 259–265

Watanabe Y & Onoda S (1997) New records of staphylinid beetles (Coleoptera) from Kuroshima Island of the Ôsumi Isslands in Kagoshima Prefecture, Japan. Elytra, Tokyo 25 (2): 508

Watanabe Y & Shibata Y (1972) The staphylinid-fauna of Yakushima Island, Japan, with descriptions of a new genus and new species. Journal of Agricultural Science of the Tokyo University of Agriculture 17 (1): 59–71

Zheng F-K (1988) Five new species of the genus *Lobrathium* Mulsant et Rey from China (Coleoptera: Staphylinidae, Paederinae) [English translation of Chinese title]. Acta Entomologica Sinica 31: 186–193

Zheng F-K (2001) Coleoptera: Staphylinidae [English translation of Chinese title]; pp. 323–330. In: Hong W & Chengwen P (eds): Insects of Tianmushan National Nature Reserve. Beijing, Science Press: 764 pp.

