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## **Six new species and additional records of *Lathrobium* from the Palaeartic region (Coleoptera: Staphylinidae: Paederinae)**

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**Abstract:** Six species of *Lathrobium* GRAVENHORST 1802 are described and illustrated: *L. bananum* nov.sp. (Iran), *L. makaluicum* nov.sp. (East Nepal), *L. hartmanni* nov.sp. (West Nepal), *L. uttaricum* nov.sp. (North India: Uttaranchal), *L. sufflatum* nov.sp. (China: Yunnan), and *L. sexoculatum* nov.sp. (China: Yunnan). Additional records of 15 species are provided, among them several new country records. The genus is now represented in the Himalaya by 51, and in mainland China by 158 described species.

**Key words:** Coleoptera, Staphylinidae, Paederinae, *Lathrobium*, Palaeartic region, new species, new records, distribution.

### **Introduction**

The diverse genus *Lathrobium* GRAVENHORST 1802 has a Holarctic distribution and is represented in the Palaeartic region by nearly 500 described species (ASSING 1012b, in press b), the vast majority of which have been recorded from the East Palaeartic. Diversity hotspots in the East Palaeartic are mainland China (156 described species), Japan (103), the Himalaya (48), the Russian Far East (46), and Taiwan (13) (ASSING 2010, 2012b; in press b; RYVKIN 2011; SMETANA 2004; SCHÜLKE unpubl.). Unlike the West Palaeartic, from where only few new species have been described in the past decade, the known inventory of the East Palaeartic *Lathrobium* fauna is evidently still rather incomplete. For instance, two-thirds of the 48 species recognized in a recent revision of the Himalayan fauna were newly described (ASSING 2012b), and 88 % (137 species) of the 156 species previously known from mainland China have been described since 2000 (ASSING in press b).

Among recently examined material from various public and private collections, six undescribed species were identified, one of them from Iran, three from the Himalaya, and two from the Chinese province Yunnan. Thus, 51 described species are now known from the Himalaya, and 158 from mainland China. In addition, this material yielded new records of 15 described species, among them several records of special zoogeographic interest.

## Material and methods

The material treated in this paper is deposited in the following public and private collections:

- BMNH ..... The Natural History Museum, London (R.G. Booth)  
 HNHM ..... Hungarian Natural History Museum, Budapest (Gy. Makranczy)  
 MNHUB..... Museum für Naturkunde der Humboldt-Universität, Berlin (J. Frisch)  
 NHMB ..... Naturhistorisches Museum Basel (M. Geiser, I. Zürcher)  
 NHMW ..... Naturhistorisches Museum Wien (H. Schillhammer)  
 NIBR..... National Institute of Biological Resources, Incheon, Korea  
 NME ..... Naturkundemuseum Erfurt (M. Hartmann)  
 cAss..... author's private collection  
 cSch..... private collection Michael Schülke, Berlin

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. The maps were created using Map-Creator 2.0 (primap) software.

Body length was measured from the anterior margin of the mandibles to the abdominal apex, the length of the forebody from the anterior margin of the mandibles to the posterior margin of the elytra, head length 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, 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.

## Species descriptions and additional records

### *Lathrobium fulvipenne* (GRAVENHORST 1806)

**Material examined:** Turkey: 1♂, 1♀, Kars, 10 km S Sarıkamış, 2000 m, 8.VI.1989, leg. Schönmann & Schillhammer (NHMW, cAss). Kyrgyzstan: 1♀, Issyk-Kul, 25 km W Balykchy, 2 km S Kek Mojnok Vtoroe, 42°27'N, 75°51'E, 1670 m, 18.VI.2011, leg. Frisch (MNHUB); 1♀, Issyk-Kul, Kek Mojnok-Vtoroe - Balykchy, 42°27'N, 75°51'E, 1580 m, 19.VI.2011, leg. Frisch (MNHUB); 1♂, Issyk-Kul, SE Kyzyl-Tuu, 42°06'N, 77°05'E, 2140 m, 21.VI.2011, leg. Frisch (MNHUB); 1♂, Issyk-Kul, Kyzyl-Tuu, Temir-Kanat, 42°02'N, 76°57'E, 2260 m, 21.VI.2011, leg. Frisch (cAss).

**Comment:** According to SMETANA (2004), this species has a trans-Palaeartic distribution. However, reliably identified material from the East Palaeartic region east of Middle Asia is unknown to me. In Middle Asia, *L. fulvipenne* has been recorded from Kazakhstan, Turkmenistan, and Uzbekistan. The above specimens from Kyrgyzstan represent new country records.

### *Lathrobium brunnipes* (FABRICIUS 1793)

**Material examined:** Russia: 2♂♂, Transbaikal region, Werchne-Undinskoye, leg. Mandl (NHMW, cAss); 1♂, Ussuri region, Yasnoe, 400 m, 12.-19.VII.1989, leg. Nikodým (NHMB).

**C o m m e n t :** According to RYVKIN (2011), *L. brunnipes* is one of the most common representatives in the East Palaearctic region.

***Lathrobium laevipenne* HEER 1839**

**M a t e r i a l e x a m i n e d :** Turkey: 1 ♀, Artvin, Veliköy, Karagöl, 5.VI.1989, leg. Schönmann & Schillhammer (NHMW); 1 ♂, Istanbul, Şile-AŞva, 19.V.1987, leg. Schönmann & Schillhammer (cAss).

**C o m m e n t :** This species has been recorded from Turkey twice, first from Giresun (KORGE 1971) and subsequently from Karaorman, based on a female (ASSING 2011).

***Lathrobium dimidiatipenne* BERNHAUER 1910**

**C o m m e n t :** Originally described from Irkutsk in the Baikal region (BERNHAUER 1910), *L. dimidiatipenne* was subsequently reported from northeastern Anatolia (Erzurum: Tortum) by COIFFAIT (1982). However, no reference material was found in the Coiffait collection at the Muséum National d'Histoire Naturelle in Paris (TAGHAVIAN pers. comm.). It seems rather likely that the record in fact refers to *L. bernhaueri* (see below).

***Lathrobium bernhaueri* KOCH 1937**

**M a t e r i a l e x a m i n e d :** Turkey: 3 ♂♂, 1 ♀, Rize, Ayder, 2.-3.VI.1989, leg. Schönmann & Schillhammer (NHMW, cAss); 1 ♀, Artvin, Veliköy, Karagöl, 5.VI.1989, leg. Schönmann & Schillhammer (NHMW).

**C o m m e n t :** *Lathrobium bernhaueri* is distributed in the Caucasus region. The only previous record from Turkey ("Ilica (Ayder) im Tal von Ardeşen") was reported by KORGE (1971).

***Lathrobium tichomirovae* COIFFAIT 1981**

**M a t e r i a l e x a m i n e d :** Azerbaijan: 2 ♂♂, 1 ♀, Lenkoran, leg. Leder (Reitter) (NHMW, cAss); 1 ♀, Lerik, leg. Leder (Reitter) (NHMW). Russia: 1 ♂, Uch-Dere [ca. 43°40'N, 39°37'E], 10.IV.1880 (NHMW).

**C o m m e n t :** All the above specimens had been misidentified as *L. castaneipenne* KOLENATI 1846. *Lathrobium tichomirovae* is evidently closely related to *L. bernhaueri*, as can be inferred from the similarly derived morphology of the aedeagus. Like *L. bernhaueri*, it is distributed in the Caucasus region. The specimens from Azerbaijan represent new country records.

***Lathrobium pallidipenne* HOCHHUTH 1851**

**M a t e r i a l e x a m i n e d :** Italy: 1 ♂, Toscana, Viareggio, XI.1966 (NHMW).

**C o m m e n t :** This species is widespread but not common in the West Palaearctic region (ASSING 2012a) and was recently reported also from East Siberia (RYVKIN 2011).

***Lathrobium taxi* BERNHAUER 1902**

**M a t e r i a l e x a m i n e d :** Romania: 1♂, "Schuler", 1895, leg. Ganglbauer (NHMW); 1♂, Braşov, leg. v. Hopffgarten (NHMW); 1♂, Braşov, 1895, leg. Ganglbauer (cAss); 1♂, 1♀, "Transsylv." (NHMW).

**C o m m e n t :** All the above specimens had been misidentified as *L. castaeneipenne* KOLENATI 1846. The distribution of *L. taxi* is of the Ponto-Mediterranean type and ranges from Asia Minor to eastern and southeastern Central Europe ASSING (2012a).

***Lathrobium marani* KOCH 1939**

**M a t e r i a l e x a m i n e d :** Kyrgyzstan: 1♂, Chui, S Bishkek, SE Kashkasu, Kaskha-Suu river, 42°41'N, 74°31'E, 1630 m, 5.VII.2011, leg. Frisch (MNHUB).

**C o m m e n t :** The known distribution of *L. marani* is confined to Middle Asia (ASSING 2009).

***Lathrobium semirufulum* BERNHAUER 1902**

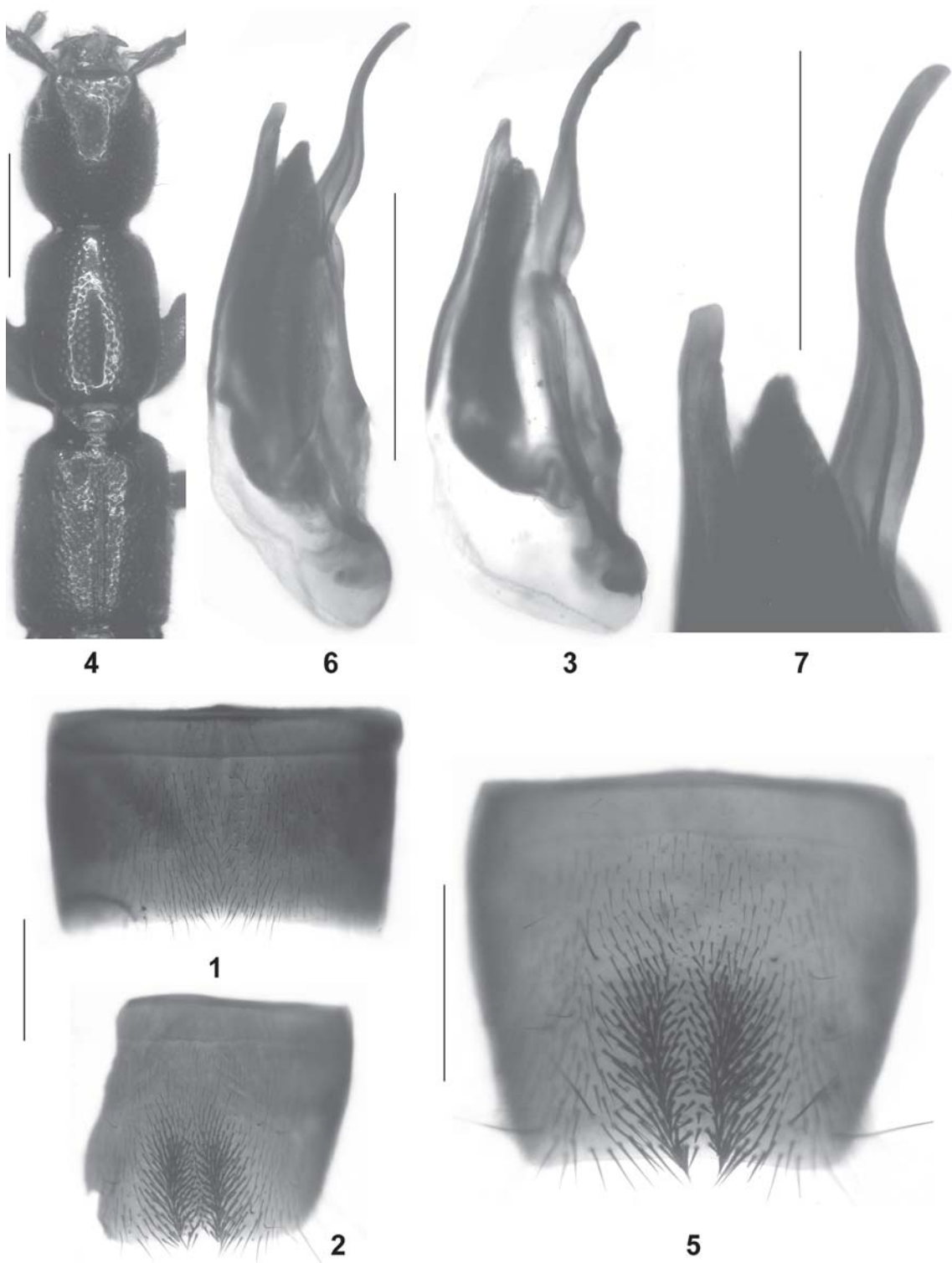
**M a t e r i a l e x a m i n e d :** Kyrgyzstan: 1♂, Issyk-Kul, 25 km W Balykchy, 2 km S Kek Mojnok Vtoroe, 42°27'N, 75°21'E, 1670 m, 18.VI.2012, leg. Frisch (MNHUB); 1♀, Issyk-Kul, Balykchy - Kyzyl-Tuu, Kök-Say, 53°05'N, 76°49'E, 2030 m, 21.VI.2011, leg. Frisch (MNHUB); 1♀, Issyk-Kul, SE Kyzyl-Tuu, 42°06'N, 77°05'E, 2140 m, 21.VI.2011, leg. Frisch (MNHUB); 1♀, Issyk-Kul, Balykchy - Kyzyl-Tuu, Kara-Talaa - Tuura-Suu, 42°09'N, 76°20'E, 2130 m, 20.VI.2011, leg. Frisch (MNHUB); 1♀, Issyk-Kul, SW Kyzyl-Tuu, Temir-Kanat, 42°02'N, 76°57'E, 2260 m, 21.VI.2011, leg. Frisch (cAss); 1♂, Chui, SE Tokmok, S Orlovka, Taldy-Bulak river, 42°43'N, 75°37'E, 3.VII.2011, leg. Frisch (cAss).

**C o m m e n t :** This species had previously been reported only from Kazakhstan and Tajikistan (SMETANA 2004). The above specimens represent the first records from Kyrgyzstan.

***Lathrobium bucharensis* KOCH 1944 (Figs 1-3, Map 1)**

**T y p e m a t e r i a l :** Holotype ♂ [somewhat damaged; antennae and parts of the legs missing; remounted and dissected]: "Buchar, Staudinger / Typus *Lathrobium bucharensis* m., 1943 C. Koch / *Lathrobium bucharensis* Koch, det. V. Assing 2012" (NHMB).

**C o m m e n t :** The original description is based on "ein einziges Männchen" from "Buchar" (today Uzbekistan) deposited in the Frey collection (KOCH 1944), which is currently housed in the NHMB. The species is known only from the type locality (Map 1). The male sexual characters are illustrated in Figs 1-3.



**Figs 1-7:** *Lathrobium bucharensis* Koch (1-3) and *L. bananum* nov.sp. (4-7): (1) male sternite VII; (2, 5) male sternite VIII; (3, 6) aedeagus in lateral view (4); forebody; (7) apical portion of aedeagus in lateral view. Scale bars: 3-4, 6: 1.0 mm; 1-2, 5, 7: 0.5 mm.

***Lathrobium bananum* nov.sp.** (Figs 4-7, Map 1)

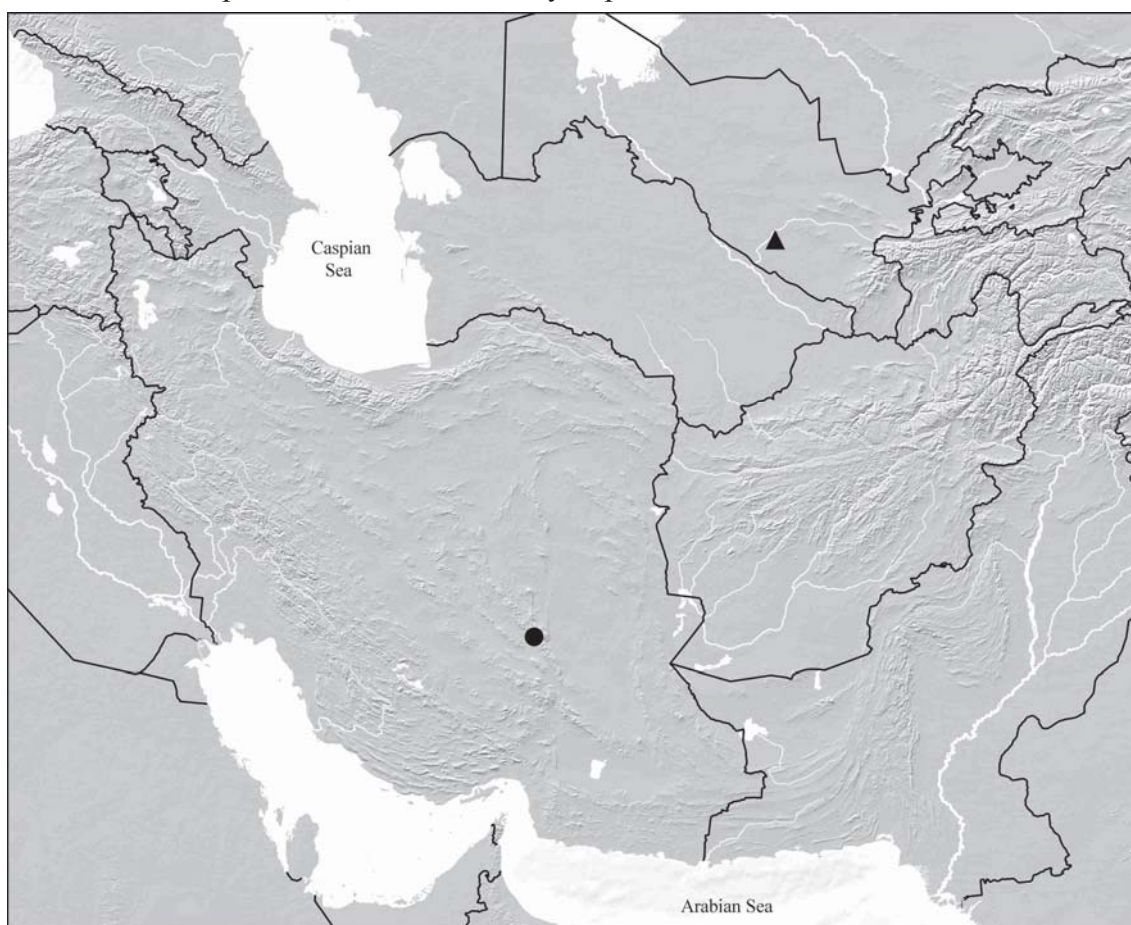
**Type material:** Holotype ♂: "IRAN, Kerman province, Kerman-Kuhpaye: Darbasiab (Banan Mts), 2470 m, N 30°31'09" E 057°09'47", 19.05.2010, lg. Frisch & Serri / Holotypus ♂ *Lathrobium bananum* sp. n., det. V. Assing 2013" (cAss).

**Etymology:** The specific epithet (adjective) is derived from the name of the mountain range (Banan) where the type locality is situated.

**Description:** Body length 9.5 mm; length of forebody 4.9 mm. Coloration: head blackish; pronotum dark-brown; elytra castaneous; abdomen dark-brown; legs castaneous; antennae dark-brown.

Head (Fig. 4) 1.12 times as long as broad and of oval shape (i.e., lateral margins convex in dorsal view); posterior angles smoothly convex, practically obsolete; punctuation relatively fine and moderately dense; interstices with fine and shallow microreticulation, mostly approximately as broad as diameter of punctures, partly narrower; median dorsal portion between eyes with sparsely punctate patch. Eyes relatively small, approximately 1/4 as long as distance from posterior margin of eye to posterior constriction in dorsal view. Antenna approximately 2.7 mm long.

Pronotum (Fig. 4) approximately 1.3 times as long as broad and 0.97 times as broad as head; punctuation slightly coarser than that of pronotum and moderately dense; interstices with extremely shallow, almost obsolete microreticulation, on average slightly broader than diameter of punctures; midline broadly impunctate.



**Map 1:** Type localities of *Lathrobium bucharensis* KOCH (triangle) and *L. bananum* nov.sp. (circle).

Elytra (Fig. 4) 0.86 times as long as pronotum; punctation shallow and ill-defined. Length of hind wings not examined.

Abdomen approximately as broad as elytra; punctation dense and fine; interstices with distinct microsculpture; posterior margin of tergite VII with palisade fringe.

♂: sternites III-VI unmodified; sternite VII slightly depressed in posterior median portion, posterior margin weakly concave in the middle; sternite VIII (Fig. 5) weakly transverse, with shallow median impression in posterior half, this impression with two longitudinal clusters of numerous modified, stout black setae, posterior margin broadly and weakly concave; aedeagus (Figs 6-7) 2.3 mm long, ventral process with distinct median keel basally and with long and slender ventral process.

♀: unknown.

**Comparative notes:** In external and the male sexual characters, *L. bananum* is most similar to *L. bucharensis*, most likely its adelphotaxon, but distinguished by the darker coloration of the elytra, legs, palpi, and antennae, and by the shape of the ventral process of the aedeagus (median carina of different shape; ventral process shorter in relation to aedeagal capsule). For illustrations of *L. bucharensis* see Figs 1-3.

**Distribution and natural history:** The type locality is situated near Kerman, Kerman province, southern Iran (Map 1), at an altitude of 2470 m.

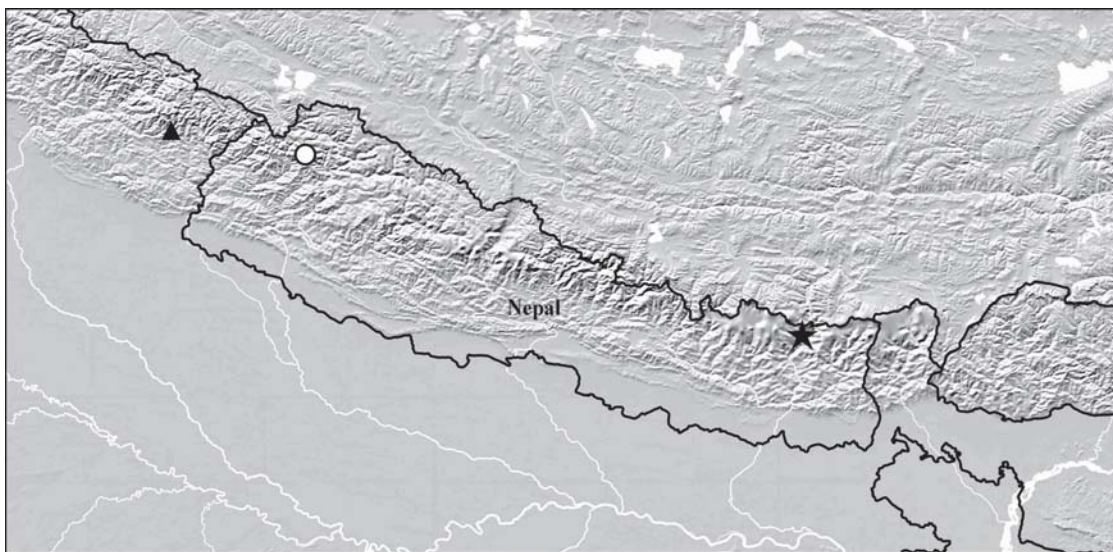
#### ***Lathrobium inexcisum* ASSING 2012**

**Material examined:** Nepal: 2 exs., Mechi/Taplejung, 32 km NE Taplejung, Anda Pheci-Tortung, 27°32'N, 87°55'E, 3190 m, rhododendron forest, 18.V.2003, leg. Weigel (NME, cAss).

**Comment:** The known distribution of *L. inexcisum* is confined to several localities in Taplejung district (ASSING 2012b).

#### ***Lathrobium diremptum* ASSING 2012**

**Material examined:** Nepal: 2 exs., Mechi/Taplejung, 32 km NE Taplejung, Anda Pheci-Tortung, 27°32'N, 87°55'E, 3190 m, rhododendron forest, 18.V.2003, leg. Weigel (NME, cAss).



**Map 2:** Type localities of *Lathrobium uttaricum* nov.sp. (triangle), *L. hartmanni* nov.sp. (circle), and *L. makaluicum* nov.sp. (diamond).

**C o m m e n t :** This recently described species was previously known only from two localities in Taplejung district (ASSING 2012b).

***Lathrobium makaluicum* nov.sp.** (Figs 8-13, Map 2)

**T y p e m a t e r i a l :** Holotype ♂: "O Nepal 1980, W. Wittmer / Mumbug O Makalu 3500 m 9.6. / Holotypus ♂ *Lathrobium makaluicum* sp. n., det. V. Assing 2013" (NHMB).

**E t y m o l o g y :** The name is an adjective derived from the name of the mountain range where the type locality is situated.

**D e s c r i p t i o n :** Body length 7.2 mm; length of forebody 3.1 mm. Coloration: forebody dark-brown; abdomen blackish; legs and antennae pale-reddish.

Head (Fig. 8) 1.03 times as broad as long; punctation moderately coarse and rather sparse; interstices with distinct microreticulation. Eyes weakly projecting from lateral contours of head, approximately one third as long as postocular region in dorsal view and composed of approximately 30 ommatidia.

Pronotum (Fig. 8) 1.18 times as long as broad and 1.02 times as broad as head; punctation similar to that of head; impunctate midline rather broad; interstices with microsculpture.

Elytra (Fig. 8) short, 0.53 times as long as pronotum; humeral angles weakly marked; punctation shallow and rather sparse; interstices without distinct microsculpture. Hind wings completely reduced.

Abdomen 1.1 times as broad as elytra; punctation fine and moderately dense, somewhat sparser on tergites VII-VIII than on tergites III-VI; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII weakly convex.

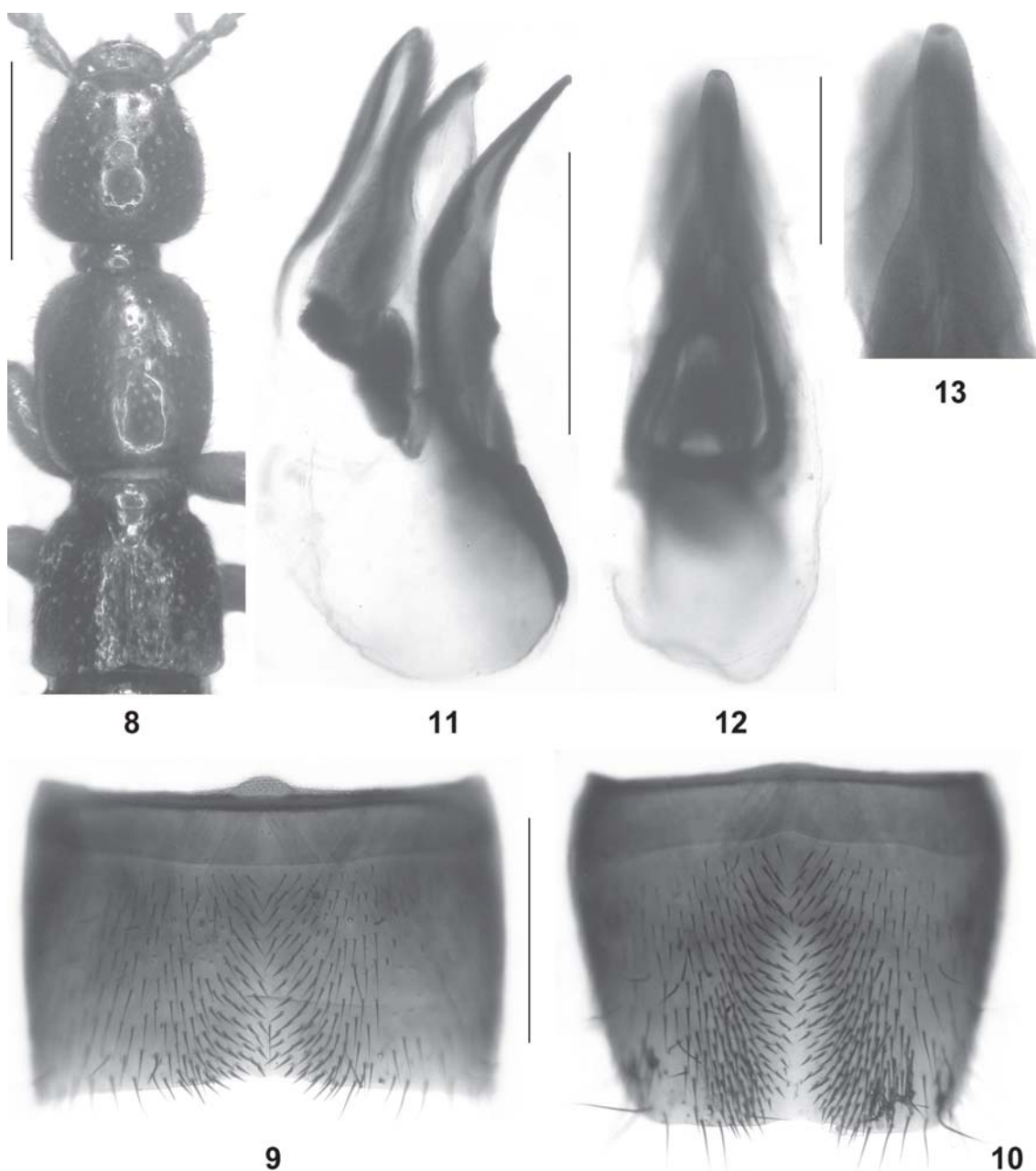
♂: protarsomeres I-IV strongly dilated; sternite VII (Fig. 9) distinctly transverse and with rather extensive postero-median impression, this impression with moderately modified stout black setae, posterior margin weakly concave; sternite VIII (Fig. 10) distinctly transverse, middle with distinct longitudinal impression, this impression narrowly without setae along the middle, on either side of middle with extensive oblong cluster of numerous moderately modified stout black setae, posterior margin indistinctly concave in the middle; aedeagus (Figs 11-13) 1.15 mm long and symmetric; ventral process curved and apically very acute in lateral view, apex narrowly truncate in ventral view; dorsal plate with moderately long and lamellate apical portion, and with short, weakly sclerotized basal portion; internal sac with dark membranous structures.

♀: unknown.

**C o m p a r a t i v e n o t e s :** Based on the external (habitus, coloration, presence of microsculpture on the pronotum) and the male sexual characters, *L. makaluicum* undoubtedly belongs to the *L. nepalense* group. In the key in ASSING (2012b), it would key out at couplet 13, together with the externally similar *L. diremptum* and *L. bibarbatum* from Taplejung district in eastern Nepal. It is distinguished from these species by the different shape and chaetotaxy of the male sternite VIII and by the different morphology of the aedeagus (shape of ventral process and of dorsal plate; internal structures).

**D i s t r i b u t i o n a n d n a t u r a l h i s t o r y :** The type locality is situated east of the Makalu range in eastern Nepal (Map 2). The holotype was collected at an altitude of 3500 m.





**Figs 8-13:** *Lathrobium makaluicum* nov.sp.: (8) forebody; (9) male sternite VII; (10) male sternite VIII; (11-12) aedeagus in lateral and in ventral view; (13) apical portion of aedeagus in ventral view. Scale bars: 8: 1.0 mm; 9-12: 0.5 mm; 13: 0.2 mm.

***Lathrobium hartmanni* nov.sp.** (Figs 14-20, Map 2)

**Type material:** Holotype ♂: "Nepal P: Seti, D: Bajhang, 42 km NE Chainpur, Kalapani Khola, N29°48'23" / E81°29'04"E, 3750 m, 22.-23.VI.2009, leg. M. Hartmann, riverside (shrub/pasture) ♂27 / Holotypus ♂ *Lathrobium hartmanni* sp.n., det. V. Assing 2012" (NME). Paratype ♀: same data as holotype (cAss).

**Etymology:** The species is dedicated to Matthias Hartmann (NME), who collected the type specimens.

**D e s c r i p t i o n :** Body length 7.5-7.8 mm; length of forebody 3.3 mm. Habitus as in Fig. 14. Coloration: body blackish-brown; legs, except for the paler tarsi, dark-brown; antennae reddish-brown.

Head (Fig. 15) as long as broad; punctation moderately coarse and moderately dense, slightly sparser in median dorsal portion; interstices with distinct microreticulation, on average somewhat broader than diameter of punctures. Eyes weakly projecting from lateral contours of head, approximately 1/3 the length of postocular region in dorsal view and composed of approximately 30 ommatidia.

Pronotum (Fig. 15) approximately 1.18 times as long as broad and as broad as head; punctation similar to that of head, but slightly coarser; interstices without microsculpture.

Elytra short, approximately 0.55 times as long as pronotum (Fig. 15); humeral angles weakly marked; punctation shallow; interstices without distinct microsculpture. Hind wings completely reduced. Metatibia slightly compressed.

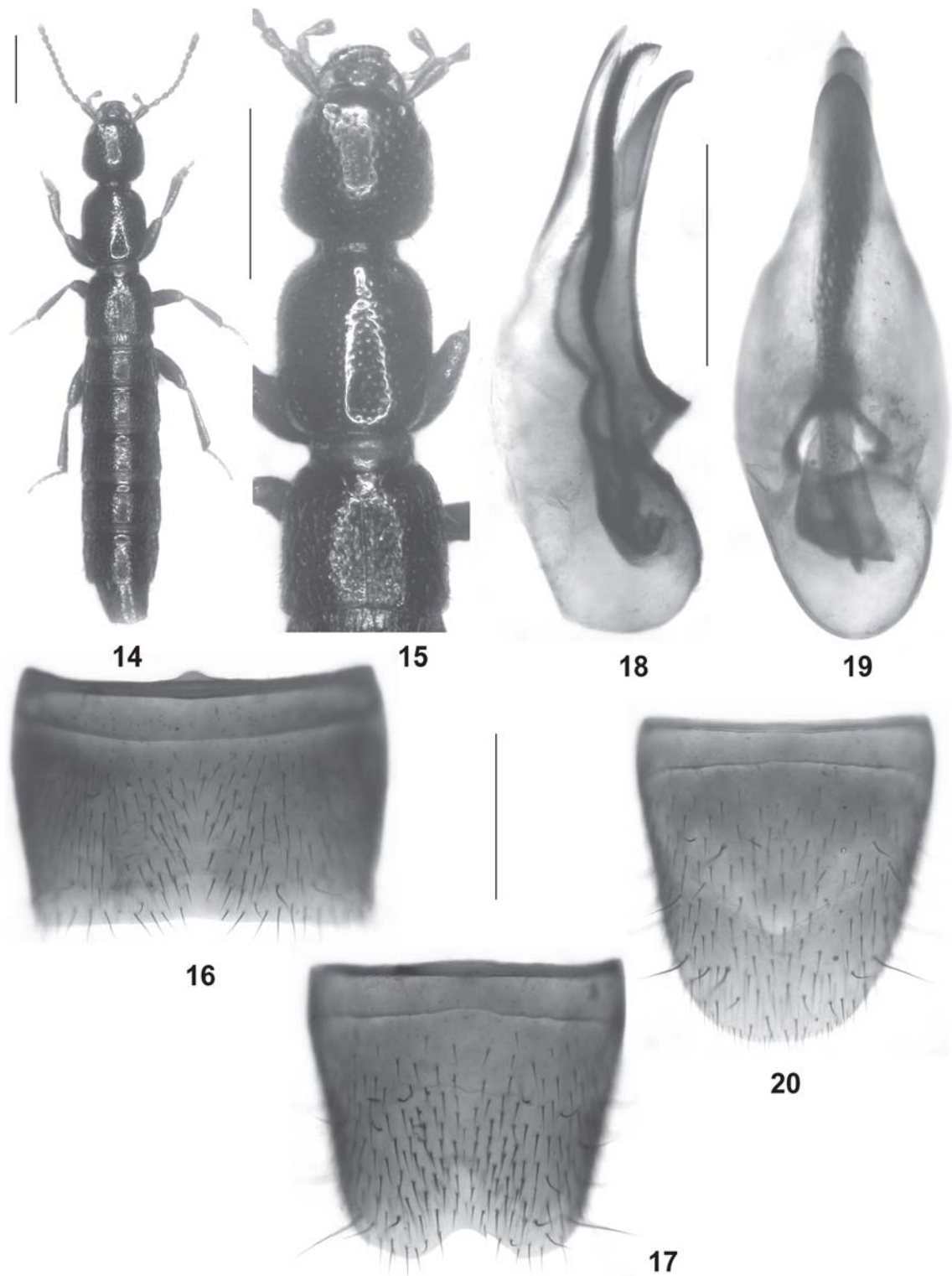
Abdomen broader than elytra; punctation moderately fine and dense, somewhat sparser on posterior than on anterior tergites; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII weakly convex to indistinctly pointed in the middle.

♂: protarsomeres I-IV strongly dilated; sternite VII (Fig. 16) shallowly impressed posteriorly and with sparse long black setae in postero-median portion, posterior margin weakly concave; sternite VIII (Fig. 17) moderately transverse, with shallow median impression, this impression with weakly modified black setae, posterior excision small, not very deep, and anteriorly concave; aedeagus (Figs 18-19) 1.3 mm long, ventral process weakly curved in lateral view and gradually narrowed apicad in ventral view, dorsal plate lamellate and moderately sclerotised, internal sac with a long membranous tube.

♀: protarsomeres I-IV strongly dilated; sternite VIII (Fig. 20) oblong and with smoothly convex posterior margin; tergite IX undivided anteriorly; tergite X approximately as long as antero-median portion of tergite IX in the middle.

**C o m p a r a t i v e n o t e s :** Based on the external and male sexual characters, *L. hartmanni* belongs to the *L. muguicum* species group, which previously included only *L. muguicum*, whose female sexual characters are unknown. Both species are externally extremely similar. The new species is distinguished from *L. muguicum* by the somewhat darker legs (*L. muguicum*: legs and antennae reddish), the broader and not distinctly V-shaped posterior excision of the male sternite VIII, and particularly by the morphology of the aedeagus. In *L. hartmanni*, the aedeagus is smaller (*L. muguicum*: 1.5 mm), the ventral process is apically abruptly narrowed (ventral view), stouter (lateral view), apically curved, and somewhat truncate, and the internal tube is less massive.

**D i s t r i b u t i o n a n d n a t u r a l h i s t o r y :** The type locality is situated to the southeast of the Saipal peak in Bajhang district, Seti province, northwestern Nepal (Map 2). The specimens were collected near a river bank at an altitude of 3750 m.



**Figs 14-20:** *Lathrobium hartmanni* nov.sp.: (14) habitus; (15) forebody; (16) male sternite VII; (17) male sternite VIII; (18-19) aedeagus in lateral and in ventral view; (20) female sternite VIII. Scale bars: 14-15: 1.0 mm; 16-20: 0.5 mm.

***Lathrobium uttaricum* nov.sp.** (Figs 21-29, Map 2)

**Type material:** Holotype ♂: "N-India: Uttaranchal state, ca. 30 km N Bageshwar, SE Dakhuri vill. [= Dhakuri; ca. 30°05'N, 79°55'E], 2600-2800 m, 25.-26.6.2003, leg. Z. Kejval & M. Trýzna / Holotypus ♂ *Lathrobium uttaricum* sp. n., det. V. Assing 2013" (NHMW). Paratypes: 2♂♂, 3♀♀: same data as holotype (NHMW, cAss).

**Etymology:** The specific epithet is derived from the name of the state where the type locality is situated and where this species is currently the sole representative of the genus.

**Description:** Species with weakly pronounced sexual size dimorphism; body length 6.8-7.5 mm (♂), 6.5-7.2 (♀); length of forebody 3.4-3.6 mm (♂), 3.1-3.2 mm (♀). Habitus as in Fig. 21. Coloration: whole body, including appendages, reddish.

Head (Fig. 22) approximately 1.05 times as broad as long; posterior angles marked; punctuation moderately coarse and rather dense, slightly sparser in median dorsal portion; interstices with distinct microreticulation, on average somewhat broader than diameter of punctures. Eyes small, not projecting from lateral contours of head, approximately 1/5 the length of postocular region in dorsal view and composed of approximately 15 ommatidia.

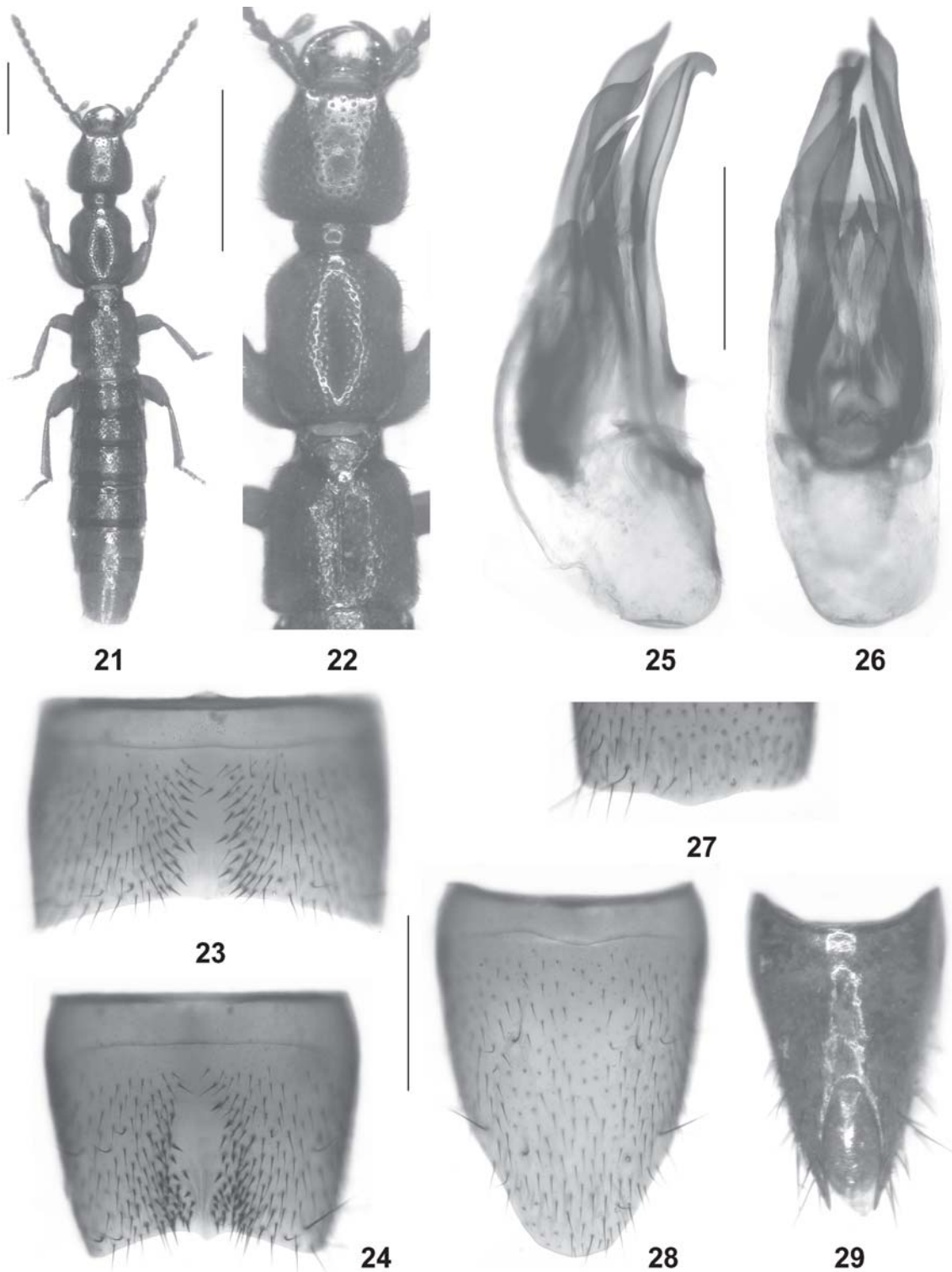
Pronotum (Fig. 22) approximately 1.25 times as long as broad and 0.95 times as broad as head; lateral margins weakly concave anteriorly in dorsal view; punctuation similar to that of head, or slightly finer; interstices without microsculpture.

Elytra (Fig. 22) moderately short, approximately 0.6 times as long as pronotum; humeral angles weakly marked; punctuation fine and shallow; interstices without distinct microsculpture. Hind wings completely reduced. Metatibia slightly compressed. Protarsomeres with pronounced sexual dimorphism.

Abdomen approximately 1.1 times as broad as elytra; punctuation fine and moderately dense, slightly sparser on posterior than on anterior tergites; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII with weakly pronounced sexual dimorphism.

♂: protarsomeres I-IV strongly dilated; tergite VIII with weakly convex posterior margin; sternites IV and V weakly depressed in postero-median portion, these depressions with sparse, moderately modified black setae on either side of middle; sternite VI with shallow median impression, this impression with sparse, moderately modified black setae; sternite VII (Fig. 23) strongly transverse, median impression without setae in the middle, laterally with sparse, moderately modified black setae, posterior margin broadly concave; sternite VIII (Fig. 24) distinctly transverse, with pronounced median impression, this impression without setae in the middle, laterally with rather sparse, moderately modified black setae, posterior margin concave, in the middle angularly produced; aedeagus (Figs 25-26) approximately 1.6 mm long; ventral process slightly asymmetric, apically hooked in lateral view; dorsal plate moderately long, flat, and apically weakly convex in dorsal view, apical portion broad, not distinctly delimited from basal portion; internal sac with three pairs of distinctly sclerotized spines, one pair of very long spines, one of intermediate length, and one of rather short spines.

♀: protarsomeres I-IV rather weakly dilated; posterior margin of tergite VIII (Fig. 27) weakly angular in the middle; sternite VIII (Fig. 28) strongly oblong and with strongly convex posterior margin; tergite IX with long and undivided antero-median portion and



**Figs 21-29:** *Lathrobium uttaricum* nov.sp.: (21) habitus; (22) forebody; (23) male sternite VII; (24) male sternite VIII; (25-26) aedeagus in lateral and in ventral view; (27) posterior portion of female tergite VIII; (28) female sternite VIII; (29) female tergites IX-X. Scale bars: 21-22: 1.0 mm; 23-29: 0.5 mm.

short postero-lateral processes; tergite X very weakly convex in cross-section and very short, shorter than antero-median portion of tergite IX (Fig. 29).

**Comparative notes:** The external and sexual characters do not suggest closer phylogenetic affiliations to any of the previously known species groups represented in the Himalaya. *Lathrobium uttaricum* shares the pale coloration, strongly reduced eyes, the general shape of the ventral process of the aedeagus, and the morphology of the female tergites IX and X with the species of the *L. deuvei* group, but differs from them by numerous characters (e.g., head shape, eyes composed of more ommatidia, presence of a sexual size dimorphism, sexual dimorphism of tergite VIII, shapes and chaetotaxy of the male sternites VII and VIII, modified male sternites IV-VI, the asymmetric aedeagus, the shapes of the dorsal plate and internal structures of the aedeagus, and the shape of the female sternite VIII). Moreover, the species of the *L. deuvei* group are all confined to high-altitude habitats above 4000 m. These observations suggest that *L. uttaricum* represents a species group of its own, characterized by a sexual size dimorphism (unique among Himalayan *Lathrobium*), reduced eyes composed of approximately 15 ommatidia, reddish coloration, moderate body size, a pronounced sexual dimorphism of protarsomeres I-IV, a sexual dimorphism of tergite VIII, modified male sternites IV-VI (unique among Himalayan *Lathrobium*), the absence of modified setae in the middle of the male sternites IV-VIII, an asymmetric aedeagus with three pairs of sclerotized spines in the internal sac, a broad and apically weakly convex, not distinctly delimited apical portion of the dorsal plate, a strongly oblong female sternite VIII, and an undivided antero-median portion of the female tergite IX.

**Distribution and natural history:** The type locality is situated to the north of Bageshwar in Uttaranchal state, North India (Map 2). The specimens were collected at an altitude of 2600-2800 m.

### ***Lathrobium sinense* HERMAN 2003**

**Material examined:** China: 1 ♀, Shaanxi, ca. 30 km S Xian, Cuihua Shan, by stream, 19.IX.1980, leg. Hammond (BMNH).

**Comment:** *Lathrobium sinense* is one of the most widespread species of the genus in China, its distribution from Gansu in the west to Jiangsu in the east (ASSING in press a).

### ***Lathrobium imminutum* ASSING in press**

**Material examined:** China: 1 ♂, Heilongjiang, Harbin, Taiyang Dao, 14.IX.1980, leg. Hammond (BMNH); 1 ♀, Heilongjiang, Harbin, 15.V.1965, leg. Hammond (cAss).

**Comment:** This minute macropterous species was previously known only from the type locality in Beijing (ASSING in press a).

### ***Lathrobium sufflatum* nov.sp. (Figs 30-37)**

**Type material:** Holotype ♂: "CHINA: Yunnan, Nujiang Lisu Pref., Gaoligong Shan, "Cloud Pass", 21 km NW Liuku, 3150 m, 25°58'21"N, 98°41'01"E, shrubs & bamboo, litter sifted, 3.IX.2009, leg. M. Schülke [CH09-22a] / Holotypus ♂ *Lathrobium sufflatum* sp.n., det. V. Assing 2013" (cSch). Paratypes: 2 ♂♂, 4 ♀♀ [1 ♀ teneral]: same data as holotype (cSch, cAss); 1 ♀: same data as holotype, but "2.IX.2009 ... [CH09-22]" (cSch).

**E t y m o l o g y :** The specific epithet is the past participle of the Latin verb *sufflare* (to inflate, to swell) and alludes to the large dorsal portion of the aedeagus.

**D e s c r i p t i o n :** Small species; body length 4.8-6.0 mm; length of forebody 2.4-2.7 mm. Coloration: body reddish; legs and antennae yellowish-red.

Head (Fig. 30) approximately 1.05 times as long as broad; punctuation rather coarse and rather sparse, even sparser in postero-median dorsal portion; interstices with shallow microreticulation. Eyes weakly projecting from lateral contours of head, approximately 1/4 the length of postocular region in dorsal view and composed of approximately 25 ommatidia. Antenna 1.3-1.4 mm long.

Pronotum (Fig. 30) 1.25-1.30 times as long as broad and 1.05-1.10 times as broad as head; punctuation similar to that of head; impunctate midline moderately broad; interstices without microsculpture, broader than diameter of punctures.

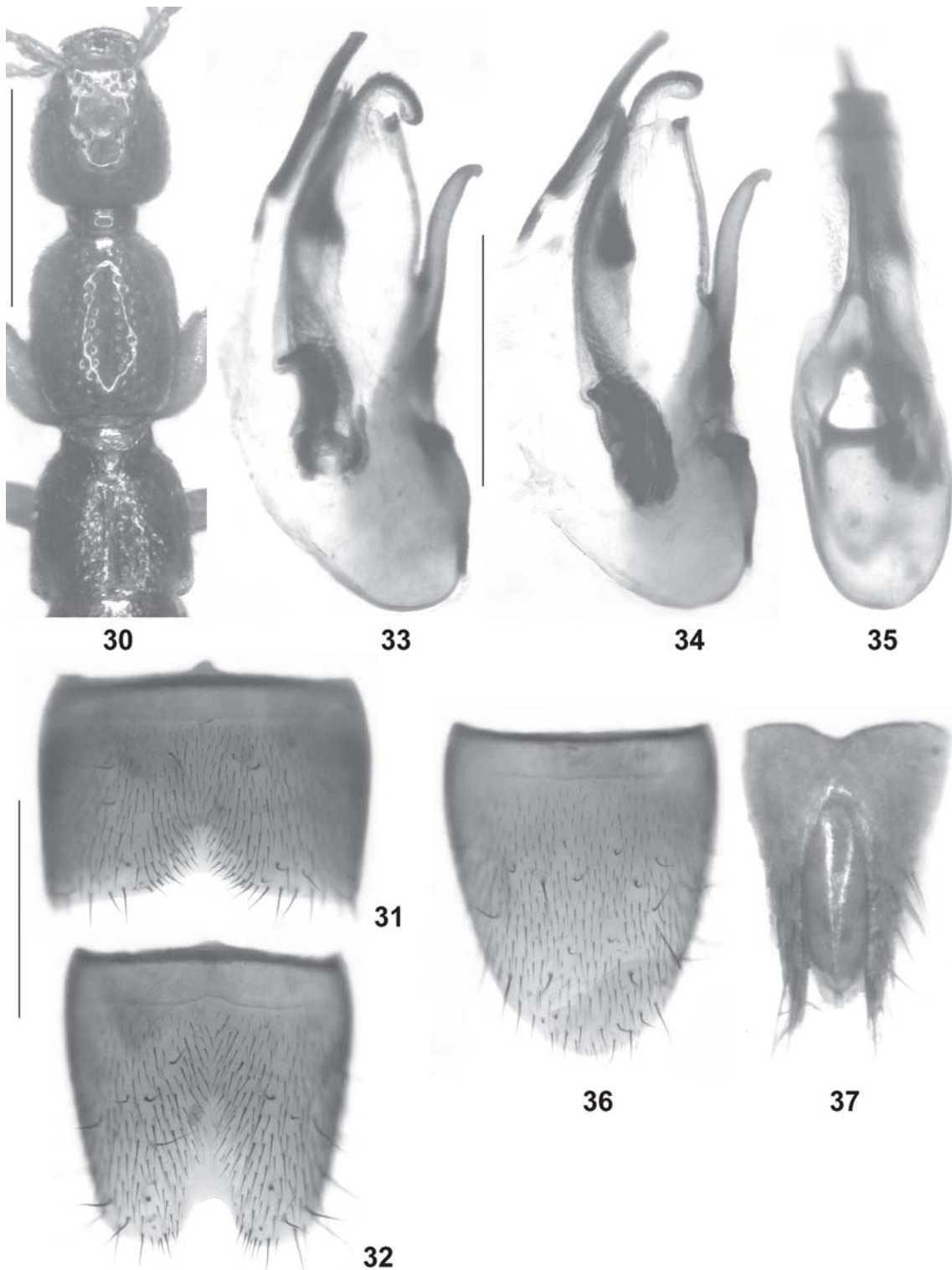
Elytra (Fig. 30) short, approximately 0.53 times as long as pronotum; humeral angles weakly marked; punctuation shallow, fine, and not very dense; interstices without microsculpture. Hind wings completely reduced. Protarsomeres I-IV with pronounced sexual dimorphism.

Abdomen broader than elytra; punctuation fine and very dense on tergites III-VI, sparser on tergites VII and VIII; interstices with distinct microsculpture, nearly matt; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII without sexual dimorphism, weakly convex to indistinctly pointed in the middle.

♂: protarsomeres I-IV strongly dilated; sternite VII (Fig. 31) moderately transverse, posteriorly with small median impression, this impression with weakly modified dark setae and in the middle without setae, posterior margin distinctly concave in the middle; sternite VIII (Fig. 32) weakly oblong, with oblong median impression posteriorly, postero-median portion of this impression without setae, posterior excision distinct and almost U-shaped; aedeagus (Figs 33-35) approximately 0.9 mm long, with large dorsal portion apically distinctly extending beyond apex of ventral process; ventral process nearly straight, slender both in lateral and in ventral view, apically hooked in lateral view; dorsal plate with relatively large, strongly sclerotized, and apically narrowly produced (dorsal view) apical portion, basal portion very short and weakly sclerotized; internal sac with long tube with numerous small and weakly sclerotized spines, basally with two asymmetric sclerotized structures, and subapically with cluster of thin dark spines.

♀: protarsomeres I-IV moderately dilated, distinctly less so than in male; sternite VIII (Fig. 36) oblong and with strongly convex posterior margin; tergite IX with short antero-median portion with suture; tergite X long, more than three times as long as antero-median portion of tergite IX, in cross-section weakly convex anteriorly and strongly convex posteriorly (Fig. 37).

**C o m p a r a t i v e n o t e s :** The only other species from Yunnan with a similarly large dorsal portion of the aedeagus is *L. bihamulatum* ASSING in press (Yunnan: Ertaiipo Shan), whose female sexual characters are unknown and which is distinguished from *L. sufflatum* as follows: body distinctly larger (body length 8.5 mm; length of forebody 3.8 mm) and darker (brown); eyes larger (composed of approximately 50 ommatidia); male sternite VII of different chaetotaxy and with strongly concave excision in the middle of the posterior margin; male sternite VIII transverse and with asymmetrically bisinuate



**Figs 30-37:** *Lathrobium sufflatum* nov.sp.: (30) forebody; (31) male sternite VII; (32) male sternite VIII; (33-35) aedeagus in lateral and in ventral view; (36) female sternite VIII; (37) female tergites IX-X. Scale bars: 30: 1.0 mm; 31-37: 0.5 mm.

posterior margin, without distinct median excision; aedeagus with curved ventral process, with much longer and differently shaped dorsal plate, and with internal structures of completely different shape. Based on external characters (small size, reddish coloration,



reduced size), the male sexual characters (sternite VIII with distinct posterior excision; dorsal plate of aedeagus apically extended into slender process, with strongly sclerotized apical portion and shorter basal portion; internal sac with asymmetric dark sclerotized structures), and also the female secondary sexual characters (antero-median portion of tergite IX short and with median suture; tergite X strongly convex in cross-section posteriorly and much longer than antero-median portion of tergite IX), *L. sufflatum* is most similar to the species of the *L. fortehamatum* subgroup of the *L. daliense* group (see ASSING in press b). This subgroup previously included three species (*L. fortehamatum* ASSING in press, *L. tricuspdatum* ASSING in press, and *L. fortespinosum* ASSING in press) from the environs of Zhongdian and from the Haba Shan in Yunnan. The new species is readily distinguished from these species by larger eyes (other species: composed of approximately 10 ommatidia), shorter elytra, the male sexual characters (other species: posterior margin of sternite VII without distinct concavity in the middle; sternite VIII with slightly asymmetric and rather V-shaped posterior excision; aedeagus with much less developed dorsal portion and with differently shaped ventral process; dorsal plate of aedeagus with much longer basal portion; internal sac with conspicuously long and massive spines), and the shape of the female sternite VIII (other species: not oblong, posterior margin not strongly convex). For characters distinguishing *L. sufflatum* from the syntopic *L. sexocellatum* see the comparative notes in the following section.

**C o m m e n t :** This species is identical to *Lathrobium* sp. 10 in ASSING (in press b).

**D i s t r i b u t i o n a n d n a t u r a l h i s t o r y :** The type locality is situated in the Gaoligong Shan in western Yunnan, close to the border with Myanmar. The specimens were sifted from leaf litter in vegetation composed of shrubs and bamboo at an altitude of 3150 m, together with the holotype of *L. sexocellatum*. One of the female paratypes is teneral.

***Lathrobium sexocellatum* nov.sp.** (Figs 38-42)

**T y p e m a t e r i a l :** Holotype ♂: "CHINA: Yunnan, Nujiang Lisu Pref., Gaoligong Shan, "Cloud Pass", 21 km NW Liuku, 3150 m, 25°58'21"N, 98°41'01"E, shrubs & bamboo, litter sifted, 3.IX.2009, leg. M. Schülke [CH09-22a] / Holotypus ♂ *Lathrobium sexocellatum* sp.n., det. V. Assing 2013" (cAss).

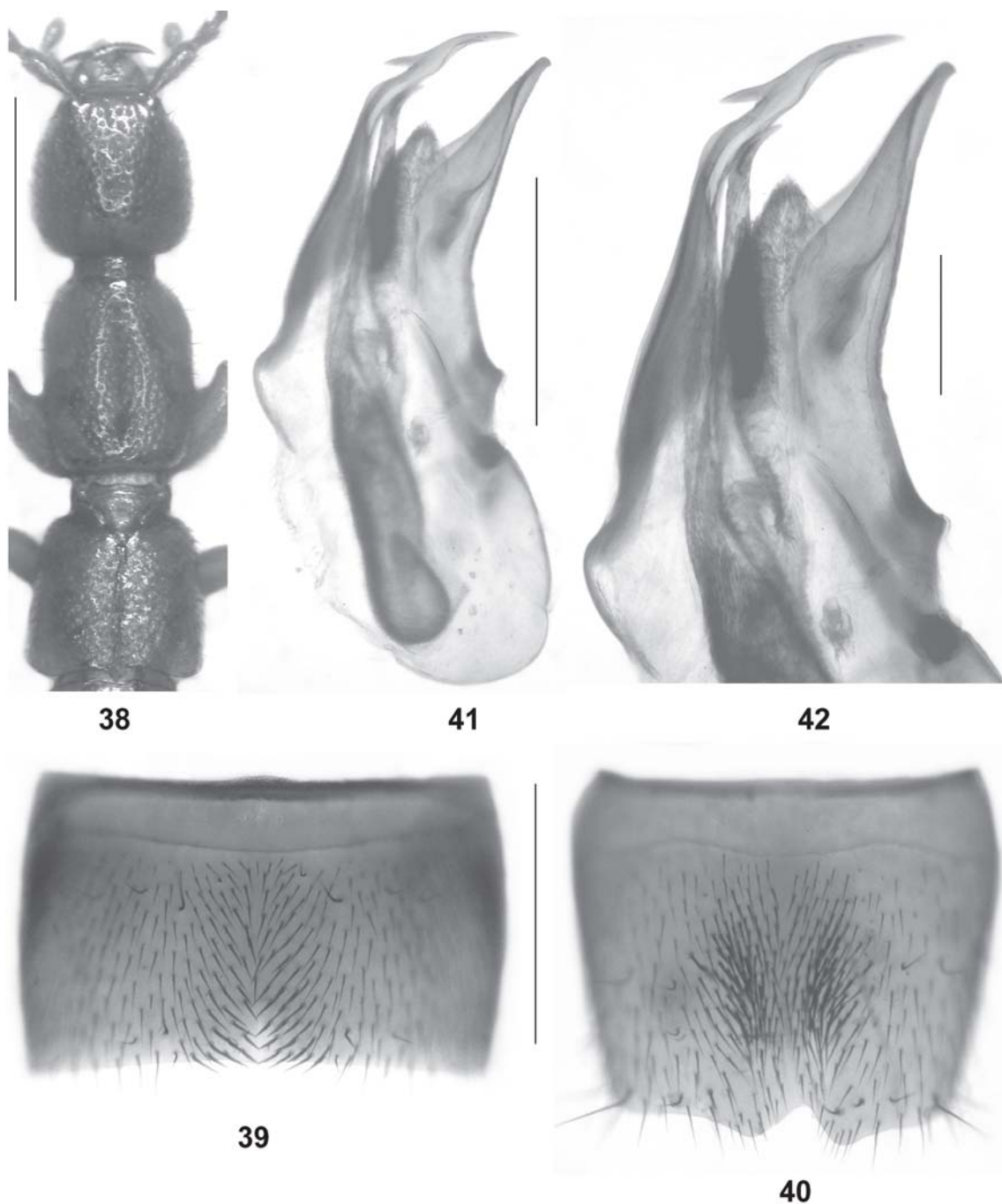
**E t y m o l o g y :** The specific epithet (Latin, adjective) alludes to the conspicuously small eyes, which are composed of only six ommatidia.

**D e s c r i p t i o n :** Species of rather small size; body length 6.3 mm; length of fore-body 3.0 mm. Coloration: body pale-reddish; legs and antennae yellowish-red.

Head (Fig. 38) 1.06 times as long as broad; punctation rather coarse and very dense, only slightly sparser in postero-median dorsal portion; interstices with shallow microreticulation, narrower than diameter of punctures. Eyes weakly projecting from lateral contours of head, reduced to minute rudiments and composed of 6 ommatidia. Antenna 1.75 mm long.

Pronotum (Fig. 38) 1.3 times as long as broad and 0.96 times as broad as head; punctation similar to that of head, very dense; impunctate midline very narrow; interstices without microsculpture, narrower than diameter of punctures.

Elytra (Fig. 38) short, approximately 0.58 times as long as pronotum; humeral angles weakly marked; punctation shallow, fine, and moderately dense; interstices without microsculpture. Hind wings completely reduced.



**Figs 38-42:** *Lathrobium sexoculatum* nov.sp.: (38) forebody; (39) male sternite VII; (40) male sternite VIII; (41) aedeagus in lateral view; (42) apical portion of aedeagus in lateral view. Scale bars: 38: 1.0 mm; 39-41: 0.5 mm; 42: 0.2 mm.

Abdomen broader than elytra; punctation fine and moderately dense; interstices glossy, with very shallow microsculpture; posterior margin of tergite VII without palisade fringe.

♂: protarsomeres I-IV moderately dilated; tergite VIII with very weakly convex, almost truncate posterior margin; sternite VII (Fig. 39) strongly transverse, posteriorly with shallow, but rather extensive median impression, this impression with weakly modified dark setae, posterior margin broadly and weakly concave; sternite VIII (Fig. 40) transverse, with cluster of dense, weakly modified black setae on either side of middle, poste-

rior excision almost V-shaped and in asymmetric position; aedeagus (Figs 41-42) large in relation to body size, 1.3 mm long; ventral process symmetric in ventral view, narrowed apicad, and almost acute apically; dorsal plate of highly distinctive morphology, apical portion very long, apically spear-shaped in lateral view, subapically with distinct tooth-like process, basal portion lamellate and very short; internal sac with long membranous structure, with subapical cluster of moderately sclerotized thin spines, and with relatively long and weakly sclerotized apical spine.

♀: unknown.

**C o m p a r a t i v e n o t e s :** *Lathrobium sexoculatum* is readily distinguished from all other congeners known from Yunnan by the extremely small eyes. Like *L. sufflatum*, it probably belongs to the *L. fortehamatum* subgroup, as is suggested by external (reddish coloration, strongly reduced eyes) and by the male sexual characters (shape and chaetotaxy of the male sternite VII, the somewhat asymmetric and almost V-shaped posterior excision of the male sternite VIII, the shape of the ventral process of the aedeagus, the long apical portion of the dorsal plate, and the presence of a spine in the internal sac). The species is distinguished from the syntopic *L. sufflatum* not only by the completely different male sexual characters and the much smaller eyes, but also by larger body size, the much more slender pronotum (in relation to head), the much denser punctuation of head and pronotum, the narrowly impunctate midline of the pronotum, the longer elytra, as well as by the much sparser punctuation and the indistinct microsculpture of the abdomen.

**D i s t r i b u t i o n a n d n a t u r a l h i s t o r y :** The type locality and the circumstances of collection are identical to those of *L. sufflatum*.

### ***Lathrobium coreanum* WATANABE 2000**

**M a t e r i a l e x a m i n e d :** South Korea: 7 exs., Jeollanam-do, Jiri-san, around Nogodan peak, 35°18'N, 127°32'E, 1500 m, rocky slope with bushes at tourist trail, sifted from grass roots and leaf litter, 15.IX.2010, leg. Makranczy et al. (HNHM, NIBR, cAss).

**C o m m e n t :** The original description is based on a male holotype and six paratypes from "Korea, Jeonlabuk-do Prov., Jeongeob City, Mt. Naejansan, Naejangsa Temple Geumseson Valley" (WATANABE 2000). The above specimens represent the first record since the original description.

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### **Zusammenfassung**

Sechs Arten der Gattung *Lathrobium* GRAVENHORST 1802 werden beschrieben und abgebildet: *L. bananum* nov.sp. (Iran), *L. makaluicum* nov.sp. (Ost-Nepal), *L. hartmanni* nov.sp. (West-Nepal), *L. uttaricum* nov.sp. (Nordindien: Uttaranchal), *L. sufflatum* nov.sp. (China: Yunnan) und *L.*

*sexoculatum* nov.sp. (China: Yunnan). Weitere Nachweise, darunter mehrere Erstnachweise, von 15 Arten werden gemeldet. Die Gattung ist derzeit im Himalaya mit 51 und auf dem chinesischen Festland mit 158 Arten vertreten.

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