

## A revision of the *Lathrobium* species of the Himalaya (Coleoptera: Staphylinidae: Paederinae)

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**Abstract.** In all, 48 named *Lathrobium* species, all of them micropterous, microphthalmous, and locally endemic, are recognised in the Himalaya, among them 32 species new to science: *L. aciforme* sp. n. (C-Nepal), *L. annapurnense* sp. n. (C-Nepal), *L. apalatum* sp. n. (C-Nepal), *L. attritum* sp. n. (C-Nepal), *L. barbatum* sp. n. (C-Nepal), *L. barbulatum* sp. n. (C-Nepal), *L. bibarbatum* sp. n. (NE-Nepal), *L. calcaratum* sp. n. (C-Nepal), *L. cavicus* sp. n. (C-Nepal), *L. compressicrus* sp. n. (C-Nepal), *L. compressum* sp. n. (C-Nepal), *L. curvum* sp. n. (C-Nepal), *L. diremptum* sp. n. (NE-Nepal), *L. discissum* sp. n. (N-India; E-Nepal), *L. excisum* sp. n. (E-Nepal), *L. exsertum* sp. n. (C-Nepal), *L. fodens* sp. n. (W-Nepal), *L. ignoratum* sp. n. (C-Nepal), *L. inexcisum* sp. n. (NE-Nepal), *L. infractum* sp. n. (E-Nepal), *L. kleebergi* sp. n. (E-Nepal), *L. lamjunense* sp. n. (C-Nepal), *L. milkeense* sp. n. (E-Nepal), *L. muguicum* sp. n. (NW-Nepal), *L. palatum* sp. n. (C-Nepal), *L. planissimum* sp. n. (W-Nepal), *L. privum* sp. n. (W-Nepal), *L. rupinaicum* sp. n. (C-Nepal), *L. separatum* sp. n. (N-India), *L. spiculatum* sp. n. (C-Nepal), *L. spinosissimum* sp. n. (C-Nepal), *L. umbhakense* sp. n. (NE-Nepal). The external and sexual characters of all the species are described and illustrated. One genus-group and two species-group synonymies are proposed: *Lathrobium* Gravenhorst, 1802 = *Glyptomerodoschema* Scheerpeltz, 1976, syn. n.; *Lathrobium lassallei* Coiffait, 1981 = *L. sherpa* Coiffait, 1982, syn. n.; *L. emodense* Coiffait, 1975 = *L. goropanense* Coiffait, 1983, syn. n. *Medon jaljalensis* (Coiffait, 1984) comb. n. is transferred from *Lathrobium* to the subtribe Medonina, redescribed, and illustrated. The Himalayan *Lathrobium* species are most unlikely to form a monophylum. Ten species groups are identified and characterised. In the Himalaya, *Lathrobium* species have been recorded only from the region between Kashmir in the west and Darjeeling (West Bengal) in the east. The altitudes range from 2400 to 5000 m. Most species have become known from central Nepal (25 species) and eastern Nepal (14 species), probably because collecting activity was highest in these regions. The distributions of the individual species and of the species groups are mapped. A catalogue and a key to the Himalayan *Lathrobium* species are provided.

**Key words.** Taxonomy, rove beetles, *Lathrobium*, *Medon*, Himalaya, Nepal, India, new species, new synonymies, new combination, key to species, catalogue, diversity, vertical distribution

### INTRODUCTION

The speciose paederine genus *Lathrobium* Gravenhorst, 1802 is represented in the Palaearctic region by approximately 350 described species in three subgenera (Assing 2010b; Smetana 2004; Schülke unpubl.). However, new species are being described every year, particularly from China and Japan, suggesting that the known inventory of the East Palaearctic *Lathrobium* fauna is far from complete. An accurate estimate of total species number is difficult, since numerous species from regions other than the Palaearctic have not been revised and may belong to other genera of Lathrobiina.

The available biogeographic data suggest that the genus has a Holarctic distribution. In the East Palaearctic, its range extends to Taiwan in the southeast, where the *Lathrobium* species are confined to high-altitude habitats (Assing 2010b). In India, the genus is known only from high-altitude habitats in the Himalaya. All the species previously recorded from India (including Sri Lanka) and Myanmar as *Lathrobium* by Cameron (1931) refer to *Lobrathium* Mulsant & Rey, 1878, *Pseudolathra* Casey,

1905, *Tetartopeus* Czwalińska, 1888, or *Pseudobium* Mulsant & Rey, 1878 (Assing 2012a–d, in press).

Twenty-one species in two subgenera had previously been recorded from the Himalaya (Coiffait 1975, 1981, 1982a, b, 1983, 1984, 1987; Scheerpeltz 1976; Smetana 2004); one of them is the type species of the monotypical subgenus *Glyptomerodoschema* Scheerpeltz, 1976. Coiffait (1982b) provided a key to the 21 Himalayan *Lathrobium* species known to him at that time, but this key included several species of *Lobrathium*, as well as one of unknown generic and subtribal affiliations (Assing in prep.). A revision of the Himalayan *Lathrobium* species has never been attempted.

Unlike other lathrobiine genera such as *Lobrathium*, *Pseudolathra*, and *Pseudobium*, *Lathrobium* species and/or species groups are often distinguished also by the female secondary sexual characters (Assing 2010b, 2012a). The morphology of the female sternite VIII and the female tergite IX are of particular taxonomic significance. The female sexual characters of Himalayan *Lathrobium* species were previously unknown.

While in the West Palaearctic region a considerable proportion of the species is either macropterous or wing-dimorphic, more or less wide-spread, and often found at low elevations, the vast majority of species in the East Palaearctic is micropterous and more or less locally endemic to individual mountain ranges. This is particularly true of the fauna of regions such as the Himalaya, China, and Japan. Not a single winged true *Lathrobium* species has been recorded from the Himalaya.

The present study was inspired primarily by material made available to me by Benedikt Feldmann (Münster) and Andreas Kleeberg (Berlin). In order to identify the species represented in this material, types had to be examined. Eventually, the type material of all the species described from the Himalaya and additional material from various public and private collections were studied, yielding an unexpected number of undescribed species, as well as several new synonymies and new combinations.

## MATERIAL AND METHODS

The morphological studies were conducted using a Ste-mi 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, 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 localities were obtained from Ahrens (2004).

## COLLECTION MATERIAL DEPOSITORIES

FSF	Forschungsinstitut Senckenberg, Frankfurt, Germany (A. Hastenpflug-Vesmanis)
MHNG	Muséum d’Histoire naturelle, Genève, Switzerland (G. Cuccodoro)
MNHNP	Muséum national d’Histoire naturelle, Paris, France (A. Taghavian)
NHMW	Naturhistorisches Museum Wien, Austria (H. Schillhammer)
NME	Naturkundemuseum Erfurt, Germany (M. Hartmann, assisted by W. Apfel)
SDEI	Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany (L. Behne)
SMNS	Staatliches Museum für Naturkunde Stuttgart, Germany (W. Schawaller, K. Wolf-Schwenninger)

SNSD	Senckenberg Naturkundliche Sammlungen Dresden, Germany (O. Jäger)
ZII	Zoologisches Institut Innsbruck, Austria (W. Schedl)
cAss	author’s private collection
cFel	private collection Benedikt Feldmann, Münster, Germany
cKle	private collection Andreas Kleeberg, Berlin, Germany
cSme	private collection Aleš Smetana, Ottawa, Canada

## RESULTS

**Taxonomic changes.** The revision yielded three new synonymies of genus-group and species-group names. The subgeneric name *Glyptomerodoschema* Scheerpeltz, 1976 is placed in synonymy with *Lathrobium* Gravenhorst, 1802. In the two cases of species-group synonymy, the junior synonym (*L. sherpa* Coiffait, 1982, *L. goropanense* Coiffait, 1983) had been described from the same locality as the senior name (*L. lassallei* Coiffait, 1981 and *L. emodense* Coiffait, 1975, respectively) by the same author, and the male sexual characters of either the junior (*L. sherpa*) or the senior synonym (*L. emodense*) had been unknown.

The type series of three previously described species (*L. nepalense* Coiffait, 1975, *L. franzi* Coiffait, 1975, *L. nepalorientis* Coiffait, 1984) are composed of specimens of at least two species. The paratypes that had erroneously been assumed to be conspecific with the holotype were either females or had been mis-sexed as females.

*Lathrobium jaljalense* Coiffait, 1984 is transferred to the genus *Medon* Stephens of the subtribe Medonina. Another species originally described in *Lathrobium*, *L. perpusillum* Coiffait, 1982, belongs to a genus of Medonina, too; it will be treated elsewhere (Assing 2012d). Both species had erroneously been attributed to *Lathrobium* probably because of their faint resemblance in colour and body shape with small *Lathrobium* species.

In all, 32 *Lathrobium* species are newly described, 30 of them from Nepal, one from West Bengal (India), and one from eastern Nepal and West Bengal.

**Species groups.** The Himalayan *Lathrobium* species are most unlikely to represent a monophyletic group. Primarily based on the male and female sexual characters, but also on external characters, ten species groups are identified.

The most speciose group, the *L. nepalense* group, is distributed in central and eastern Nepal (Figs 2–3) and includes 15 species (*L. bibarbatum* sp. n., *L. compressum* sp. n., *L. diremptum* sp. n., *L. exsertum* sp. n., *L. ignora-*

*tum* sp. n., *L. inexcisum* sp. n., *L. infractum* sp. n., *L. janetscheki* Scheerpeltz, 1976, *L. khumbuense* Coiffait, 1982, *L. kleebergi* sp. n., *L. lassallei*, *L. milkeense* sp. n., *L. nepalense*, *L. nepalorientis*, *L. umbhakense* sp. n.). Species of this group are characterised by usually dark coloration, small to moderately large body size, moderately small eyes composed of approximately 20–30 ommatidia, a relatively weakly oblong (approximately 1.15 times as long as broad) and – in cross-section – strongly convex pronotum with more or less pronounced microsculpture (e.g., Figs 5, 18, 28, 43), a male sternite VII with or without weakly modified pubescence (e.g. Figs 6, 11, 19, 23, 29, 35, 39), the shape of the male sternite VIII (posterior margin with or without very small median excision, as in Figs 7, 12–13, 20, 24, sometimes even convex in the middle, as in Figs 30, 66), a distinctly sclerotised aedeagus with a lamellate dorsal plate (e.g., Figs 8, 14–15, 21, 25–26), and the presence of micropubescence in the posterior portion of the female sternite VIII (e.g. Figs 10, 16–17, 22, 28). In addition, the female tergite IX is separated by a narrow membranous suture in the middle in most species.

The *L. muguicum* group includes only one species from northwestern Nepal (Fig. 96), *L. muguicum* sp. n. It is somewhat similar to the species of the *L. nepalense* group, but has slightly larger eyes (composed of approximately 30 ommatidia), a slightly more slender and less convex pronotum without microsculpture (Fig. 87), a distinctly V-shaped posterior excision of the male sternite VIII (Fig. 89), and a different morphology of the aedeagus (dorso-ventrally flattened ventral process, lamellate dorsal plate, internal sac with long membranous tube, but without sclerotised structures) (Figs 90–91).

The *L. emodense* group comprises four species from central Nepal (Fig. 96): *L. annapurnense* sp. n., *L. emodense*, *L. curvum* sp. n., and *L. spinosissimum* sp. n. They are characterised by relatively small body size, reddish to dark-brown coloration, moderately small eyes composed of approximately 20–25 ommatidia, the presence of modified setae on the male sternite VIII (Figs 93, 99, 104, 109) and often also on sternite VII (Figs 92, 98), the shape of the male sternite VIII (posterior margin sometimes pointed on either side of the median excision, as in Figs 93, 104), the morphology of the aedeagus (dorsal plate apically at least weakly hooked, long, and stout, not lamellate; ventral process not flat; internal structures with sclerotised internal structures) (Figs 94, 100, 105), and an anteriorly undivided female tergite IX.

The *L. excisum* group includes only a single species, *L. excisum* sp. n. from eastern Nepal (Fig. 96). It is similar to the species of the *L. emodense* group, but distinguished primarily by aedeagal characters (dorsal plate lamellate; internal structures without sclerotised spines, as in Figs 115–116).

The *L. deuvei* group is represented by eight species from western and central Nepal (Fig. 126), all of them confined to high-altitude habitats above 4000 m: *L. aciforme*, *L. apalatum* sp. n., *L. barthei* Coiffait, 1987, *L. deuvei* Coiffait, 1981, *L. ganeshense* Coiffait, 1983, *L. lamjunense* sp. n., *L. palatum* sp. n., *L. rupinaicum* sp. n. The species of this group are characterised by moderately large to large body size (length of forebody > 3.0 mm), conspicuously slender habitus with relatively long legs and antennae, minute eyes composed of very few ommatidia, a strongly transverse and posteriorly excavate male sternite VII (e.g., Figs 127, 132), a distinctly transverse male sternite VIII with a deep (exception: *L. ganeshense*) and broadly V-shaped posterior excision and mostly with conspicuous fringes or cluster of dense dark setae (e.g., Figs 128, 133), a relatively large (1.3–2.0 mm) aedeagus with a long, strongly sclerotised, and apically acute ventral process, with a dorsal plate composed of a lamellate basal portion and a distinctly sclerotised (not lamellate), apically hooked apical portion, and with long, slender, distinctly sclerotised internal structures (e.g., Figs 129, 134–135); the female sternite VIII is often strongly produced posteriorly (e.g., Fig. 136).

The *L. gladiator* group includes only a single species, *L. gladiator* from Kashmir, and is characterised by a posteriorly laterally compressed, strongly bulging female tergite X (Figs 123–124), an aedeagus with a long and strongly sclerotised ventral process, with a dorsal plate composed of a lamellate basal and a strongly sclerotised apical portion (Figs 120–121), a strongly transverse male sternite VII with an extensive cluster of modified setae (Fig. 118), and by the shape of the male sternite VIII (posterior margin produced on either side of the posterior excision) (Fig. 119).

The *L. discissum* group is represented by two described (and one undescribed) species from West Bengal (North India) and the extreme east of Nepal (Figs 3, 126): *L. discissum* sp. n. and *L. separatum* sp. n. It is distinguished from other species groups particularly by the structure of the female tergite IX (Fig. 174), which is divided into two hemi-tergites, so that the anterior margin of tergite X almost reaches the anterior margin of tergite IX (unique among Himalayan *Lathrobium*), and also by the morphology of the aedeagus (ventral process apically narrowly truncate in ventral view; dorsal plate reduced; internal sac with membranous tube, but without sclerotised spines; see Figs 171–172, 178–179) and by the unmodified pubescence of the male sternites VII and VIII (Figs 176–177, 169–170).

The *L. jumense* group includes three species from western Nepal (Fig. 96), *L. jumense* Coiffait, 1982, *L. inustum* Coiffait, 1982, and *L. planissimum* sp. n., which are characterised by small body size, uniformly reddish coloration, a conspicuously small (< 0.7 mm), weakly sclerotised, and – in ventral view – broad aedeagus (Figs

184–185, 191–192), unmodified pubescence of the male sternites VII and VIII (Figs 182–183, 189–190), and a symmetric posterior excision of the male sternite VIII.

The two species of the *L. aculeatum* group, *L. aculeatum* Coiffait, 1982 and *L. spiculatum* sp. n., are distributed in central Nepal (Fig. 96). They are similar to the species of the *L. jumense* group, but distinguished by a long (>1.0 mm) and slender aedeagus with a conspicuously long and thin, needle-shaped ventral process (Figs 196–197, 203–212), and a somewhat asymmetric posterior excision of the male sternite VIII (Figs 195, 202).

The speciose *L. pectinatum* group includes eleven species from central and eastern Nepal (Fig. 214): *L. attritum* sp. n., *L. barbatum* sp. n., *L. barbulatum* sp. n., *L. calcaratum*, *L. cassagnaui* Coiffait, 1982, *L. cavicus* sp. n., *L. compressicus* sp. n., *L. fodens* sp. n., *L. franzi* Coiffait, 1975, *L. pectinatum* Coiffait, 1981, *L. privum* sp. n. They are readily distinguished from all other Himalayan species groups by the presence of one or more transverse rows of pectinate setae on the male sternite VII (e.g., Figs 215, 219), undoubtedly a synapomorphy constituting the monophyly of this species group. The males of some species, in some cases even the females, have conspicuously modified metafemora, mesotibiae, and/or metatibiae (Figs 225, 230, 237, 244, 251).

**Diversity and biogeography.** In all, 48 described species of *Lathrobium* are now known from the Himalaya. The

westernmost representative is from Kashmir, the easternmost species from Darjeeling district in West Bengal, northern India. The region with the highest diversity of described species is central Nepal (25 species), followed by eastern Nepal (14 species) and western Nepal (seven species). Only three species are known from northern India, one from Kashmir and two from Darjeeling district in West Bengal. These figures, however, are probably strongly biased as a result of the different collecting activity in these regions. As far as the Staphylinidae is concerned, central Nepal is without doubt the most frequently visited and best studied region in the Himalaya. Not a single species has been recorded from the Himalaya east of West Bengal, a poorly studied region from which only very little material of Staphylinidae has become available. There is no evidence suggesting that the *Lathrobium* fauna of the eastern Himalaya should be any less diverse than that of Nepal. Moreover, the only *Lathrobium* species known from the western Himalaya west of Nepal is *L. gladiator* from Kashmir. Not a single species has been recorded from the region between the type locality of *L. gladiator* and Nepal, a distance of nearly 800 km!

Without exception, all the currently known Himalayan *Lathrobium* species are micropterous, microphthalmous, and locally endemic. Many of them are known only from a single locality. Interestingly, the species groups have rather restricted distributions, too. None of the ten species groups (see preceding section) is distributed across all of Nepal (Figs 2, 3, 96, 126, 214).

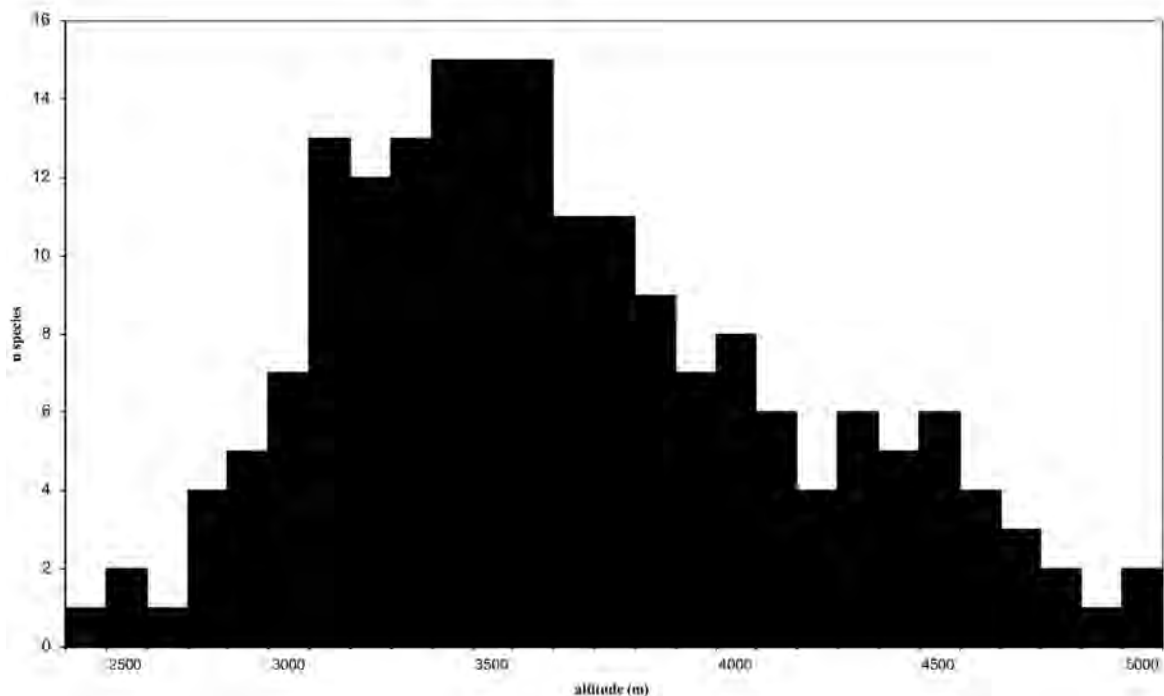


Fig. 1. Pooled vertical distribution of Himalayan *Lathrobium* species.



### Catalogue of the *Lathrobium* species of the Himalaya

In the catalogue, the species are listed alphabetically. The references in the catalogue are abbreviated as follows: App = present paper; C75 = Coiffait (1975), C81 = Coiffait (1981), C82a = Coiffait (1982a), C82b = Coiffait (1982b), C83 = Coiffait (1983), C84 = Coiffait (1984), C87 = Coiffait (1987), S76 = Scheerpeltz (1976).

Species	Distribution	References	Altitude
<i>aciforme</i> sp. n.	C-Nepal: Annapurna	App	4500–4700 m
<i>aculeatum</i> Coiffait, 1982	C-Nepal: N-Dhaulagiri,	App, C82a	3300–3400 m
<i>annapurnense</i> sp. n.	C-Nepal: Annapurna	App	4900 m
<i>apalatum</i> sp. n.	C-Nepal: S-Manaslu: Meme Pokhari	App	4300–4400 m
<i>attritum</i> sp. n.	C-Nepal: Bagmati prov.: Yardang ridge	App	3250 m
<i>barbatum</i> sp. n.	C-Nepal: N-Annapurna	App	3000–3500 m
<i>barbulatum</i> sp. n.	C-Nepal: N-Annapurna	App	3050 m
<i>barthei</i> Coiffait, 1987	W-Nepal: Jumla: Mt. Mahidoela	App, C75, C87	5000 m
= <i>alticola</i> Coiffait, 1975			
<i>bibarbatum</i> sp. n.	NE-Nepal: Taplejung district	App	3400–3600 m
<i>calcaratum</i> sp. n.	C-Nepal: Kali-Gandaki valley	App	?
<i>cassagnai</i> Coiffait, 1982	eastern C-Nepal: Mt. Kalinchock	App, C82b	3000 m
<i>cavicus</i> sp. n.	C-Nepal: Manaslu	App	2800–3300 m
<i>compressicrus</i> sp. n.	C-Nepal: Manaslu	App	3800–4100 m
<i>compressum</i> sp. n.	eastern central Nepal, NNE Kathmandu, Bagmati province, Shermathang in Bairavkund Lekh	App	2900 m
<i>curvum</i> sp. n.	C-Nepal: Dhaulagiri	App	2700–2900 m
<i>deuvei</i> Coiffait, 1981	C-Nepal: Manaslu: Himal Chuli	App, C81	4300 m
<i>direptum</i> sp. n.	NE-Nepal: Taplejung district	App	3250–3500 m
<i>discissum</i> sp. n.	N-India: W-Bengal: Darjeeling; E-Nepal: Panchthar district	App	2700–3100 m
<i>emodense</i> Coiffait, 1975	C-Nepal: W Pokhara, Ghorepani env.	App, C75, C83	3050–3100 m
= <i>goropanense</i> Coiffait, 1983; syn. n.			
<i>excisum</i> sp. n.	E-Nepal: Rolwaling Himal	App	3300–3800 m
<i>exsertum</i> sp. n.	C-Nepal: Bagmati province: N Kathmandu, Yangri ridge and environs of Thare Pati	App	3100–4800 m
<i>fodens</i> sp. n.	W-Nepal: Jumla district	App	3550–4100 m
<i>franzi</i> Coiffait, 1975	C-Nepal: NNW Kathmandu	App, C75	?
<i>ganeshense</i> Coiffait, 1983	C-Nepal: Ganesh Himal	App, C83	4300–4500 m
<i>gladiator</i> Coiffait, 1982	Kashmir: Pir Panjal pass	App, C82b	3200–3700 m
<i>ignoratum</i> sp. n.	C-Nepal: N Kathmandu, western Langtang region	App	3600–3800 m
<i>inexcisum</i> sp. n.	NE-Nepal: Taplejung district	App	3250–3700 m
<i>infractum</i> sp. n.	E-Nepal: Solukhumbu district	App	3000 m
<i>inustum</i> Coiffait, 1982	W-Nepal: Jumla: Maharigaon env.	C82a	3000–4000 m
<i>janetscheki</i> Scheerpeltz, 1976	E-Nepal: Khumbu: Pangpoche env.	App, S76	?
<i>jumlense</i> Coiffait, 1982	W-Nepal: Jumla: Dampa pass near Chanta	App, C82a	3500 m
<i>khumbuense</i> Coiffait, 1982	E-Nepal: Khumbu: Lukla	App, C82a, C83	3000–4000 m
<i>kleebergi</i> sp. n.	E-Nepal: Rolwaling Himal	App	2400–3300 m
<i>lamjunense</i> sp. n.	C-Nepal: Lamjun Himal	App	4300–4600 m
<i>lassallei</i> Coiffait, 1981	eastern central Nepal, Mt. Kalinchock		
= <i>sherpa</i> Coiffait, 1982, syn. n.	environs, region NE Barabise	App, C81, C82b	3000–3250 m
<i>milkeense</i> sp. n.	E-Nepal: Milke Himal	App	2500 m
<i>mugicum</i> sp. n.	NW-Nepal: Mugu district	App	3200 m
<i>nepalense</i> Coiffait, 1975	C-Nepal: Bagmati province	App, C75	2800–3500 m
<i>nepalorientis</i> Coiffait, 1984	E-Nepal: Jaljale Himal	App, C84	4000 m
<i>palatum</i> sp. n.	C-Nepal: Annapurna	App	5000 m
<i>pectinatum</i> Coiffait, 1981	E-Nepal: Manaslu	App, C81	3000–3500 m
<i>planissimum</i> sp. n.	NW-Nepal: Mahakali	App	3450 m
<i>privum</i> sp. n.	W-Nepal: Jumla	App	3500 m
<i>rupinaicum</i> sp. n.	C-Nepal: S-Manaslu	App	4100–4500 m
<i>separatum</i> sp. n.	N-India: W-Bengal: Darjeeling	App	2700–3100 m
<i>spiculatum</i> sp. n.	eastern C-Nepal: Langtang	App	2900–4800 m
<i>spinosissimum</i> sp. n.	C-Nepal: Lamjun Himal	App	3700 m
<i>umbhakense</i> sp. n.	E-Nepal: Sankhua Sabha and Taplejung districts	App	3450–4200 m

**Natural history.** As was to be expected based on the hypothesised Holarctic distribution of the genus, the Himalayan *Lathrobium* species are absent from lower elevations. The altitudes range from 2400 to 5000 m, with most species occurring between 3000 and 4500 m (Fig. 1). Species of the *L. devei* group appear to be specially adapted and confined to high-altitude habitats above 4000 m. As far as can be inferred from the data specified from the labels, from Franz' unpublished collection notes, as well as from unpublished reports of colleagues who collected *Lathrobium* in Nepal, the species live in the leaf litter of montane shrubland and forests (alder, birch, fir, spruce, rhododendron, etc.) (Figs 295–297). Species of the *L. devei* group have also been found in unforested, alpine habitats. On several occasions, two or more *Lathrobium* species, sometimes of the same species group, were collected in the same localities. Teneral adults were found in April (three species), May (one species), June (two species), September (one species), and October (one species).

#### KEY TO THE HIMALAYAN *LATHROBIUM* SPECIES

1. ♂: aedeagus without sclerotised dorsal plate, with long, dark membranous tube, but without distinctly sclerotised structures in internal sac; ventral process of aedeagus slender, apically narrowly truncate in ventral view (Figs 171–172, 178–179); sternites VII and VIII without distinctly modified pubescence (Figs 169–170, 176–177). ♀: tergite IX distinctly divided into two hemi-tergites (Fig. 174); tergite X almost reaching anterior margin of tergite IX. Species from the extreme east of Nepal and from Darjeeling (India). The *Lathrobium discissum* group ..... 2
  - ♂: aedeagus mostly with at least weakly sclerotised dorsal plate and often with sclerotised internal structures; ventral process of aedeagus apically not narrowly truncate in ventral view; sternites VII and/or VIII often with distinctly modified chaetotaxy. ♀: tergite IX anteriorly at most with fine, membranous median suture; anterior portion of tergite X clearly distant from anterior margin of tergite IX ..... 3
2. Larger species: body length 7.5–9.0 mm; length of forebody at least 3.1 mm. ♂: aedeagus approximately 1.5 mm long, shaped as in Figs 171–172; posterior margin of sternite VII distinctly concave in the middle (Fig. 169); sternite VIII with moderately deep posterior excision and with moderately dense pubescence (Fig. 170). E-Nepal: Panchthar district; N-India: West Bengal: Darjeeling district (Fig. 126) ..... *L. discissum* sp. n.
  - Smaller species: body length 5.5–6.5 mm; length of forebody 3.0 mm at most. ♂: aedeagus 0.9–1.0 mm

long, shaped as in Figs 178–179; posterior margin of sternite VII very weakly concave in the middle (Fig. 176); sternite VIII with shallow posterior excision and with sparse pubescence (Fig. 177). N-India: West Bengal: Darjeeling district (Fig. 3)

- ..... *L. separatum* sp. n.
- 3. Species of usually dark coloration; at least head, pronotum, and abdomen dark-brown to blackish-brown. Head and pronotum with microsculpture. Eyes moderately small, composed of at least approximately 20 ommatidia. Pronotum rather weakly oblong, approximately 1.15 times as long as broad, broader than, or approximately as broad as head, and strongly convex in cross-section (e.g., Figs 5, 18). Body size small to moderately large; length of forebody 2.3–3.8 mm. ♂: sternite VII with weakly modified pubescence at most; sternite VIII often with modified setae, posteriorly at most with very shallow posterior excision (e.g. Figs 20, 24), sometimes even produced in the middle (e.g., Fig. 30); aedeagus usually rather compact, though often with long and acute ventral process, and with moderately sclerotised dorsal plate at most. ♀: tergite IX mostly with membranous suture in the middle; sternite VIII with micropubescence posteriorly. Central and eastern Nepal (Figs 2–3). The *L. nepalense* group ..... 4
  - Pronotum without microsculpture, less convex in cross-section, and almost always more slender. Eyes mostly smaller and composed of less than 20 ommatidia. Coloration mostly paler. ♂: sternite VIII posteriorly with deeper excision, never produced in the middle; dorsal plate of aedeagus in dark-coloured species strongly sclerotised. ♀: tergite IX never with median suture; sternite VIII usually without micropubescence posteriorly ..... 18
- 4. Smaller species; length of forebody at most 3.0 mm. Species from eastern Nepal ..... 5
  - Larger species; length of forebody at least 3.0 mm. Species from central and eastern Nepal ..... 11
- 5. ♂: sternite VIII without modified setae, posterior margin broadly and weakly concave (Fig. 40); aedeagus as in Fig. 41. ♀: sternite VIII as in Fig. 42. Khumbu (Fig. 2) ..... *L. khumbuense* Coiffait
  - ♂: sternite VIII with modified setae, posterior margin either with small and shallow median concavity or produced in the middle; aedeagus of different morphology ..... 6
- 6. ♂: posterior margin of sternite VIII at least weakly convex in the middle ..... 7
  - ♂: posterior margin of sternite VIII weakly concave in the middle ..... 8
- 7. Smaller species; length of forebody 2.3–2.6 mm. ♂: sternite VIII approximately as long as broad, on either side of middle with weakly defined cluster of dense setae, and with distinctly convex posterior mar-

- gin (Fig. 76); aedeagus smaller, approximately 0.8 mm long, ventral process symmetric in ventral view and weakly bent in lateral view (Figs 77–79). ♀: sternite VIII strongly produced posteriorly (Fig. 81). Taplejung district (Fig. 3) ..... *L. inexcisum* sp. n.
- Larger species; length of forebody 2.6–3.0 mm. ♂: sternite VIII distinctly transverse, with median cluster of moderately dense black setae, and with weakly convex posterior margin (Fig. 83); aedeagus larger, approximately 1.0 mm long, ventral process strongly asymmetric in ventral view and strongly bent in lateral view (Figs 84–85). ♀: sexual characters unknown. Solukhumbu district (Fig. 3) ..... *L. infractum* sp. n.
  - 8. ♂: ventral process of aedeagus strongly bent in lateral view (Figs 50, 54) ..... 9
  - ♂: ventral process of aedeagus weakly bent and apically very acute in lateral view (e.g., Figs 60–63) ...10
  - 9 ♂: aedeagus larger, approximately 1.05 mm long; ventral process of aedeagus symmetric in ventral view and apically more acute in lateral view; dorsal plate strongly sclerotised and longer (Figs 54–55). Milke Himal (Fig. 2) ..... *L. milkeense* sp. n.
  - ♂: aedeagus slightly smaller, 0.95 mm long; ventral process of aedeagus distinctly asymmetric in ventral view and apically less acute in lateral view; dorsal plate less strongly sclerotised and shorter (Figs 50–51). Mt. Everest range (Fig. 2) ..... *L. janetscheki* Scheerpeltz
  - 10. ♂: sternite VIII approximately as long as wide (Fig. 45); aedeagus shaped as in Figs 46–47. Jaljale Himal (Fig. 2) ..... *L. nepalorientis* Coiffait
  - ♂: sternite VIII transverse (Fig. 59); aedeagus shaped as in Figs 60–63. ♀: sternite VIII as in Fig. 64. Sankhua Sabha and Taplejung districts (Fig. 3) ..... *L. umbhakense* sp. n.
  - 11. Species from eastern Nepal (east of 86°10'E longitude) ..... 12
  - Species from central Nepal (west of 86°10'E longitude) ..... 14
  - 12. ♂: sternite VIII with extensive median cluster of modified setae and with broadly and weakly concave posterior margin (Fig. 20); aedeagus with relatively short and apically not very acute ventral process in lateral view (Fig. 21). ♀: sternite VIII as in Fig. 22; tergite IX without median suture. Rolwaling Himal (Fig. 2) ..... *L. kleebergi* sp. n.
  - ♂: sternite VIII with a cluster of less distinctly modified setae on either side of middle and with distinctly convex posterior margin; aedeagus with longer and apically very acute ventral process in lateral view. ♀: tergite IX with median suture ..... 13
  - 13. ♂: sternite VII with posterior margin distinctly concave in the middle (Fig. 70); sternite VIII with weakly defined clusters of moderately dense setae and with less strongly convex posterior margin (Fig. 71); aedeagus approximately 1.0 mm long and with less slender ventral process in lateral and in ventral view (Figs 72–73). ♀: sternite VIII as in Fig. 74. Taplejung district (Fig. 2) ..... *L. diremptum* sp. n.
  - ♂: sternite VII with posterior margin broadly and less distinctly concave (Fig. 65); sternite VIII with distinct cluster of very dense setae on either side of middle and with strongly convex posterior margin (Fig. 66); aedeagus 1.1 mm long and with more slender ventral process both in lateral and in ventral view (Figs 67–68). ♀: sternite VIII as in Fig. 69. Taplejung district (Fig. 3) ..... *L. bibarbatum* sp. n.
  - 14. ♂: middle of posterior margin of sternite VIII weakly concave, without additional modifications ..... 15
  - ♂: middle of posterior margin of sternite VIII either convex, or somewhat elevated and with pair of clusters of dense black setae ..... 17
  - 15. ♂: apical portion of ventral process of aedeagus distinctly elongate, slender, symmetric, and dorso-ventrally compressed (Figs 37–38). Species of relatively large size; length of forebody 3.4–3.6 mm. Bagmati province: Bairavkund Lekh (Fig. 2) ..... *L. compressum* sp. n.
  - ♂: apical portion of ventral process of aedeagus shorter, less slender, and not dorso-ventrally compressed ..... 16
  - 16. ♂: apex of ventral process of aedeagus very acute in lateral view and slightly asymmetric in ventral view; dorsal plate longer (Figs 25–27). ♀: sternite VIII as in Fig. 28. Bagmati province (Fig. 2) ..... *L. ignoratum* sp. n.
  - ♂: apex of ventral process stouter; dorsal plate shorter (Figs 14–15). ♀: sternite VIII as in Figs 16–17. Environs of Kalinchok (Fig. 2) ... *L. lassallei* Coiffait
  - 17. ♂: sternite VIII on either side of middle with rather extensive cluster of dense black setae, posterior margin convex in the middle (Fig. 30); aedeagus with apex of ventral process shorter and stouter in lateral view; dorsal plate shorter (Figs 31–32). ♀: sternite VIII more strongly produced posteriorly (Fig. 33). Bagmati province (Fig. 3) ..... *L. exsertum* sp. n.
  - ♂: sternite VIII with median cluster of dense setae, posterior margin somewhat produced and elevated in the middle, this elevation with pair of clusters of dense setae (Fig. 7); aedeagus with apex of ventral process longer, more slender, and more acute; dorsal plate longer (Figs 8–9). ♀: sternite VIII less strongly produced posteriorly (Fig. 10). Bagmati province (Fig. 2) ..... *L. nepalense* Coiffait
  - 18. Eyes moderately small, composed of at least approximately 20 ommatidia. Coloration of body brown to blackish-brown, rarely uniformly reddish (*L. emod-*

- ense*, *L. excisum*). Mostly species of intermediate body size (length of forebody < 3.1 mm). Nepal eastwards to Rolwaling Himal ..... 19
- Eyes smaller, composed of approximately ten ommatidia at most. Either large and slender species (length of forebody > 3.0 mm) of dark-reddish to reddish-brown coloration or small species of more or less uniformly reddish coloration ..... 24
19. Larger species; length of forebody approximately 3.4 mm. Eyes larger, composed of approximately 30 ommatidia. ♂: aedeagus (Figs 90–91) larger, 1.5 mm long, with slender, dorso-ventrally compressed ventral process; internal sac with long membranous tube, but without distinctly sclerotised internal structures; dorsal plate flat and shorter; pubescence of sternite VIII not distinctly modified (Fig. 89). Northwestern Nepal (Fig. 96). The *L. muguicum* group ..... *L. muguicum* sp. n.
- Smaller species; length of forebody < 3.1 mm. Eyes smaller, composed of approximately 20–25 ommatidia. ♂: aedeagus smaller, 0.8–1.3 mm long; ventral process less slender in lateral view and dorso-ventrally not compressed; sternite VIII and mostly also VII with modified setae in the middle; posterior margin of sternite VIII often pointed on either side of posterior excision. Central Nepal and eastern Nepal ... 20
20. ♂: aedeagus with dark membranous tube, but without sclerotised spines in internal sac and with lamellate dorsal plate, ventral process of characteristic shape (Figs 115–116); sternite VII with modified, stout black setae in median portion (Fig. 113); sternite VIII weakly transverse and with stout black setae in median portion, posterior margin pointed on either side of middle (Fig. 114). ♀: sternite VIII weakly oblong (Fig. 114). Eastern Nepal: Rolwaling Himal (Fig. 96). The *L. excisum* group ..... *L. excisum* sp. n.
- ♂: aedeagus with sclerotised internal structures in internal sac; dorsal plate stout (not flat), long, and apically more or less distinctly hooked in lateral view. Central Nepal. The *L. emodense* group ..... 21
21. Smaller species, length of forebody 2.4–2.5 mm. ♂: aedeagus smaller, 0.83 mm long, shaped as in Fig. 110; internal sac with two weakly sclerotised, not spine-shaped structures; pubescence of sternites VII and VIII rather sparse (Figs 108–109). ♀: sternite VIII as in Fig. 111. Annapurna (Fig. 96) ..... *L. annapurnense* sp. n.
- On average larger species; length of forebody 2.4–2.9 mm. ♂: aedeagus > 1.0 mm long and of different shape; internal sac with at least four strongly sclerotised, more or less curved, spine-like structures ... 22
22. ♂: sternite VIII with sparser and less numerous modified setae in the middle, posterior margin pointed on either side of posterior excision (Fig. 93); sternite VII as in Fig. 92; aedeagus 1.2 mm long; ventral process symmetric and shaped as in Figs 94–95; dorsal plate only indistinctly hooked apically; internal structures long and weakly curved in lateral view. Region to the west of Pokhara (Fig. 96) ..... *L. emodense* Coiffait
- ♂: sternite VIII with denser and more numerous modified setae in the middle; aedeagus with ventral process of different shape and sometimes asymmetric in ventral view; dorsal plate more distinctly hooked in lateral view; internal structures shorter, more strongly curved in lateral view, and of similar length ..... 23
23. ♂: sternite VII with more numerous stouter and shorter modified setae in median portion (Fig. 98); sternite VIII with more strongly modified (shorter and stouter) setae in posterior median portion, posterior excision shallower and broader (Fig. 99); aedeagus larger, approximately 1.3 mm long, shaped as in Figs 100–101; ventral process of aedeagus somewhat asymmetric in ventral view; dorsal plate longer; internal structures regularly curved. Dhaulagiri (Fig. 96) ..... *L. curvum* sp. n.
- ♂: sternite VII with fewer and less strongly modified setae in median portion (Fig. 103); sternite VIII with few and less strongly modified setae in posterior median portion, posterior excision much narrower (Fig. 104); aedeagus smaller, approximately 1.0 mm long, shaped as in Figs 105–106; dorsal plate shorter; internal sac with differently shaped structures of different lengths. ♀: sternite VIII as in Fig. 125. Annapurna range: southern Lamjun Himal (Fig. 96) ..... *L. spinosissimum* sp. n.
24. Moderately large to large species (length of forebody > 3.0 mm) of reddish to dark-brown coloration and conspicuously slender habitus. Eyes minute and composed of very few ommatidia. ♂: sternite VII strongly transverse and strongly excavate posteriorly (e.g., Figs 127, 132); sternite VIII transverse, with deep (exception: *L. ganeshense*) and broadly V-shaped posterior excision and mostly with conspicuous fringes or a cluster of dense dark setae (e.g., Figs 128, 133); aedeagus (e.g., Figs 129, 134–135) large, 1.3–1.9 mm long; ventral process long and apically acute; dorsal plate composed of a lamellate basal and a distinctly sclerotised and apically hooked apical portion; internal sac with long, slender, and distinctly sclerotised structures. ♀: sternite VIII often strongly produced posteriorly (e.g., Fig. 136). Western and central Nepal (Fig. 126). Known only from high elevations above 4000 m. The *L. deuvei* group ..... 25
- Small species (length of forebody < 3.0 mm). Body of more or less uniformly reddish coloration. Male sexual characters different ..... 32
25. Largest Himalayan representative of the genus,



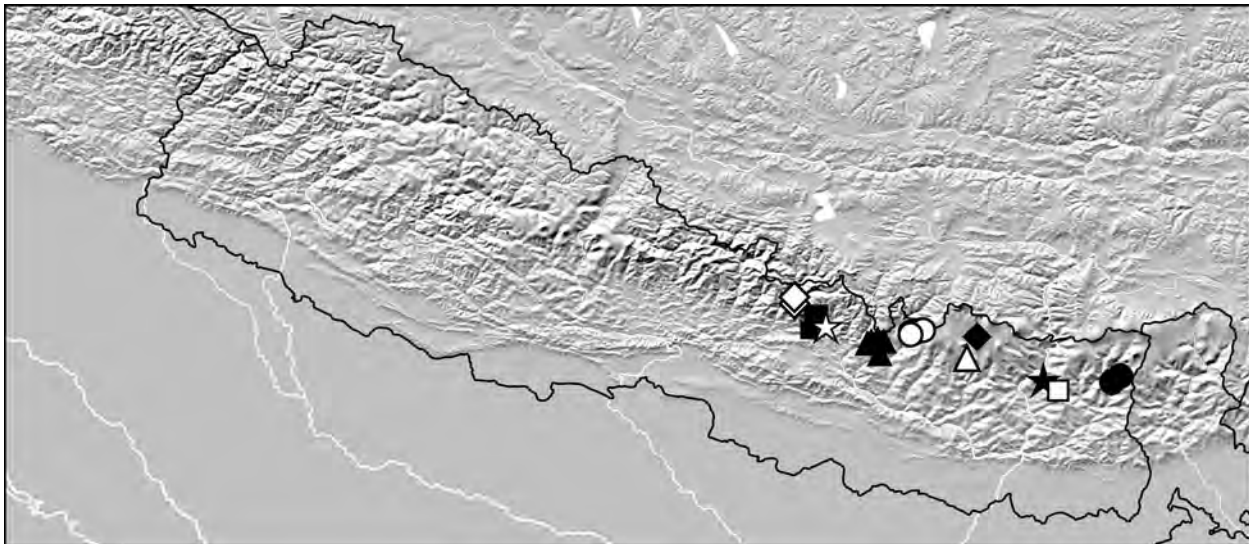
- length of forebody > 4.0 mm. ♂: sternite VII broadly and rather deeply excised posteriorly (Fig. 157); sternite VIII with deep posterior excision (Fig. 158); aedeagus shaped as in Figs 159–160. Western Nepal: Jumla region (Fig. 126) ..... *L. barthei* Coiffait
- Smaller species; length of forebody < 4.0 mm. Male sexual characters different. Central Nepal ..... 26
26. Body smaller; length of forebody 3.4 mm at most. ♂: aedeagus smaller, 1.3–1.4 mm long, and with shorter dorsal plate (Fig. 155); posterior margin of sternite VII distinctly excavate and weakly bisinuate in the middle (Fig. 153); sternite VIII with deep and broadly V-shaped posterior excision (Fig. 154). Southern Manaslu Himal (Fig. 126) ... *L. rupinaicum* sp. n.
- Body larger; length of forebody at least 3.4 mm. ♂: aedeagus larger, > 1.5 mm long, and with longer dorsal plate. Sternite VII and/or VIII of different shape and chaetotaxy ..... 27
27. ♂: posterior excision of sternite VIII relatively shallow (Fig. 163); posterior margin of sternite VII broadly concave, without distinct median excavation (Fig. 162); aedeagus 1.6 mm long; ventral process apically very acute and straight (Figs 164–165). ♀: sternite VIII relatively weakly produced posteriorly (Fig. 166). Ganesh Himal (Fig. 126) ..... *L. ganeshense* Coiffait
- ♂: posterior excision of sternite VIII deep; posterior margin of sternite VII with distinct median excavation; aedeagus of different shape. ♀: sternite VIII more strongly produced posteriorly (exceptions: *L. apalatum* and *L. deuvei*). Distribution different ... 28
28. ♂: aedeagus with ventral process much stouter in apical portion (Fig. 150); sternite VIII with conspicuously deep and broad posterior excision, its depth distinctly more than half the length of sternite (Fig. 149); sternite VII with distinctly bisinuate posterior excision (Fig. 148). ♀: sternite VIII transverse and obtusely pointed posteriorly (Fig. 151). Southern Manaslu Himal (Fig. 126) ..... *L. apalatum* sp. n.
- ♂: aedeagus with ventral process longer and more slender in apical portion; sternite VIII with less deep and/or less broad posterior excision. ♀: sternite VIII oblong and distinctly, convexly produced posteriorly (exception: *L. deuvei*) ..... 29
29. ♀: sternite VIII obtusely pointed posteriorly (Fig. 130). ♂: posterior excision of sternite VII broad, moderately deep, and not bisinuate (Fig. 127); posterior excision of sternite VIII very deep, its depth more than half the length of sternite, and symmetric (Fig. 128); aedeagus shaped as in Fig. 129. Manaslu: Himal Chuli (Fig. 126) ..... *L. deuvei* Coiffait
- ♀: sternite VIII strongly and convexly produced posteriorly. ♂: sternites VII and/or VIII of different shape and chaetotaxy; aedeagus of different morphology. Annapurna range ..... 30
30. ♂: aedeagus larger, 1.8–2.0 mm long, shaped as in Figs 134–135; sternite VII with deeper posterior excavation (Fig. 132); posterior excision of sternite VIII somewhat asymmetric (Fig. 133). ♀: sternite VII as in Fig. 136. Northern Annapurna (Fig. 126) ..... *L. lamjunense* sp. n.
- ♂: aedeagus smaller, < 1.8 mm long; sternite VII with slightly less deep posterior excavation. Distribution different ..... 31
31. ♂: ventral process of aedeagus apically sharply bent in lateral view (Fig. 140); sternite VIII with deeper and symmetric posterior excision (Fig. 139); sternite VII as in Fig. 138. ♀: sternite VIII as in Fig. 141. Annapurna: Kang La pass (Fig. 126) ..... *L. palatum* sp. n.
- ♂: ventral process of aedeagus apically smoothly curved in lateral view (Fig. 145); sternite VIII with less deep and slightly asymmetric posterior excision (Fig. 144); sternite VII as in Fig. 143. ♀: sternite VIII as in Fig. 146. Annapurna: Pisang (Fig. 126) ..... *L. aciforme* sp. n.
32. ♀: tergite X laterally compressed, strongly bulging, almost keeled in posterior portion (Figs 123–124); sternite VIII as in Fig. 122. ♂: aedeagus (Figs 120–121) 1.2 mm long, with long and strongly sclerotised ventral process; dorsal plate of aedeagus with lamellate basal and strongly sclerotised apical portion; sternite VII strongly transverse and with extensive cluster of modified setae (Fig. 118); sternite VIII produced on either side of posterior excision (Fig. 119). Kashmir. The *L. gladiator* species group ..... *L. gladiator* Coiffait
- ♀: tergite X weakly convex in cross-section. ♂: aedeagus of different morphology, dorsal plate not strongly sclerotised; sternites VII and VIII of different shape and chaetotaxy. Nepal ..... 33
33. ♂: sternite VII without transverse combs of pectinate setae ..... 34
- ♂: sternite VII with transverse combs of pectinate setae (e.g., Figs 215, 219). Central and eastern Nepal (Fig. 214). The *L. pectinatum* group ..... 38
34. ♂: aedeagus weakly sclerotised and slender, > 1.0 mm long, with conspicuously long and thin, needle-shaped ventral process; sternite VIII weakly oblong or approximately as long as broad, without distinctly modified pubescence and with somewhat asymmetric posterior excision. ♀: sternite VIII distinctly oblong. The *L. aculeatum* group. Central Nepal (Fig. 96) ..... 35
- ♂: aedeagus much smaller, < 0.7 mm long, and of much broader shape, ventral process not thin and needle-shaped; sternite VII without modified setae; sternite VIII oblong, without modified setae, and with symmetric posterior excision. ♀: sternite VIII distinctly oblong. Western Nepal (Fig. 96). The *L. jumlaense* group ..... 36

35. ♂: aedeagus 1.2–1.3 mm long, ventral process extremely long, longer than basal portion of aedeagus (Figs 203–212); posterior margin of sternite VII indistinctly concave, almost truncate (Fig. 201); sternite VIII approximately as long as broad and with broader posterior excision (Fig. 202). ♀: sternite VIII as in Fig. 213; tergite X shorter than tergite IX in the middle. Bagmati province: region ca. 40 km north of Kathmandu (Fig. 96) *L. spiculatum* sp. n.
- ♂: aedeagus approximately 1.1 mm long, ventral process shorter than basal portion of aedeagus (Figs 196–197); posterior margin of sternite VII more distinctly concave (Fig. 194); sternite VIII oblong and with narrower posterior excision (Fig. 195). ♀: sternite VIII as in Fig. 198; tergite X longer than tergite IX in the middle. Northern Dhaulagiri range (Fig. 96) ..... *L. aculeatum* Coiffait
36. ♂: aedeagus dorso-ventrally distinctly flattened and apically less acute in ventral view (Figs 277–279); posterior excision of sternite VIII broadly V-shaped (Fig. 276). Extreme northwest of Nepal: Mahakali region (Fig. 96) ..... *L. planissimum* sp. n.
- ♂: aedeagus dorso-ventrally not distinctly flattened, ventral process apically acute in ventral view; posterior excision of sternite VIII not distinctly V-shaped. Jumla region (Fig. 96) ..... 37
37. ♂: sternite VII relatively weakly transverse and with weakly concave posterior margin (Fig. 182); posterior excision of sternite VIII deeper (Fig. 183); aedeagus much larger, approximately 0.65 mm long and relatively narrower in ventral view (Figs 184–185). ♀: sternite VIII slightly less slender (Fig. 186) ..... *L. jumlaense* Coiffait
- ♂: sternite VII distinctly transverse and with more strongly concave posterior margin (Fig. 189); posterior excision of sternite VIII less deep and almost of semi-circular shape (Fig. 190); aedeagus minute (smaller than in any other Himalayan *Lathrobium* species), 0.33 mm long and relatively broader in ventral view (Figs 191–192). ♀: sternite VIII slightly more slender (Fig. 193) ..... *L. inustum* Coiffait
38. ♂: metatibia modified: either conspicuously flattened, or in basal third with pronounced postero-ventral tooth and in apical half distinctly excavate (note that females of most of the species are unknown and that this may not always be a secondary sexual character); ventral process of aedeagus shorter, not needle-shaped; sternite VII with at least two complete transverse combs of pectinate setae. Central Nepal: Manaslu and Annapurna ranges ..... 39
- ♂: metatibia moderately flattened at most, otherwise unmodified; ventral process of aedeagus long, thin and mostly somewhat needle-shaped; sternite VII with one or two transverse rows of pectinate setae. .... 43
39. ♂: metatibia conspicuously flattened, without tooth; ventral process of aedeagus of broadly triangular shape and symmetric in ventral view. Central Nepal: Manaslu range ..... 40
- ♂: metatibia with distinct postero-ventral tooth in basal third and strongly excavate in apical half (Fig. 225); ventral process of aedeagus more slender and distinctly asymmetric in ventral view. Central Nepal: Northern Annapurna and Manaslu ranges ..... 41
40. Apical half of mesotibia conspicuously flattened in both sexes. ♂: ventral process of aedeagus broader and slightly longer (Figs 221–222); sternite VII with two uninterrupted and two interrupted transverse rows of pectinate setae (Fig. 219); sternite VIII as in Fig. 220. ♀: sternite VIII as in Fig. 223. Barapokhari Lekh (Fig. 214) ..... *L. compressicrus* sp. n.
- Mesotibia not conspicuously flattened. ♂: ventral process of aedeagus less broad and slightly shorter (Figs 217–218); sternite VII with two complete and a rudimentary third transverse row of pectinate setae (Fig. 215); sternite VIII as in Fig. 216. Distribution: Fig. 214 ..... *L. pectinatum* Coiffait
41. ♂: sternite VII with posterior margin and posterior transverse combs of pectinate setae almost straight (Fig. 284); ventral process of aedeagus almost symmetric in ventral view and apically less acute in lateral view (Figs 286–287). ♀: sternite VIII relatively longer (Fig. 289). Manaslu range (Fig. 214) ..... *L. cavicrus* sp. n.
- ♂: sternite VII with posterior margin and posterior transverse combs of pectinate setae distinctly concave; ventral process of aedeagus distinctly asymmetric in ventral view and apically more acute in lateral view. ♀: sternite VIII relatively shorter (Fig. 231). Northern Annapurna range ..... 42
42. ♂: sternite VII with apical row of pectinate setae of flatly trapezoid shape (Fig. 226); aedeagus shaped as in Figs 228–229; sternite VIII as in Fig. 227. ♀: sternite VIII as in Fig. 231. Distribution: Fig. 214 ..... *L. barbatum* sp. n.
- ♂: sternite VII with apical row of pectinate setae curved (Fig. 232); aedeagus shaped as in Figs 234–235; sternite VIII as in Fig. 233. Distribution: Fig. 214 ..... *L. barbulatum* sp. n.
43. ♂: metafemur distinctly modified, with postero-ventral tooth-like process approximately in the middle (e.g., Figs 237, 244); sternite VII with one or two transverse rows of pectinate setae; aedeagus with long and more or less needle-shaped ventral process ... 44
- ♂: metafemur not conspicuously modified; sternite VII with one transverse row of – in one species relatively sparse – pectinate setae; sternite VIII without pubescence in the middle and with somewhat asymmetric posterior excision ..... 46

44. ♂: tooth-like process of metafemur apically acute (Fig. 237); sternite VII with two long transverse rows of pectinate setae (Fig. 238); sternite VIII with weakly asymmetric posterior excision (Fig. 239); aedeagus approximately 1.0 mm long, ventral process somewhat spear-shaped and symmetric in ventral view (Figs 240–241). Central Nepal: Bagmati province (Fig. 214) ..... *L. franzi* Coiffait
- ♂: tooth-like process of metafemur not distinctly acute apically; sternite VII with one transverse row of pectinate setae; aedeagus at least approximately 1.1 mm long; ventral process asymmetric and not spear-shaped in ventral view ..... 45
45. ♂: metafemur with symmetric and somewhat axe-shaped process (Fig. 251); sternite VII with straight transverse row of pectinate setae and with weakly concave posterior margin (Fig. 252); sternite VIII with asymmetric posterior excision (Fig. 253); aedeagus with much longer and more slender ventral process somewhat resembling a golf club (Figs 254–255). ♀: sternite VIII strongly oblong (Fig. 256). West Nepal: Jumla district (Fig. 214) ... *L. privum* sp. n.
- ♂: metafemur asymmetric, not axe-shaped (Fig. 244); sternite VII with flatly trapezoid transverse row of pectinate setae, posterior margin with trapezoid excavation in the middle (Fig. 245); posterior excision of sternite VIII almost symmetric (Fig. 246); ventral process shorter, less slender, and somewhat scoop-shaped (Figs 247–248). Central Nepal: Kali-Gandaki valley (valley separating the Annapurna and Dhaulagiri ranges) (Fig. 214) ..... *L. calcaratum* sp. n.
46. ♂: ventral process of aedeagus gradually narrowed toward apex and not needle-shaped in ventral view (Figs 271–272); sternite VII posteriorly with few and not contiguous pectinate setae (Fig. 269); sternite VIII as in Fig. 270. Bagmati province, Yardang ridge west of Barabbise (Fig. 214) ..... *L. attritum* sp. n.
- ♂: ventral process thin and slender, not gradually narrowed towards apex in ventral view; sternite VII posteriorly with transverse comb of numerous contiguous pectinate setae ..... 47
47. ♂: aedeagus 1.3 mm long, ventral process longer and more slender, distinctly needle-shaped (Figs 266–267); sternite VII with transverse row of pectinate setae bisinuate (Fig. 264); posterior excision of sternite VIII smaller (Fig. 265). ♀: sternite VIII shaped as in Fig. 268. West Nepal: Jumla region (Fig. 214) ..... *L. fodens* sp. n.
- ♂: aedeagus 1.15 mm long, ventral process shorter and stouter (Figs 260–261); sternite VII with almost straight transverse row of pectinate setae (Fig. 258); posterior excision of sternite VIII larger (Fig. 259). ♀: sternite VIII as in Fig. 262. Central Nepal: Kalinchok (Fig. 214) ..... *L. cassagnai* Coiffait

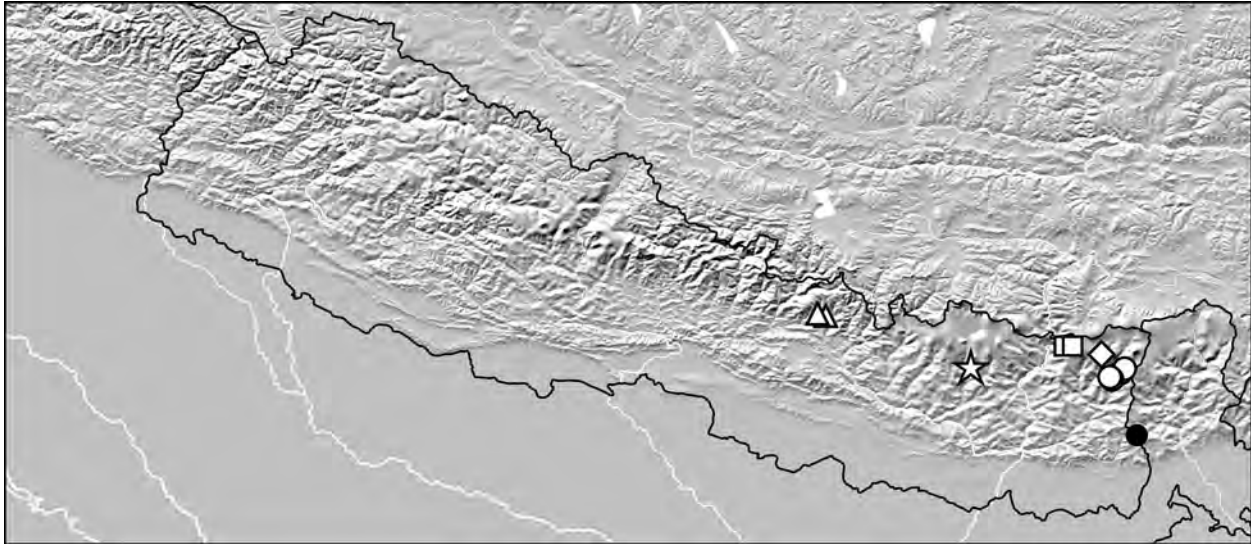
## THE HIMALAYAN *LATHROBIUM* SPECIES

### The *Lathrobium nepalense* group



**Fig. 2.** Distributions of species of the *L. nepalense* group: *L. ignoratum* (open diamonds); *L. nepalense* (filled squares); *L. compressum* (open star); *L. lassallei* (filled triangles); *L. kleebergi* (open circles); *L. khumbuense* (open triangle); *L. janetscheki* (filled diamond); *L. nepalorientis* (filled star); *L. milkeense* (open square); *L. diremptum* (filled circles).





**Fig. 3.** Distributions of species of the *L. nepalense* (open symbols) and the *L. discissum* groups (filled circle): *L. exsertum* (open triangles); *L. infractum* (open star); *L. umbhakense* (open squares); *L. bibarbatum* (open diamond); *L. inexcisum* (open circles); *L. separatum* (filled circle).

***Lathrobium nepalense* Coiffait, 1975** (Figs 2, 4–10)  
*Lathrobium nepalensis* [sic] Coiffait, 1975: 182.

**Type material examined.** Holotype ♂: “Zw. Mulkharka u. Tare-Pati / Pa 158 [overleaf] / Zentral-Nepal, Sept.-Okt. 1971, lg. H. Franz / Holotype / *Lathrobium nepalense* H. Coiffait 1974 / *Lathrobium nepalense* Coiffait, det. V. Assing 2011” (NHMW). Paratypes [see also type material of *L. ignoratum*]: 1 ♀: same data as holotype, but “Paratype” (NHMW).

**Comment.** The original description is based on a male holotype and two female paratypes from “Entre Mulkharka et Tare-Pati”, one female from “bois au-dessous de Fulung”, and one female from “chemin de Pokhara vers Goropani” (Coiffait 1975). The holotype and two paratypes from the Franz collection at the NHMW were examined; the “female” from Fulung proved to be a male of an undescribed species (see description of *L. ignoratum*). In view of the generally restricted distributions of Himalayan *Lathrobium* species, there is little doubt that the female paratype from the environs of Pokhara, too, refers to a different, probably undescribed species. The aedeagus of the holotype is damaged: the apical portion of the ventral process is broken off. It was evidently undamaged when Coiffait (1975) figured it.

**Additional material examined.** Nepal: 22 exs. [partly teneral], Bagmati province, below Thare Pati, 3300 m, 10.IV.1981, leg. Löbl & Smetana (cSme, cAss); 15 exs. [partly teneral], same data, but 11.IV.1981 (cSme, cAss); 1 ex., same data, but 9.IV.1981 (cSme); 10 exs. [partly teneral], same data, but 3400 m, 13.IV.1981 (cSme, cAss); 26 exs., same data, but 3500 m,

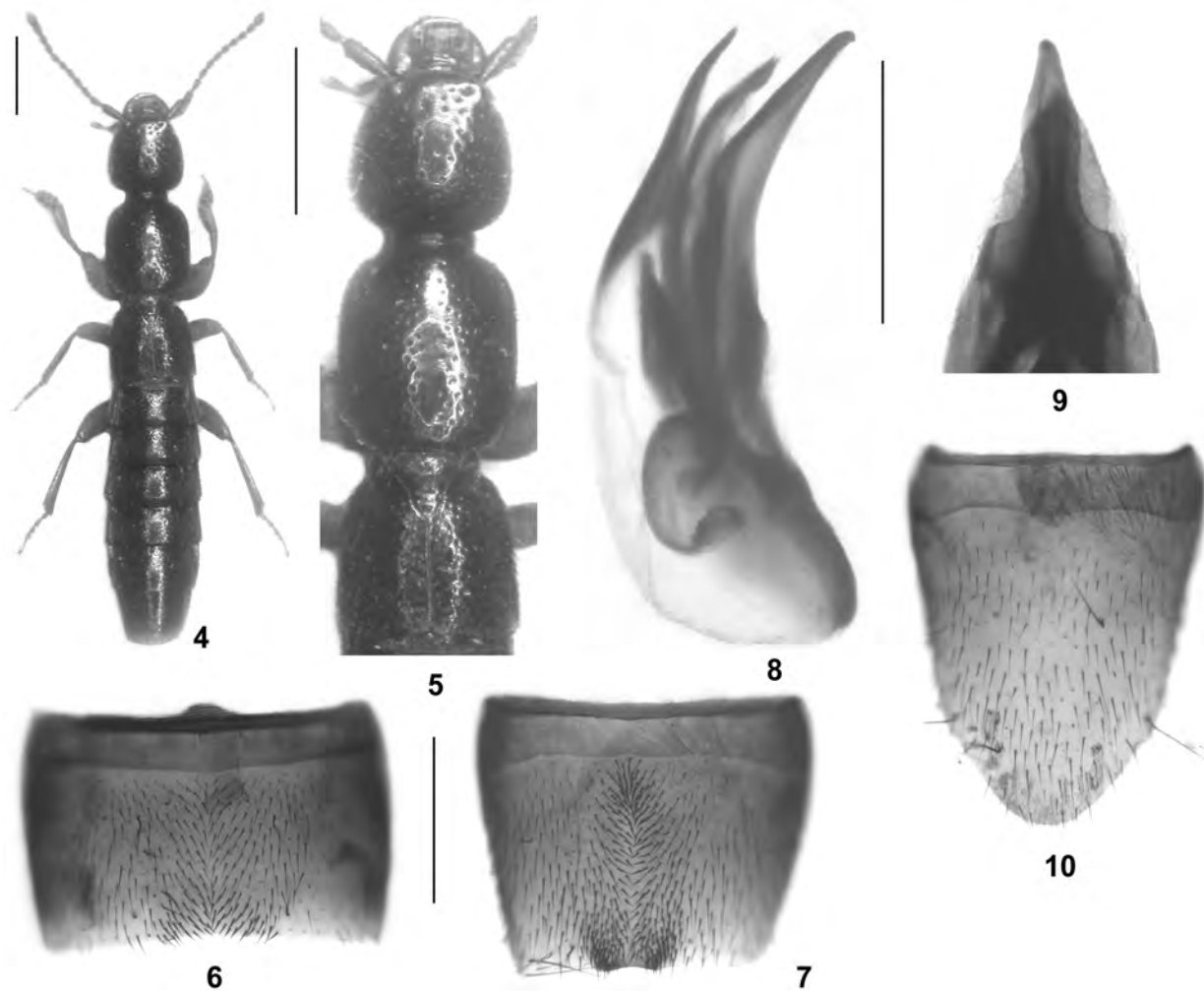
12.IV.1981 (cSme, cAss); 11 exs., Bagmati province, Malemchi, 2800 m, 18.IV.1981, leg. Löbl & Smetana (cSme, cAss); 10 exs. [partly teneral], Bagmati province, near Mere Dara, 3000 m, 7.IV.1981, leg. Löbl & Smetana (cSme, cAss); 4 exs. [partly teneral], Bagmati province, Mere Dara, 3200 m, 8.IV.1981, leg. Löbl & Smetana (cSme, cAss); 8 exs., Nuwakot district, between Ghopte and Thare Pati, 3220 m, 23.IV.1985, leg. Smetana (cSme, cAss); 3 exs., same data, but 3250 m (cSme); 1 ex., same data, but 3150 m, 25.IV.1985 (cAss); 1 ex., same data, but 3200 m, 25.IV.1985 (cSme); 2 exs., same data, but 3200 m, 26.IV.1985 (cSme, cAss).

**Redescription.** Body length 6.4–8.0 mm; length of forebody 3.0–3.8 mm. Habitus as in Fig. 4. Coloration: body dark-brown to blackish-brown, with the abdominal apex, often the elytra, and sometimes also the head paler brown; legs pale-reddish to reddish-brown; antennae reddish, apical half often somewhat infuscate.

Head (Fig. 5) approximately as long as broad or weakly transverse; punctation moderately coarse, sparse in median dorsal portion, somewhat less sparse in posterior and lateral portions, but interstices on average broader than diameter of punctures; interstices with fine microreticulation. Eyes weakly projecting from lateral contours of head, small, 1/4–1/3 times as long as postocular region in dorsal view.

Pronotum (Fig. 5) 1.10–1.15 times as long as broad and 1.05–1.10 times as broad as head, strongly convex in cross-section; punctation similar to that of head, but slightly finer; interstices with microreticulation.





**Figs 4–10.** *Lathrobium nepalense*. **4:** habitus; **5:** forebody; **6:** male sternite VII; **7:** male sternite VIII; **8:** aedeagus in lateral view; **9:** apical portion of aedeagus in ventral view; **10:** female sternite VIII. Scale bars: 4–5: 1.0 mm; 6–10: 0.5 mm.

Elytra short, 0.55–0.60 times as long as pronotum (Fig. 5); humeral angles weakly marked; punctation shallow and ill-defined; interstices without distinct microsculpture. Hind wings completely reduced.

Abdomen broader than elytra; punctation fine and moderately dense, sparser on posterior tergites; posterior margin of tergite VII without palisade fringe.

♂: protarsomeres I–IV strongly dilated; sternite VII impressed along the middle, posterior margin broadly and weakly concave (Fig. 6); sternite VIII impressed along the middle, the impression with numerous weakly modified setae, at posterior margin with pair of elevations with conspicuously dense setae, posterior margin weakly bisinuate in the middle (Fig. 7); aedeagus (Figs 8–9) approximately 1.2 mm long, with slender and apically acute ventral process, with lamellate, but distinctly sclerotised dorsal plate, and with long, sclerotised internal structures.

♀: protarsomeres I–IV dilated, but somewhat less so than in male; sternite VIII much longer than tergite VIII, distinctly produced and finely pubescent posteriorly (Fig. 10); tergite IX with fine median suture; tergite X slightly longer than tergite IX in the middle.

**Comparative notes.** This species is most similar and evidently closely related to the following 14 species, from which it is distinguished particularly by the different shape of the ventral process of the aedeagus, as well as by the conspicuous modifications of the male sternite VIII.

**Distribution and natural history.** The type locality is situated between Mulkharka [27°46'N, 85°26'E] and Thare Pati [28°02'N, 85°29'E] to the northeast of Kathmandu. The additional material was found near Thare Pati, Mere Dara (ca. 5 km south of Thare Pati), and Malemchi

[28°01'N, 85°31'E] at altitudes of 2800–3500 m (Fig. 2). Part of the material collected in April is slightly teneral. Between Ghopte and Thare Pati, *L. nepalense* was found together with the closely related and similar *L. exsertum*. According to Franz' diary, the type specimens were collected in a rhododendron forest above "Bulumje" [?] on 7.X.1971.

***Lathrobium lassallei* Coiffait, 1981** (Figs 2, 11–17)

*Lathrobium lassallei* Coiffait, 1981: 331 f.

*Lathrobium sherpa* Coiffait, 1982b: 290 f.; **syn. n.**

**Type material examined.** *L. lassallei*: Holotype ♂: "Nepal IX 80, Barabinse [sic] / Mt Kalingchok, 3000 D. L / Holotype / *Lathrobium lassallei* H. Coiffait 1981 / *Lathrobium lassallei* Coiffait, det. V. Assing 2011" (MNHNP).

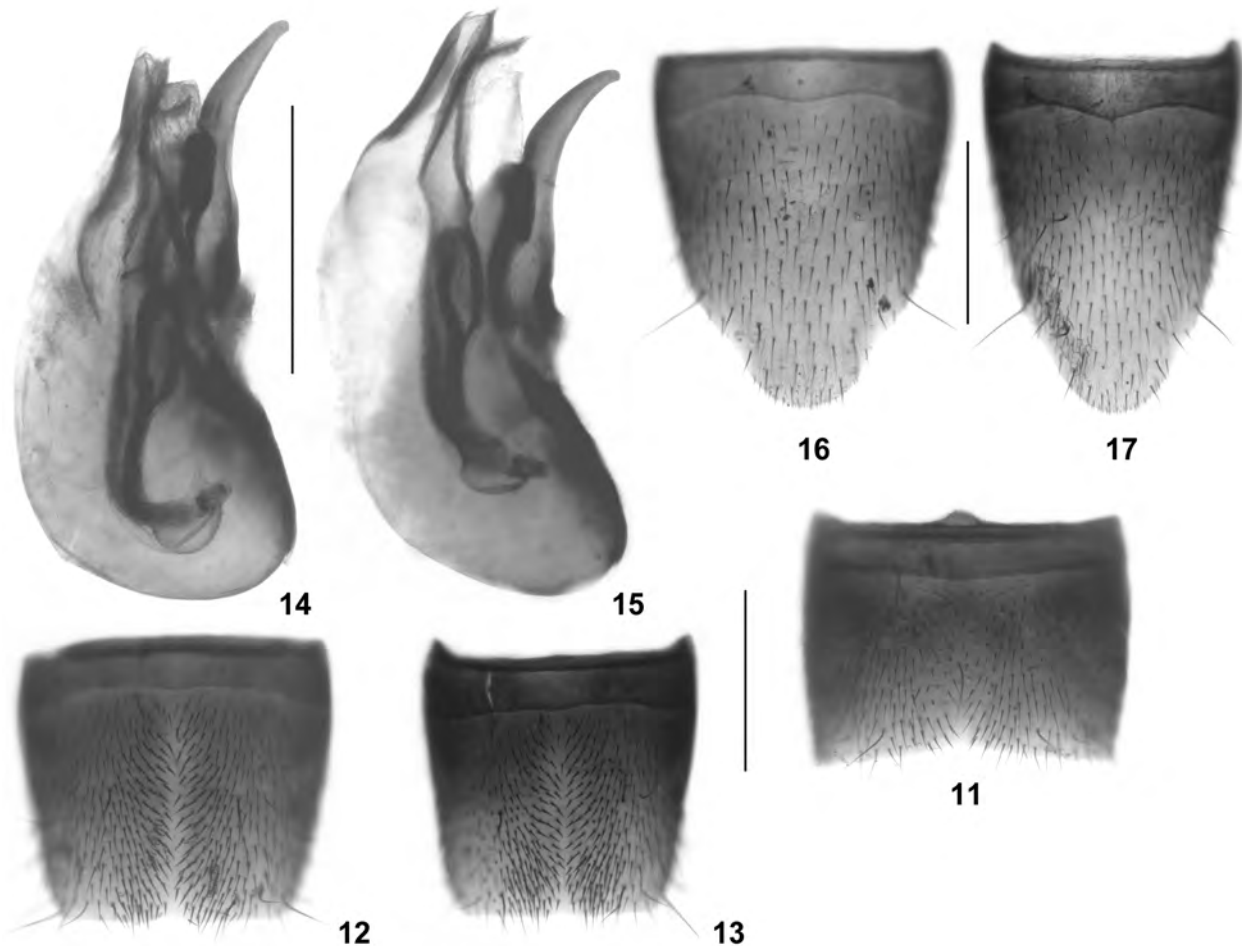
*L. sherpa*: Holotype ♂ [aedeagus and abdominal segments IX–X missing]: "Nepal X.81, Kalingchok, 3.100 PC

/ Holotype / *Lathrobium sherpa* H. Coiffait 1982 / *Lathrobium lassallei* Coiffait, det. V. Assing 2011" (MNHNP). Paratype ♀: same data as holotype (MNHNP).

**Comment.** The original description of *L. lassallei* is based on a unique holotype male from "Barabinse [sic], Mt Kalingchok, 3000 m" (Coiffait 1981). The specimen is deposited in the Coiffait collection at the MNHNP.

*Lathrobium sherpa* was described from a male holotype and a female paratype from "Massif du Kalingchok, près de Barabise [sic], 3100 m" (Coiffait 1982b). The aedeagus of the holotype is missing. According to a footnote (Coiffait 1982b: 291), it was lost before the drawings were finished. Remarkably, there is no reference to *L. lassallei* in the original description of *L. sherpa*, although the type localities of both species are practically identical and despite their similar external appearance.

Since convincing evidence was found neither in the external nor in the male sexual characters that *L. sherpa* should represent a distinct species, the name is placed in synonymy with *L. lassallei*.



**Figs 11–17.** *Lathrobium lassallei* (12, 14, 16: Kalinchok; 11, 13, 15, 17: Ting Sang La). **11:** male sternite VII; **12–13:** male sternite VIII; **14–15:** aedeagus in lateral view; **16–17:** female sternite VIII. Scale bars: 0.5 mm.

**Additional material examined.** Nepal: 10 exs., Dolakha District, E Ting Sang La [27°49'N, 86°03'E], 3100 m, 12.–13.VI.2000, leg. Schawaller [628] (SMNS, cAss); 13 exs., Dolakha District, SW Kalinchok Mt., 3100 m, 19.–23.IV.1995, leg. Martens & Schawaller [421] (SMNS, cAss); 9 exs., Bagmati province, NE Barabise, Yardang ridge, 3250 m, 5.V.1981, leg. Löbl & Smetana (cSme, cAss); 2 exs., Bagmati province, NE Barabise, Pokhare, 3000 m, 7.V.1981, leg. Löbl & Smetana (cSme, cAss).

**Redescription.** Body length 7–8 mm; length of forebody 3.0–3.5 mm. External characters similar to those of *L. nepalense*; reliably distinguished only by the sexual characters.

♂: posterior margin of tergite VIII truncate to weakly convex; sternite VII weakly impressed in postero-medial portion, posterior margin broadly and weakly concave (Fig. 11); sternite VIII impressed along the middle, the impression with numerous weakly modified setae, posterior margin weakly concave in the middle (Figs 12–13); aedeagus (Figs 14–15) 1.0–1.1 mm long, with slender and apically acute ventral process, and with lamellate dorsal plate.

♀: posterior margin of tergite VIII weakly angled in the middle; sternite VIII much longer than tergite VIII, distinctly produced posteriorly, posteriorly very finely pubescent (Figs 16–17); tergite IX with fine median suture; tergite X approximately as long as tergite IX in the middle, or nearly so.

**Comparative notes.** This species is highly similar and evidently closely related to *L. nepalense*, from which it is distinguished particularly by the different shape of the ventral process of the aedeagus and by the male secondary sexual characters.

**Intraspecific variation.** The material from Ting Sang La is distinguished from that collected on or near Mt. Kalinchok by slight differences in the shape of the ventral process of the aedeagus (Fig. 15), as well as in the shapes of the male and female sternites VIII (Figs 13, 17). Since no additional evidence was found suggesting that the two samples should belong to different species, these differences are attributed to intra- rather than interspecific variation.

**Distribution and natural history.** The known distribution of *L. lassallei* is confined to the Kalinchok range and the region to the northeast of Barabise, some 60 km ENE of Kathmandu (Fig. 2), where it has been collected at altitudes of 3000–3250 m.

*Lathrobium kleebergi* sp. n. (Figs 2, 18–22, 296–297)

**Type material.** Holotype ♂: “Ost-Nepal, Rolwaling Himal / Rolwaling Ufer zw. Simigaon u. Nyimare 2700 m,

17.05.2000 leg. A. Kleeberg / Holotypus ♂ *Lathrobium kleebergi* sp. n. det. V. Assing 2011” (cAss). Paratypes: 1 ex.: same data as holotype (cKle); 9 exs.: “Ost-Nepal, Rolwaling Himal / Rolwaling Tal, Nyimare, 3300 m, 19.05.2000, leg. A. Kleeberg” (cKle, cAss); 3 exs.: “Ost-Nepal, Rolwaling Himal / Nyimare, 3000 m, 18.05.2000, leg. A. Kleeberg” (cKle); 3 exs.: “Ost-Nepal, Rolwaling Himal / oberh. Simigaon, 2700–2800 m, 31.05.2000, leg. A. Kleeberg” (cKle); 15 exs.: same data, but “01.06.2000” (cKle, cAss); 14 exs.: “Ost-Nepal, Rolwaling Himal / westl. Daldung La Pass, 3300 m, 28.05.2000, leg. A. Kleeberg” (cKle, cAss); 1 ex.: same data, but “29.05.2000” (cKle); 13 exs.: same data, but 30.05.2000” (cKle, cAss); 1 ex.: “Nepal, Rolwaling Himal, upp. Simigaon vill. 2400–2700 m, 01.06.2000, leg. J. Schmidt” (cKle); 14 exs.: “upp. Simigaon vill., ca. 3300 m, 28.05.2000, leg. J. Schmidt” (cKle, cAss); 8 exs.: “Nepal, Rolwaling Himal, upp. Simigaon vill. 2700–2800 m, 01.06.2000, leg. J. Schmidt” (cKle, cAss); 4 exs.: “Nepal, Rolwaling vall. Dugong Kharka, 2700–2800 m, 17.05.2000, leg. J. Schmidt” (cKle, cAss); 8 exs.: “Nepal, Rolwaling vall., bef. Beding vill., 3300 m, 19.05.2000, leg. J. Schmidt” (cKle, cAss).

**Description.** Body length 7–8 mm; length of forebody 3.0–3.5 mm. Coloration: body dark-brown to blackish-brown, with the abdominal apex, often the elytra, and sometimes also the head paler brown; legs pale-reddish to reddish-brown; antennae reddish, apical half often somewhat infusate.

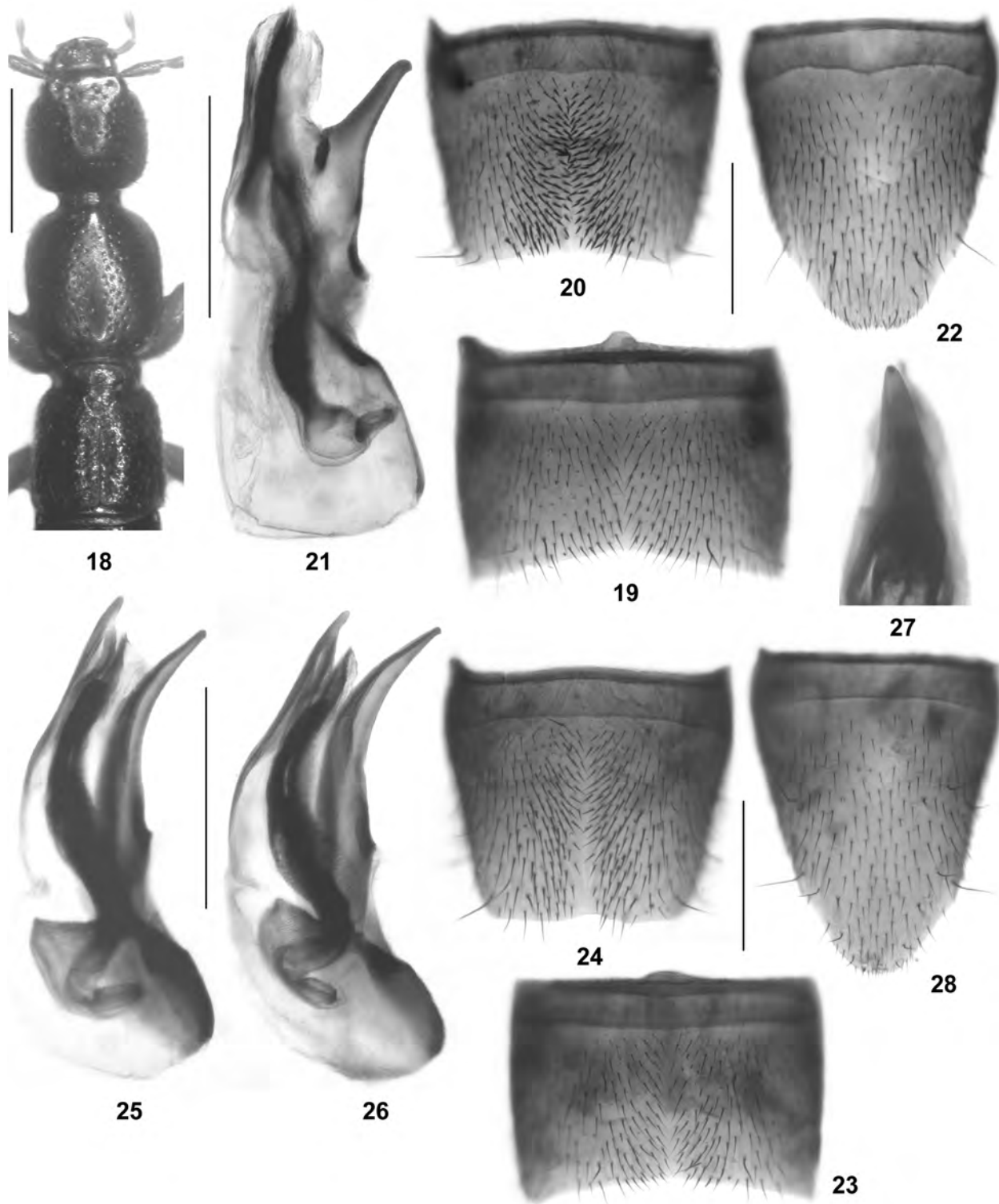
Head (Fig. 18) approximately as long as broad or weakly transverse; punctation moderately coarse, sparse in median dorsal portion, somewhat less sparse in posterior and lateral portions, but interstices on average broader than diameter of punctures; interstices with fine microreticulation. Eyes weakly projecting from lateral contours of head, small, 1/4–1/3 times as long as postocular region in dorsal view.

Pronotum (Fig. 18) 1.10–1.15 times as long as broad and 1.05–1.10 times as broad as head, strongly convex in cross-section; punctation and microsculpture similar to those of head.

Elytra short, 0.55–0.60 times as long as pronotum (Fig. 18); humeral angles weakly marked; punctation shallow and ill-defined; interstices without distinct microsculpture. Hind wings completely reduced. Protarsomeres I–IV dilated in both sexes, but more so in male than in female.

Abdomen broader than elytra; punctation fine and moderately dense; posterior margin of tergite VII without palisade fringe.

♂: posterior margin of tergite VIII truncate to weakly convex; sternite VII weakly impressed in postero-medial portion, posterior margin broadly and weakly concave (Fig. 19); sternite VIII broadly impressed along the middle, the impression with numerous modified setae, poste-



**Figs 18–28.** *Lathrobium kleebergi* (18–22) and *L. ignoratum* (23–28). 18: forebody; 19, 23: male sternite VII; 20, 24: male sternite VIII; 21, 25–26: aedeagus in lateral view; 22, 28: female sternite VIII; 27: apical portion of aedeagus in ventral view. Scale bars: 18: 1.0 mm; 19–28: 0.5 mm.



rior margin weakly concave, without distinct median incision (Fig. 20); aedeagus (Fig. 21) approximately 1.0–1.1 mm long, with slender and apically acute ventral process, and with lamellate dorsal plate.

♀: posterior margin of tergite VIII weakly angled in the middle; sternite VIII much longer than tergite VIII, distinctly produced posteriorly, posteriorly finely pubescent (Fig. 22); tergite IX not divided in the middle; tergite X approximately as long as tergite IX in the middle, or nearly so.

**Comparative notes.** *Lathrobium kleebergi* is highly similar and closely related to *L. nepalense*, *L. lassallei*, and other species of the *L. nepalense* group. It is reliably distinguished from them by the male primary and secondary sexual characters, from most of them also by the absence of a median suture of the female tergite IX.

**Etymology.** The species is dedicated to Andreas Kleeberg, who, together with Joachim Schmidt, collected the type specimens.

**Distribution and natural history.** *Lathrobium kleebergi* is currently known from several localities in the Rolwaling Himal in eastern Nepal (Fig. 2), where the specimens were collected at altitudes of 2400–3300 m (Figs 296–297). In one locality, the species was found together with *L. excisum*. One of the dissected females had a mature egg in the ovaries.

***Lathrobium ignoratum* sp. n.** (Figs 2, 23–28)

**Type material.** Holotype: “Nepal Rasuwa Dis., north slope above Syabru 3600 m, 18.IV.85 A. Smetana / Holotypus ♂ *Lathrobium ignoratum* sp. n., det. V. Assing 2012” (cSme). Paratypes: 5 exs.: same data as holotype (cSme, cAss); 5 exs.: same data, but “19.IV.85” (cSme); 5 exs.: same data, but “3650 m, 17.IV.85” (cSme, cAss); 2 exs.: same data, but 3800 m, 18.IV.85” (cSme); 1 ♂: “Wald unterhalb Fulung / Pa 175 [overleaf] / Zentral-Nepal, Sept.–Okt. 1971, lg. H. Franz / Paratype [of *L. nepalense*]” (NHMW).

**Description.** Length of forebody 3.35 mm. External characters highly similar to those of *L. nepalense* and allied species.

♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII very weakly convex; sternite VII weakly impressed in postero-median portion, this impression with moderately dense black setae, posterior margin broadly and weakly concave (Fig. 23); sternite VIII impressed along the middle, this impression with numerous long black setae, posterior margin shallowly concave in the middle (Fig. 24); aedeagus 1.0–1.1 mm long, with

slender and apically acute ventral process, and with distinctly sclerotised, lamellate dorsal plate (Figs 25–27).

♀: protarsomeres I–IV dilated, but less so than in male; posterior margin of tergite VIII weakly, obtusely angled in the middle; sternite VIII convexly produced and finely pubescent posteriorly (Fig. 28); tergite IX with fine median suture; tergite X distinctly longer than tergite IX in the middle.

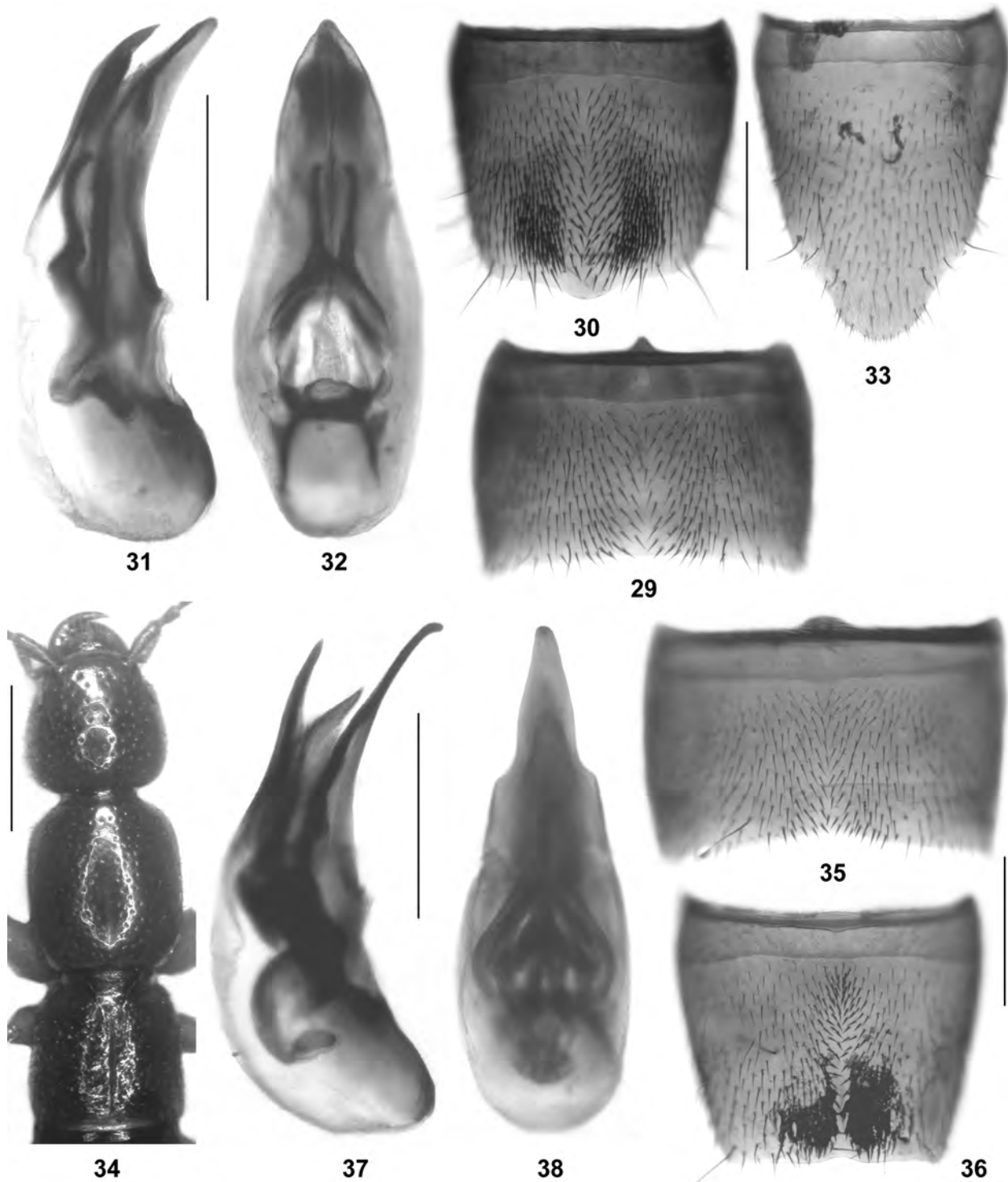
**Comparative notes.** The similar external and sexual characters suggest that *L. ignoratum* is closely related to *L. nepalense* and allied species, from which it is distinguished by the shape and chaetotaxy of the male sternites VII and VIII, as well as by the morphology of the aedeagus. From *L. nepalense*, with which it was previously confounded, it is separated by slightly smaller body size, the less transverse male sternite VII, the less dense and finer setae in the posterior impression of the male sternite VII, the absence of setae in the middle of the impression of the male sternite VIII, the absence of dense clusters of setae near the middle of the posterior margin of sternite VIII, as well as by the smaller aedeagus with a differently shaped ventral process and a differently shaped dorsal plate.

**Etymology.** The specific epithet (Latin, past participle of *ignorare*: to mistake, to confound) alludes to the fact that the paratype of *L. nepalense* from Fulung, now paratype of *L. ignoratum*, was previously both missexed and misidentified.

**Distribution and natural history.** The species was found near Syabru [28°10'N, 85°20'E] and near the Fulung Monastery [28°07'N, 85°20'E], to the north of Kathmandu, central Nepal (Fig. 2). The specimens from Syabru were collected at an altitude of 3600–3800 m. According to Franz' diary, the specimen from Fulung was sifted from dry and slightly mouldy leaf litter in an old oak forest with rhododendron forest with scattered pine and fir on 11.X.1971.

***Lathrobium exsertum* sp. n.** (Figs 3, 29–33)

**Type material.** Holotype ♂: “Nepal (Prov. Bagmati), Yangri Ridge, 4200 m, 21.IV.81, Löbl & Smetana / Holotypus ♂ *Lathrobium exsertum* sp. n., det. V. Assing 2012” (cSme). Paratypes: 3 ♂♂, 1 ♀ [1 slightly teneral]: same data as holotype (cSme, cAss); 3 ♂♂, 1 ♀: “Nepal (Prov. Bagmati), Yangri Ridge, 4350 m, 22.IV.81, Löbl & Smetana” (cSme, cAss); 1 ♂, 3 ♀♀: “Nepal (Prov. Bagmati), Yangri Ridge, 4700–4800 m, 22.IV.81, Löbl & Smetana” (cSme, cAss); 3 ♂♂ [1 teneral]: “Nepal Newakot Di., betw. Ghopte and Thare Pati, 3220 m, 23.IV.85 A. Smetana” (cSme, cAss); 3 ♂♂: same data, but “3150 m, 24.IV.85”



**Figs 29–38.** *Lathrobium exsertum* (29–33) and *L. compressum* (34–38). 29, 35: male sternite VII; 30, 36: male sternite VIII; 31, 37: aedeagus in lateral view; 32, 38: aedeagus in ventral view; 33: female sternite VIII; 34: forebody. Scale bars: 34: 1.0 mm; 29–33, 35–38: 0.5 mm.

(cSme, cAss); 1♂, 2♀♀: same data, but “3100 m, 24.IV.85” (cSme); 1♂: same data, but “3150 m, 25.IV.85” (cSme); 1♂, 1♀: same data, but “3200 m, 26.IV.85” (cSme, cAss).

**Description.** Body length 6.3–8.5 mm; length of forebody 3.1–3.7 mm. External characters as in *L. nepalense*.

♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII weakly convex in the middle; sternite VII impressed along middle, this impression with moderately dense black setae, posterior margin broadly and weakly concave (Fig. 29); sternite VIII impressed along the middle, this impression with moderately dense black setae, on either side of median impression with extensive cluster of conspicuously dense black setae, posterior margin produced in the middle (Fig. 30); aedeagus (Figs 31–32) approximately 1.3 mm long, ventral process moderately slender in lateral view and broad in ventral view; dorsal plate lamellate, but distinctly sclerotised.

♀: protarsomeres I–IV dilated, but less so than in male; posterior margin of tergite VIII obtusely angled in the middle; sternite VIII distinctly produced and finely pubescent posteriorly (Fig. 33); tergite IX with fine median suture; tergite X much longer than tergite IX in the middle.

**Comparative notes.** *Lathrobium exsertum* is distinguished from the similar, geographically close, and partly even syntopic *L. nepalense* by the completely different shape and chaetotaxy of the male sternite VIII, the shorter, less acute (lateral view), a much broader ventral process of the aedeagus (ventral view), and by the posteriorly more produced female sternite VIII.

**Etymology.** The specific epithet (Latin, past participle of *exserere*: to extend, to stick out) refers to the posteriorly distinctly produced female sternite VIII, the only character distinguishing female *L. exsertum* from female *L. nepalense*.

**Distribution and natural history.** The specimens were collected in the Yangri ridge, some 25 km to the east of Thare Pati, and between Ghopte and Thare Pati (Fig. 3) at altitudes of 3100–4800 m. Some of the beetles are noticeably teneral. Between Ghopte and Thare Pati, *L. exsertum* was found together with *L. nepalense*.

*Lathrobium compressum* sp. n. (Figs 2, 34–38)

**Type material.** Holotype ♂: “Nepal (Prov. Bagmati), above Shermathang, 2900 m, 26.IV.81, Löbl & Smetana / Holotypus ♂ *Lathrobium compressum* sp. n., det. V. Assing 2011” (MHNG). Paratypes: 1♂, 1♀: same data as holotype (MHNG, cAss).

**Description.** Body length 7.0–7.7 mm; length of forebody 3.4–3.6 mm. External characters highly similar to those of *L. nepalense*, except for the larger average body size and the very shallow, almost obsolete microreticulation on the head and pronotum (Fig. 34).

♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII truncate; sternite VII weakly impressed in postero-median portion, posterior margin broadly and weakly concave (Fig. 35); sternite VIII impressed along the middle, this impression with numerous weakly modified setae, posteriorly with patch of dense dark setae on either side of middle, posterior margin weakly concave, with very small and shallow median incision (Fig. 36); aedeagus approximately 1.3 mm long, with very slender and apically acute ventral process, and with distinctly sclerotised, lamellate dorsal plate (Figs 37–38).

♀: protarsomeres strongly dilated, only slightly less so than in male; posterior margin of tergite VIII weakly convex in the middle; sternite VIII much longer than tergite VIII, distinctly produced and finely pubescent posteriorly, of similar shape as that of *L. kleebergi*; tergite IX with fine median suture; tergite X distinctly longer than tergite IX in the middle.

**Comparative notes.** The similar external and sexual characters suggest that *L. compressum* is closely related to *L. nepalense*, *L. lassallei*, and allied species, from which it is distinguished by slightly larger average body size, shallower microreticulation of the head and pronotum, and particularly by the male sexual characters.

**Etymology.** The specific epithet (Latin, adjective) alludes to the dorso-ventrally strongly compressed ventral process of the aedeagus.

**Distribution and natural history.** The type locality is situated near Shermathang in the Bairavkund Lekh, some 55 km NNE of Kathmandu, in Bagmati province (Fig. 2). The specimens were collected at an altitude of 2900 m.

*Lathrobium khumbuense* Coiffait, 1982 (Figs 2, 39–42)  
*Lathrobium khumbuensis* [sic] Coiffait, 1982a: 90.

**Type material examined.** Holotype ♀: “Umg. Lughla, Khumbu, Nepal, lg. H. Franz / Pa 260 [overleaf] / Type / *Lathrobium khumbuensis* H. Coiffait 1979 / *Lathrobium khumbuense* Coiffait, det. V. Assing 2011” (NHMW). Paratype ♀ [teneral]: same data as holotype (MNHNP).

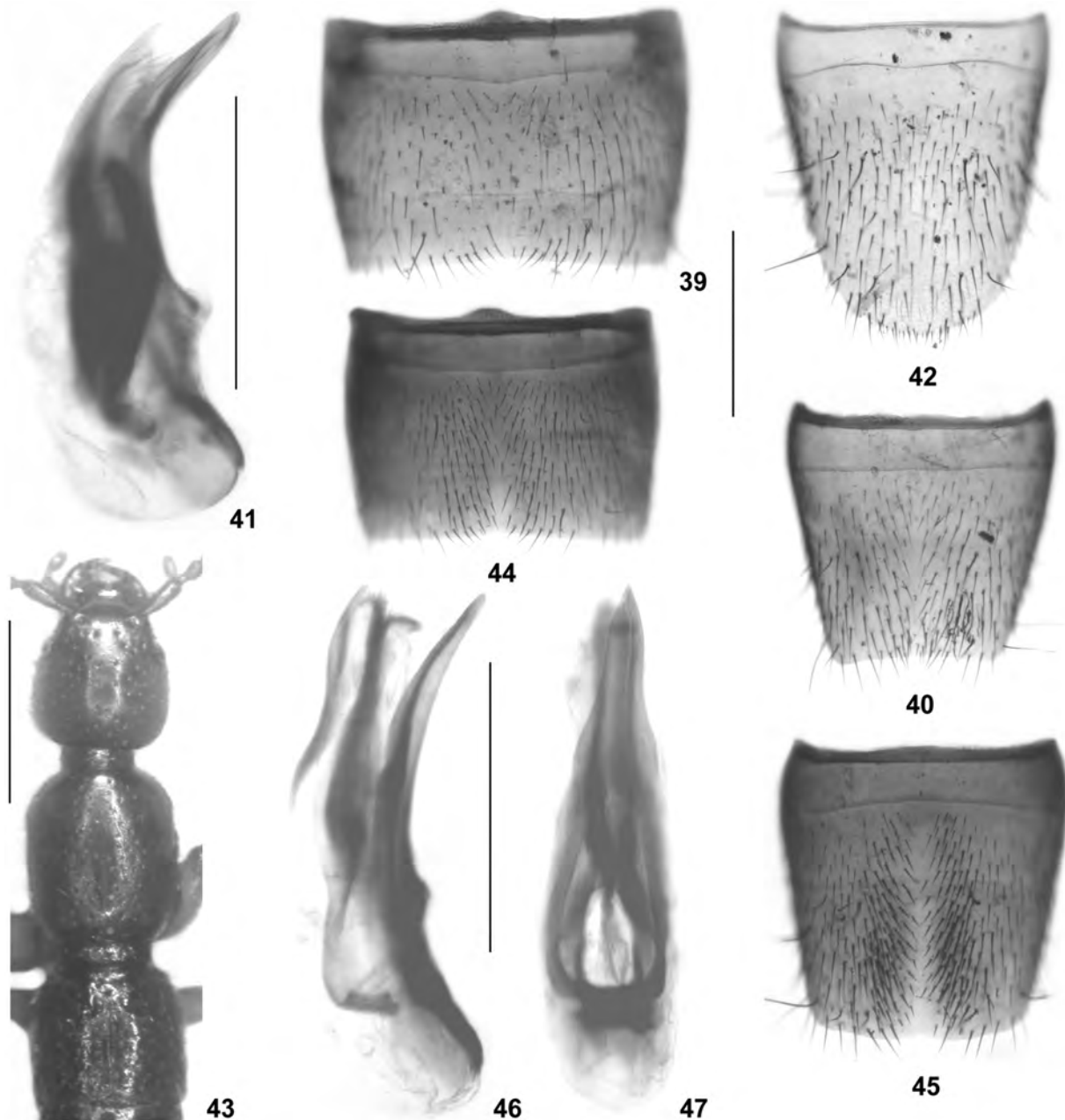
**Comment.** The original description is based on a holotype and a paratype, both females, from “Népal, environs de Lughla, Khumbu” (Coiffait 1982a) deposited in the collections at the NHMW and in the Coiffait collection at the MNHNP, respectively. The male sexual characters were

described by Coiffait (1983), based on a specimen that was evidently collected together with the types, as can be inferred from Franz' identical sample number ("Pa 260"). This specimen was erroneously labelled by Coiffait as the allotype; it does not have type status, since it was not included in the original description.

**Additional material examined.** Nepal: 1♂, Khumbu, Lughla env., "Alm Dugdinma, 3000–4000 m, leg. Franz, "Pa 260", "Allotype" (MNHNP).

**Redescription.** Species of moderate size; body length 5.6–6.5 mm; length of forebody 2.5–2.8 mm. Coloration: head and pronotum dark-brown; elytra reddish to brown; abdomen reddish-brown to brown; legs and antennae reddish.

Head approximately as broad as long; punctation coarse and rather sparse, even sparser in median dorsal portion; interstices with distinct microreticulation, almost matt, on average broader than diameter of punctures. Eyes moderately small and not distinctly projecting from lateral con-



**Figs 39–47.** *Lathrobium khumbuense* (39–42) and *L. nepalorientis* (43–47). 39, 44: male sternite VII; 40, 45: male sternite VI-II; 41, 46: aedeagus in lateral view; 42: female sternite VIII; 43: forebody; 47: aedeagus in ventral view. Scale bars: 43: 1.0 mm; 39–42, 44–47: 0.5 mm.



tours of head, approximately 1/3 the length of postocular region in dorsal view and composed of numerous (> 30) ommatidia.

Pronotum broad, short, and strongly convex in cross-section, approximately 1.15 times as long as broad and approximately as broad as head; lateral margins straight and almost subparallel, only indistinctly converging posteriorly; punctation similar to that of head; interstices with pronounced microreticulation and almost matt.

Elytra short, approximately 0.55 times as long as pronotum; humeral angles weakly marked; punctation shallow and ill-defined; interstices without distinct microsculpture. Hind wings completely reduced. Metatibia weakly compressed.

Abdomen broader than elytra, widest at segment VI; punctation dense and not particularly fine; interstices with finely transverse microsculpture; posterior margin of tergite VII without palisade fringe.

♂: protarsomeres I–IV moderately dilated; posterior margin of tergite VIII indistinctly angled in the middle; sternite VII moderately transverse, with shallow median impression, without modified pubescence, and with weakly concave posterior margin (Fig. 39); sternite VIII weakly transverse, with long black pubescence in posterior half, posterior margin very weakly concave, almost truncate, and without median excision (Fig. 40); aedeagus approximately 0.9 mm long, with long, slender, and apically acute ventral process, with a lamellate, weakly sclerotised dorsal plate, and with dark membranous internal structures (Fig. 41).

♀: protarsomeres I–IV almost as dilated as in male; tergite VIII of similar shape as in male; sternite VIII distinctly longer than tergite VIII, with convex posterior margin, at posterior margin with fine pubescence (Fig. 42); tergite IX with fine median suture; tergite X somewhat longer than tergite IX in the middle.

**Comparative notes.** As can be inferred from external (head and pronotum with pronounced microreticulation; eyes with numerous ommatidia; short and convex pronotum) and sexual characters (sternite VII without distinctly modified pubescence and posterior margin; sternite VI–II without posterior excision and without distinctly modified setae; general morphology of the aedeagus without sclerotised internal structures and with weakly sclerotised dorsal plate), *L. khumbuense* is closely related to *L. nepalense* and allied species. It is distinguished from them by smaller size and by the male primary and secondary sexual characters.

**Distribution and natural history.** *Lathrobium khumbuense* is currently known only from the type locality near “Lughly”, today probably Lukla (27°41’N, 86°43’E) in Khumbu, eastern Nepal (Fig. 2), where the type specimens

were collected at an altitude of 3000–4000 m. The paratype is teneral.

***Lathrobium nepalorientis* Coiffait, 1984** (Figs 2, 43–47)  
*Lathrobium nepalorientis* Coiffait, 1984: 381 f.

**Type material examined.** Holotype ♂: “Nepal or. 7.83, Jaljale Himal 4000 m / Type / *Lathrobium nepalorientis* H. Coiffait / *Lathrobium nepalorientis* Coiffait, det. V. Assing 2011” (MNHN). Paratype ♂: see holotype of *L. milkeense*.

**Comment.** The original description is based on a male holotype from “Népal oriental, Jaljale Himal 4000 m” and a paratype (“une femelle”) from “Milke Himal, 2500 m” deposited in the Coiffait collection at the MNHN (Coiffait 1984). An examination of the two type specimens revealed that the paratype is in fact a male and that it is not conspecific with the holotype.

**Redescription.** Species of moderate size; body length 6.1 mm; length of forebody 2.9 mm. Coloration: forebody brown; abdomen blackish-brown to brown; legs and antennae reddish.

Head (Fig. 43) approximately as broad as long; punctation coarse and rather sparse, even sparser in median dorsal portion; interstices with distinct microreticulation, distinctly broader than diameter of punctures.

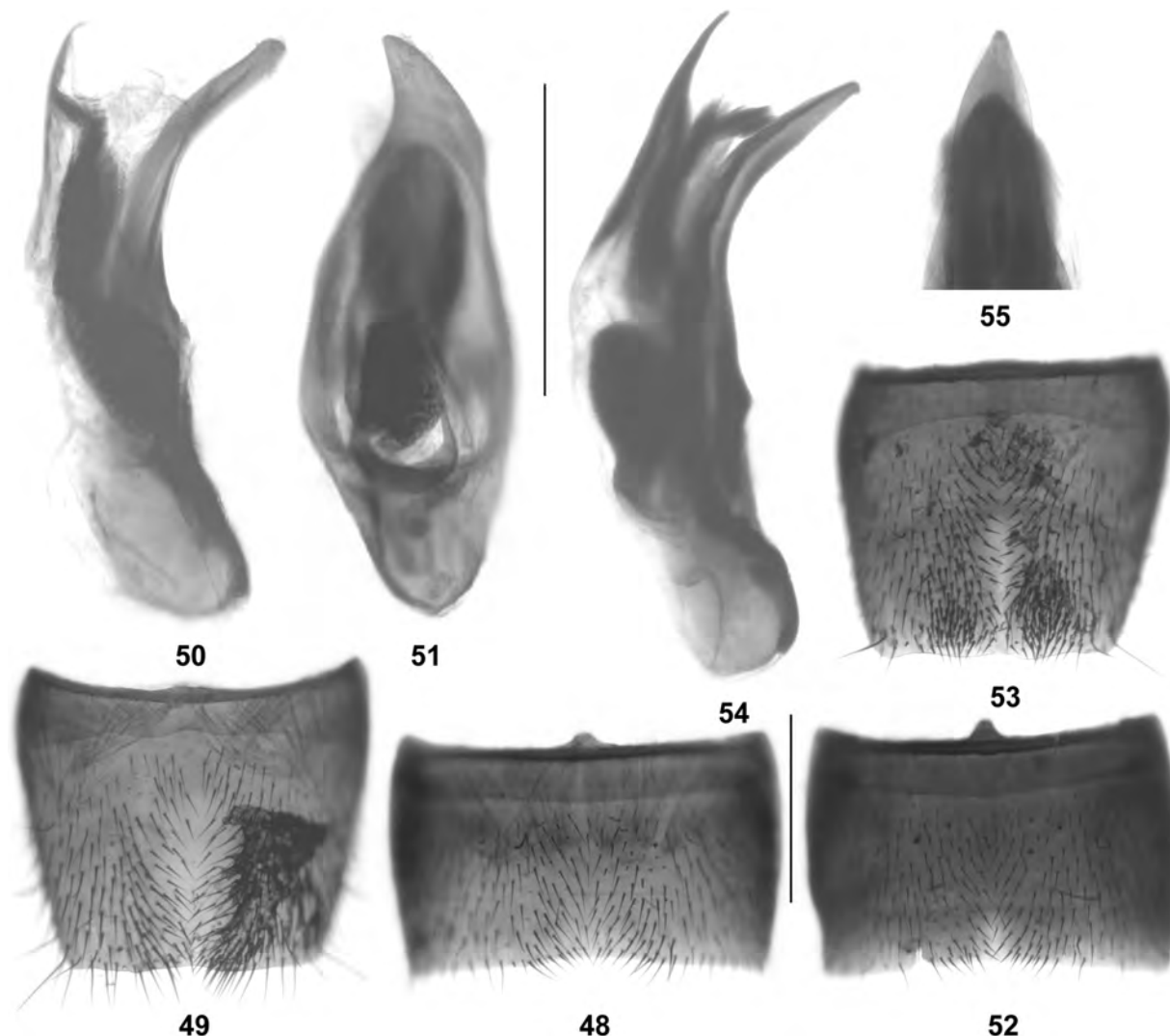
Other external characters as in *L. khumbuense*.

♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII indistinctly angled in the middle; sternite VII moderately transverse, with shallow median impression, without modified pubescence, and with weakly concave posterior margin (Fig. 44); sternite VIII as long as wide, with long median impression, on either side of middle with dense black setae, posterior margin with very shallow, almost indistinct median excision (Fig. 45); aedeagus 1 mm long, with slender, weakly curved (lateral view), and apically acute ventral process and with weakly sclerotised, lamellate dorsal plate (Figs 46–47).

♀: unknown.

**Comparative notes.** *Lathrobium nepalorientis* is reliably distinguished from the similar *L. khumbuense* only by the male sexual characters, particularly the shape and chaetotaxy of the male sternite VIII and the shape of the ventral process of the slightly larger aedeagus.

**Distribution and natural history.** This species is currently known only from the type locality, the Jaljale Himal in eastern Nepal (Fig. 2), where the holotype was collected at an altitude of 4000 m.



*Lathrobium janetscheki* Scheerpeltz, 1976 (Figs 2, 48–51)  
*Lathrobium* (*Glyptomerodoschema*) *janetscheki* Scheerpeltz, 1976: 29 ff.

**Comment.** The original description is based on a unique male holotype from “Basislager Yaral (Pangpoche)” (Scheerpeltz 1976). The specimen, which is in rather poor condition, is deposited in the collections of the ZII.

Scheerpeltz (1976) described the subgenus *Glyptomerodoschema* to accommodate the type species *Lathrobium janetscheki* Scheerpeltz, 1976, stating that the subgenus was distinguished from other species groups of the *Lathrobium* s. str. by the short elytra, reduced hind wings and small eyes, and from *Glyptomerus* Müller, 1856 by the presense of ommatidia. Coiffait (1982b) already argued that attributing the depigmented, micropterous, and microphthalmous Himalayan *Lathrobium* species to a subgenus of their own was unjustified. Such adaptive reductions are known from several species groups in *Lathrobi-*

*um* both in the West and in the East Palearctic regions. Moreover, attributing *L. janetscheki* to a subgenus of its own would undoubtedly render the nominate subgenus paraphyletic. Therefore, *Glyptomerodoschema* is placed in synonymy with *Lathrobium*.

**Redescription.** External characters as in *L. nepalorientis* and *L. nepalense*.

♂: protarsomeres I–IV strongly dilated; sternite VII strongly transverse, with median impression of triangular shape and with relatively long dark setae, posterior margin weakly concave (Fig. 48); sternite VIII moderately transverse and with pronounced, sparsely pubescent median impression, on either side of this impression with dense dark setae, posterior margin weakly concave in the middle (Fig. 49); aedeagus 1 mm long, ventral process strongly asymmetric in ventral view (Figs 50–51).

♀: unknown.

**Comparative notes.** *Lathrobium janetscheki* is evidently closely related to *L. nepalorientis* and *L. khumbuense*, as can be inferred particularly from the similar modifications of the male sternites VII and VIII, as well as from the similar morphology of the aedeagus and similar external characters. It is readily distinguished from its close relatives especially by the strongly asymmetric ventral process of the aedeagus.

**Distribution and natural history.** The type locality is situated near Pangpoche [27°51'N, 86°48'E] in the Mount Everest region, eastern Nepal (Fig. 2). The holotype was sifted from rhododendron litter and grass in April.

***Lathrobium milkeense* sp. n.** (Figs 2, 52–55)

**Type material.** Holotype ♂: “Népal or. 7-83, Milke Himal, 2500 m / Allotype [of *L. nepalorientis*] / Holotypus ♂ *Lathrobium milkeense* sp. n., det. V. Assing 2011” (MNHN).

**Description.** External characters as in *L. nepalorientis*.

♂: protarsomeres I–IV strongly dilated; sternite VII strongly transverse, with median impression with relatively long dark setae, posterior margin weakly concave (Fig. 52); sternite VIII moderately transverse, median impression oblong and with sparse, weakly modified dark setae, on either side of impression with dense dark setae, posterior margin weakly concave in the middle (Fig. 53); aedeagus 1.1 mm long, ventral process strongly curved in lateral view, dorsal plate relatively massive and strongly sclerotised, apically very acute and in the middle broad in dorsal view (Figs 54–55).

♀: unknown.

**Comparative notes.** As can be inferred from the similar external and male sexual characters, *L. milkeense* is closely allied to the *L. nepalorientis*, *L. khumbuense*, and *L. janetscheki*, but distinguished from them particularly by the morphology of the aedeagus, especially the shape of the ventral process and of the strongly sclerotised dorsal plate.

**Etymology.** The specific epithet (adjective) is derived from the name of the mountain range where the species was discovered.

**Distribution and natural history.** The type locality is situated in the Milke Himal in eastern Nepal (Fig. 2). The holotype was collected at an altitude of 2500 m.

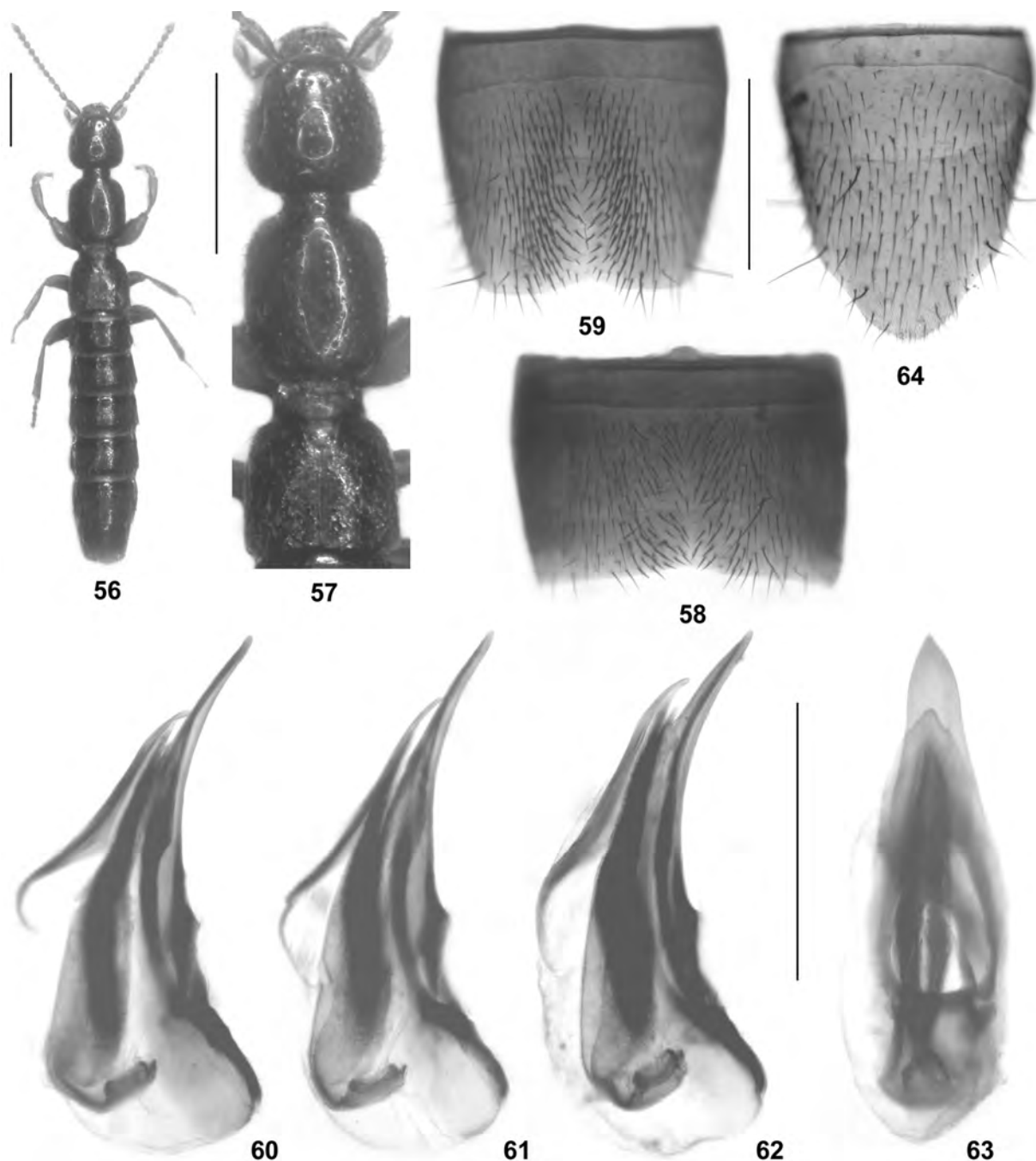
***Lathrobium umbhakense* sp. n.** (Figs 3, 56–64)

**Type material.** Holotype ♂: “Nepal-Expeditionen Jochen Martens / 390 Sankhua Sabha Distr., Thudam, mixed forest mainly Betula/Rhododendron, 3550–3650 m, 25–27 May 88 J. Martens & W. Schawaller / Holotypus ♂ *Lathrobium umbhakense* sp. n., det. V. Assing 2011” (SMNS). Paratypes: 4♂♂, 2♀♀: same data as holotype (SMNS, cAss); 1♂, 1♀: “Nepal-Expeditionen Jochen Martens / 362 Taplejung Distr., upper Simbua Khola Valley, near Yalung, 3450–3700 m, mature *Abies-Rhododendron-Juniperus* forest, 13 May 1988 J. Martens & W. Schawaller leg.” (SMNS); 2♂♂, 1♀: “Nepal-Expeditionen Jochen Martens / 387 Sankhua Sabha Distr., Kangla Khola E Thudam, dwarf *Rhododendron*, rock debris, 4100–4200 m, 24–25 May 88 Martens & Schawaller” (SMNS, cAss).

**Description.** Body length 5.3–6.7 mm; length of forebody 2.6–2.9 mm. Habitus and forebody as in Figs 56–57. Externally highly similar to *L. nepalorientis*.

♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII convex to indistinctly pointed in the middle; sternite VII strongly transverse, median impression with relatively long dark setae, posterior margin weakly concave (Fig. 58); sternite VIII moderately transverse, median impression oblong, not very deep, and with moderately sparse modified dark setae, on either side of impression with dense dark setae, posterior margin weakly concave in the middle (Fig. 59); aedeagus approximately 0.9–1.0 mm long, ventral process evenly curved and slender in lateral view, dorsal plate relatively large, but not massive and relatively weakly sclerotised (Figs 60–63).

♀: protarsomeres I–IV dilated, but distinctly less so than in male; posterior margin of tergite VIII obtusely pointed in the middle; sternite VIII oblong, longer than tergite VIII, produced and with fine setae posteriorly (Fig. 64);



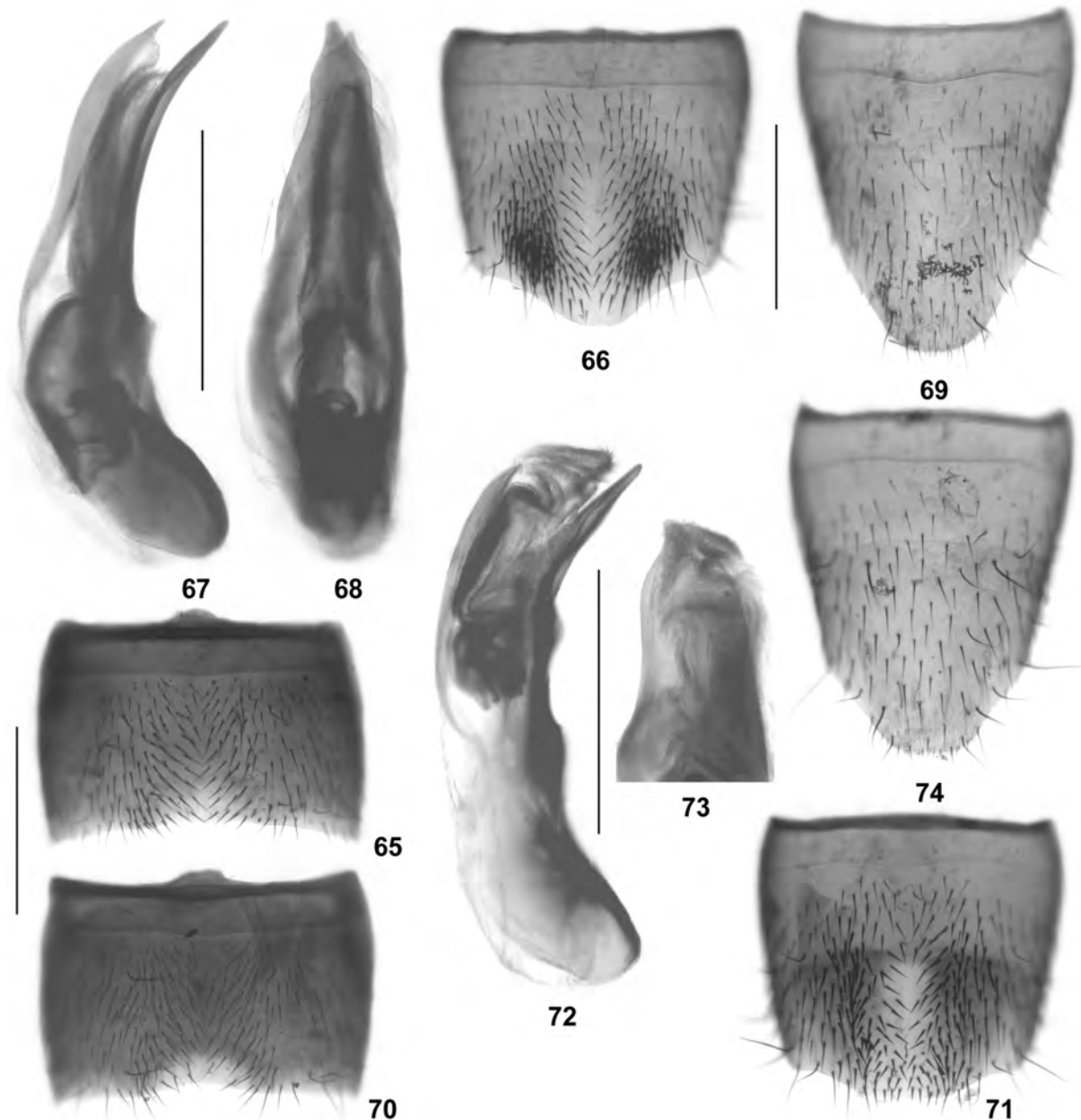
**Figs 56–64.** *Lathrobium umbhakense*. **56:** habitus; **57:** forebody; **58:** male sternite VII; **59:** male sternite VIII; **60–62:** aedeagus in lateral view; **63:** aedeagus in ventral view; **64:** female sternite VIII. Scale bars: 56–57: 1.0 mm; 58–64: 0.5 mm.

tergite IX not divided in the middle; tergite X slightly longer than tergite IX in the middle.

**Comparative notes.** As can be inferred from the similar external and male sexual characters, *L. umbhakense* is closely related to *L. nepalorientis* and allied species, but distinguished from them particularly by the morphology

of the aedeagus, especially the shape of the ventral process and the dorsal plate (*L. nepalorientis*: male sternite VIII not transverse; aedeagus with ventral process of slightly different shape in lateral view and dorsal plate much smaller). It is additionally separated from the syntopic *L. inexcisum* by the anteriorly undivided female tergite IX.





**Figs 65–74.** *Lathrobium bibarbatum* (65–69) and *L. direptum* (70–74). 65, 70: male sternite VII; 66, 71: male sternite VIII; 67, 72: aedeagus in lateral view; 68: aedeagus in ventral view; 69, 74: female sternite VIII; 73: apical portion of aedeagus in ventral view. Scale bars: 0.5 mm.

**Etymology.** The specific epithet (adjective) is derived from the name of the mountain range where the species is probably endemic.

**Distribution and natural history.** The species was found in three localities near Thudam and Yalung in the very northeast of Nepal, close to the border with Tibet (Fig. 3). The specimens were collected in a mixed forest with rhododendron, from rock debris, and litter of dwarf rhodo-

dendron at altitudes of 3450–4200 m, in one locality together with *L. inexcisum*.

***Lathrobium bibarbatum* sp. n.** (Figs 3, 65–69)

**Type material.** Holotype ♂: “Nepal-Expeditionen Jochen Martens / 380 Taplejung Distr., above Walungchung Gola, open *Abies-Betula* forest, 3400–3600 m, 21 May 1988

J. Martens & W. Schawaller / Holotypus ♂ *Lathrobium bibarbatum* sp. n., det. V. Assing 2011" (SMNS). Paratypes: 1♂, 1♀: same data as holotype (SMNS, cAss).

**Description.** Body length 7.0–7.5 mm; length of forebody 3.1–3.2 mm. Whole body dark-reddish. Externally highly similar to *L. nepalorientis*, but eyes less convex, slightly smaller, and composed of < 30 ommatidia.

♂: protarsomeres I–IV strongly dilated; sternite VII strongly transverse, median impression with relatively long dark setae, posterior margin very weakly concave (Fig. 65); sternite VIII weakly transverse and with pronounced, deep, wide, long median impression with sparse black setae, on either side of this impression with conspicuous cluster of dense dark setae, posterior margin produced in the middle, not concave or incised (Fig. 66); aedeagus 1.1 mm long, ventral process evenly curved, slender, and apically acute in lateral view, dorsal plate long, lamellate, and weakly sclerotised (Figs 67–68).

♀: protarsomeres I–IV dilated, but less so than in male; sternite VIII oblong, longer than tergite VIII, convexly produced and with micropubescence posteriorly (Fig. 69); tergite IX with median suture; tergite X distinctly longer than tergite IX in the middle.

**Comparative notes.** Based on the external and sexual characters, *L. bibarbatum* is closely related to *L. nepalorientis* and allied species. It is distinguished from them particularly by the conspicuous shape and chaetotaxy of the male sternite VIII and by the morphology of the aedeagus (shapes of ventral process and of dorsal plate).

**Etymology.** The specific epithet (Latin, adjective: with two beards) alludes to the conspicuous clusters of dark setae on the male sternite VIII.

**Distribution and natural history.** The type locality is situated in Taplejung district, in the very northeast of Nepal (Fig. 3). The specimens were collected in an open fir and birch forest at an altitude of 3400–3600 m.

#### *Lathrobium diremptum* sp. n. (Figs 2, 70–74)

**Type material.** Holotype ♂: "Nepal-Expeditionen Jochen Martens / 361 Taplejung Distr., upper Simbua Khola Valley, near Tseram, 3250–3350 m, mature *Abies-Rhododendron* forest, 10–15 May 88 J. Martens & W. Schawaller leg. / Holotypus ♂ *Lathrobium diremptum* sp. n., det. V. Assing 2011" (SMNS). Paratype ♀: "Nepal-Expeditionen Jochen Martens / 359 Taplejung Distr., pasture Lassetham NW Yamputhin, 3300–3500 m, mature *Abies-Rhododendron* forest, 6–9 May 1988 J. Martens & W. Schawaller leg." (cAss).

**Description.** Body length 7.0–7.2 mm; length of forebody 3.1–3.3 mm. Externally indistinguishable from *L. bibarbatum*.

♂: protarsomeres I–IV strongly dilated; sternite VII strongly transverse, median impression with relatively sparse, long dark setae, posterior margin very weakly concave in the middle (Fig. 70); sternite VIII weakly transverse and with moderately deep, wide, long median impression with sparse black setae, on either side of this impression with moderately dense dark setae, posterior margin convex, not concave or incised (Fig. 71); aedeagus approximately 1 mm long, ventral process evenly curved in lateral view, somewhat asymmetric, relatively broad, and apically acute in ventral view, dorsal plate moderately long, lamellate, and distinctly sclerotised (Figs 72–73).

♀: protarsomeres I–IV dilated, but less so than in male; sternite VIII oblong, longer than tergite VIII, convexly produced and with micropubescence posteriorly (Fig. 74); tergite IX with fine median suture; tergite X distinctly longer than tergite IX in the middle.

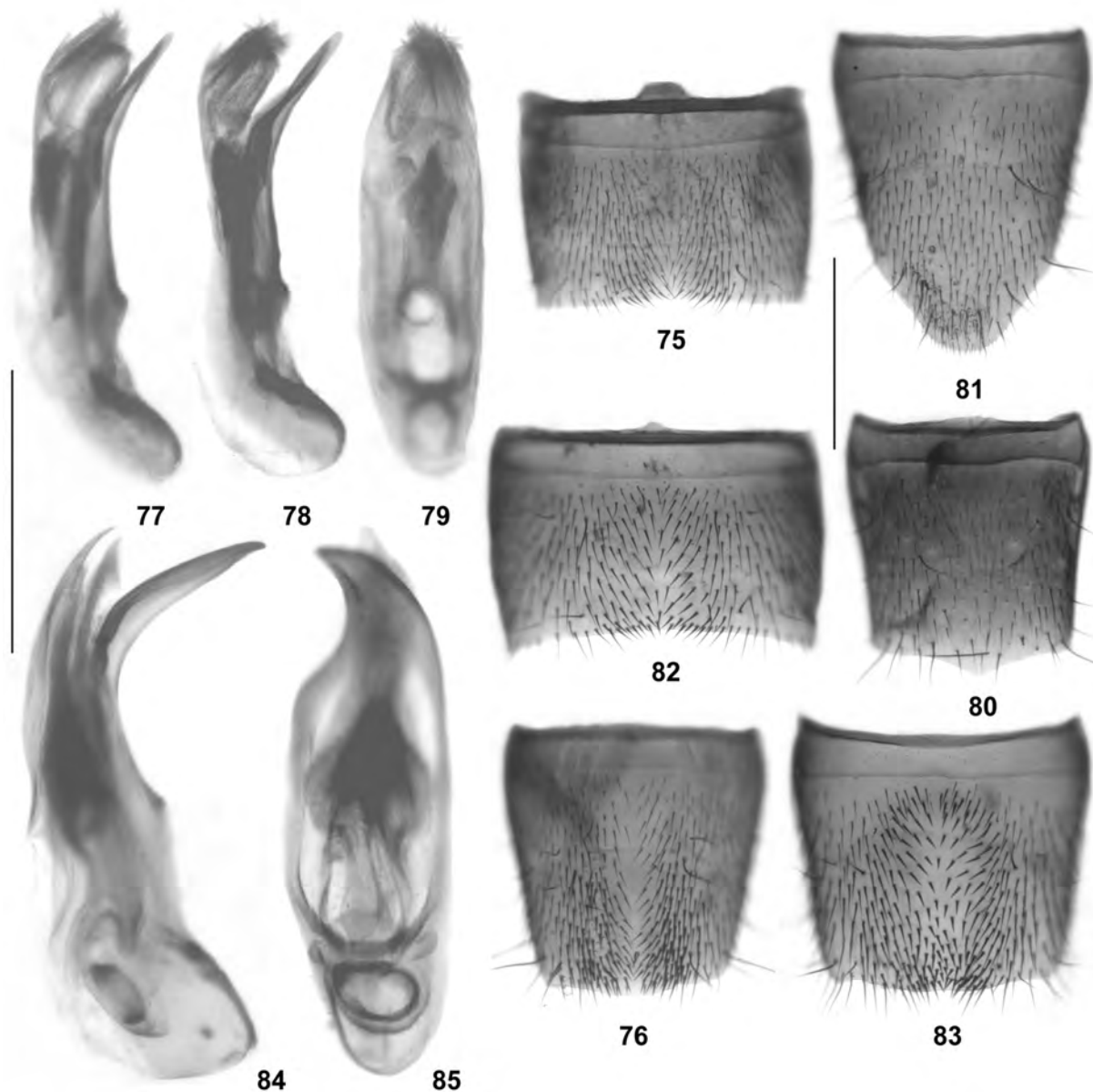
**Comparative notes.** *Lathrobium diremptum* is evidently most closely related to *L. bibarbatum*, as is suggested by the similar external morphology and particularly by the male and female sexual characters: the posteriorly convex male sternite VIII, the morphology of the aedeagus, and the anteriorly divided, but contiguous female tergite IX. It is distinguished from *L. bibarbatum* by the shape and chaetotaxy of the male sternite VIII (without pronounced cluster of dense dark setae on either side of middle; posterior margin less strongly produced), the shape of the male sternite VII (posterior margin concave in the middle), and by morphology of the aedeagus (ventral process broader and distinctly asymmetric in ventral view; dorsal plate shorter and more strongly sclerotised).

**Etymology.** The specific epithet (Latin, past participle of *dirimere*: to separate) alludes to the anteriorly divided female tergite IX.

**Distribution and natural history.** The type specimens were found in two localities near Tseram and near Yamputhin in Taplejung district, northeastern Nepal (Fig. 2). They were collected in mature fir and rhododendron forests at an altitude of 3250–3500 m.

#### *Lathrobium inexcisum* sp. n. (Figs 3, 75–81)

**Type material.** Holotype ♂: "Nepal-Expeditionen Jochen Martens / 361 Taplejung Distr., upper Simbua Khola Valley, near Tseram, 3250–3350 m, mature *Abies-Rhododendron* forest, 10–15 May 88 J. Martens & W. Schawaller leg. / Holotypus ♂ *Lathrobium inexcisum* sp. n., det. V.



**Figs 75–85.** *Lathrobium inexcisum* (75–81) and *L. infractum* (82–85). 75, 82: male sternite VII; 76, 83: male sternite VIII; 77–78, 84: aedeagus in lateral view; 79, 85: aedeagus in ventral view; 80: female tergite VIII; 81: female sternite VIII. Scale bars: 0.5 mm.

Assing 2011" (SMNS). Paratypes: 4♂♂, 4♀♀: same data as holotype (SMNS, cAss); 2♂♂: "Nepal-Expeditionen Jochen Martens / 362 Taplejung Distr., upper Simbua Khola Valley, near Yalung. 3450–3700 m, mature *Abies-Rhododendron-Juniperus* forest, 13 May 1988 J. Martens & W. Schawaller leg." (SMNS, cAss); 2♀♀ [1 teneral]: "Nepal-Expeditionen Jochen Martens / 359 Taplejung Distr., pasture Lassetham NW Yamputhin, 3300–3500 m, mature *Abies-Rhododendron* forest, 6–9 May 1988 J. Martens & W. Schawaller leg." (SMNS); 1♂: "Nepal-Expeditionen Jochen Martens / 275 Taplejung Dist., Alm Lassetham, *Abies-Rhododendron*-Wald, 3500 m, Berlese, 6–7 Sep 83 Martens & Daams" (SMNS); 1♂: "Nepal-Expeditionen Jochen Martens / 277 Taplejung Dist. Khola, Yalung, 3450 m, 8Sep83 J. Martens" (SMNS); 1♂: "Nepal-Expeditionen Jochen Martens / 275 Taplejung Dist., Alm Lassetham, *Abies-Rhododendron*-Wald, 3500 m, Berlese, 6–7 Sep 83 Martens & Daams" (SMNS); 1♀: "Nepal-Expeditionen Jochen Martens / 367 Taplejung Distr., pass Deorali W Yamputhin, 3400 m, *Abies-Rhododendron* forest, 17 May 1988 J. Martens & W. Schawaller leg." (SMNS).

setham, *Abies-Rhododendron*-Wald, 3500 m, Berlese, 6–7 Sep83 Martens & Daams" (SMNS); 1♂: "Nepal-Expeditionen Jochen Martens / 277 Taplejung Dist. Khola, Yalung, 3450 m, 8Sep83 J. Martens" (SMNS); 1♂: "Nepal-Expeditionen Jochen Martens / 275 Taplejung Dist., Alm Lassetham, *Abies-Rhododendron*-Wald, 3500 m, Berlese, 6–7 Sep 83 Martens & Daams" (SMNS); 1♀: "Nepal-Expeditionen Jochen Martens / 367 Taplejung Distr., pass Deorali W Yamputhin, 3400 m, *Abies-Rhododendron* forest, 17 May 1988 J. Martens & W. Schawaller leg." (SMNS).

**Description.** Body length 5.3–6.2 mm; length of forebody 2.3–2.6 mm. Coloration: head and pronotum reddish-brown to dark-brown; elytra reddish to reddish-brown; abdomen brown to blackish; legs reddish to brown; antennae reddish. Apart from the slightly smaller body size, externally highly similar to the preceding species.

♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII weakly convex to indistinctly angled in the middle; sternite VII distinctly transverse, median impression with long dark setae, posterior margin very weakly concave (Fig. 75); sternite VIII approximately as long as broad and with moderately deep, wide, long median impression with sparse black setae, on either side of this impression with moderately dense dark setae, posterior margin convex, not concave or incised (Fig. 76); aedeagus approximately 0.8 mm long, ventral process subapically bent in lateral view, relatively broad and apically acute in ventral view, dorsal plate lamellate, very thin, moderately long, and weakly sclerotised (Figs 77–79).

♀: protarsomeres I–IV dilated, but less so than in male; posterior margin of tergite VIII obtusely pointed in the middle (Fig. 80); sternite VIII oblong, longer than tergite VIII, strongly convexly produced and with micropubescent posteriorly (Fig. 81); tergite IX with median suture; tergite X distinctly longer than tergite IX in the middle.

**Comparative notes.** As can be inferred particularly from the similar shape of the male sternite VIII and the anteriorly divided female tergite IX, *L. inexcisum* is closely allied to *L. diremptum* and *L. bibarbatum*. It is distinguished from both species particularly by smaller body size, by the shape and chaetotaxy of the male sternite VIII, and by the distinctly smaller aedeagus with a ventral process and dorsal plate of different shapes. From the syntopic *L. umbhakense*, it is additionally separated by the anteriorly divided female tergite IX.

**Etymology.** The specific epithet (Latin, adjective) alludes to the absence of a posterior excision of the male sternite VIII.

**Distribution and natural history.** The type specimens were found in several localities near Tseram, Yalung, and Yamputhin in Taplejung district, northeastern Nepal (Fig. 3). They were collected in mature fir, rhododendron, and juniper forests at an altitude of 3250–3700 m, in one locality together with *L. umbhakense*. One female taken in early May is teneral.

#### *Lathrobium infractum* sp. n. (Figs 3, 82–85)

**Type material.** Holotype ♂: “523 Nepal: Solukhumbu Distr., E Pangkongma La, 3000 m, 17.V.1997, leg. W. Schawaller / Holotypus ♂ *Lathrobium infractum* sp. n.,

det. V. Assing 2011” (SMNS). Paratypes: 1 ♀ [without abdominal apex]: same data as holotype (cAss).

**Description.** Body length 5.8 mm; length of forebody 2.6–3.0 mm. Whole body reddish. Externally highly similar to *L. umbhakense* and *L. bibarbatum*, except for the slightly larger eyes.

♂: protarsomeres I–IV strongly dilated; sternite VII strongly transverse, median impression with weakly modified setae, posterior margin weakly concave (Fig. 82); sternite VIII weakly transverse and with extensive median impression with sparse black setae, without lateral clusters of dense dark setae, posterior margin convex, in the middle indistinctly concave (Fig. 83); aedeagus 1 mm long, ventral process long, sharply bent in lateral view, strongly asymmetric in ventral view, dorsal plate lamellate and weakly sclerotised (Figs 84–85).

♀: protarsomeres I–IV dilated, but less so than in male; other sexual characters not available (missing in paratype).

**Comparative notes.** Based on the external and sexual characters, *L. infractum* is closely related to *L. nepalorientis* and allied species. It is distinguished from them particularly by the weakly modified pubescence of the male sternites VII and VIII, the extensive impression on the male sternite VIII, as well as by the conspicuous shape of the ventral process of the aedeagus. From many of the related species, it is additionally separated by the slightly larger eyes.

**Etymology.** The specific epithet (Latin, adjective: flexed, broken) alludes to the conspicuous shape of the ventral process of the aedeagus.

**Distribution and natural history.** The type locality is situated in Solukhumbu district in eastern Nepal (Fig. 3). The specimens were collected at an altitude of 3000 m.

#### The *Lathrobium muguicum* group

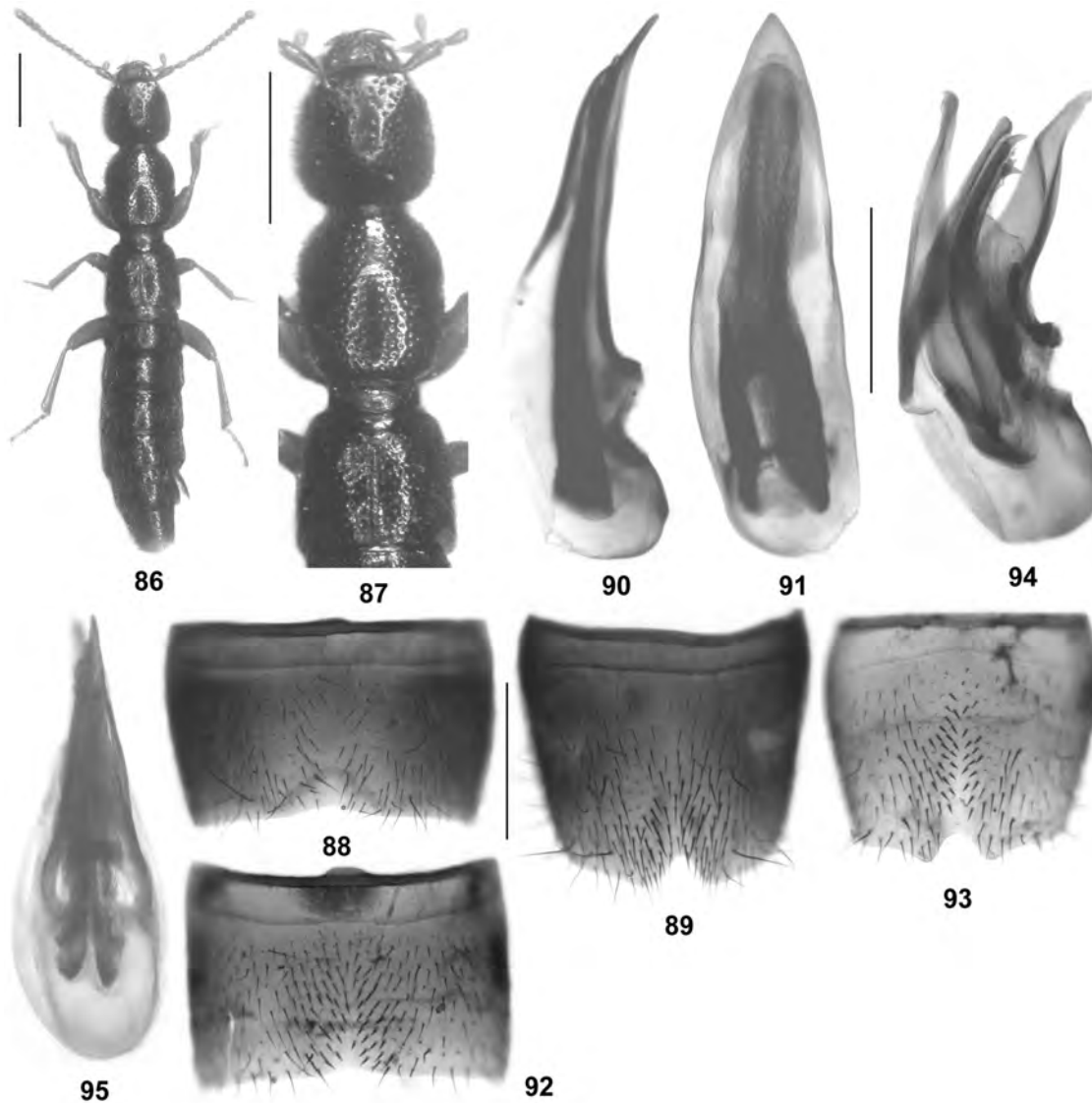
##### *Lathrobium muguicum* sp. n. (Figs 86–91, 96)

**Type material.** Holotype ♂: “576 Nepal: Mugu Distr., SW Rara Lake, 3200 m, 12.VI.1998, leg. W. Schawaller / Holotypus ♂ *Lathrobium muguicum* sp. n., det. V. Assing 2011” (SMNS).

**Description.** Body length 7 mm; length of forebody 3.4 mm. Habitus as in Fig. 86. Coloration: body blackish-brown; legs and antennae reddish.

Head (Fig. 87) as long as broad; punctation moderately coarse and not very dense; interstices with distinct microreticulation, on average somewhat broader than diameter of punctures, slightly sparser in median dorsal por-





**Figs 86–95.** *Lathrobium muguicum* (86–91) and *L. emodense* (92–95). **86:** habitus; **87:** forebody; **88, 92:** male sternite VII; **89, 93:** male sternite VIII; **90, 94:** aedeagus in lateral view; **91, 95:** aedeagus in ventral view. Scale bars: 86–87: 1.0 mm; 88–95: 0.5 mm.

tion. 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. 87) 1.18 times as long as broad and 1.04 times as broad as head; punctation similar to that of head, but slightly coarser; interstices without microsculpture.

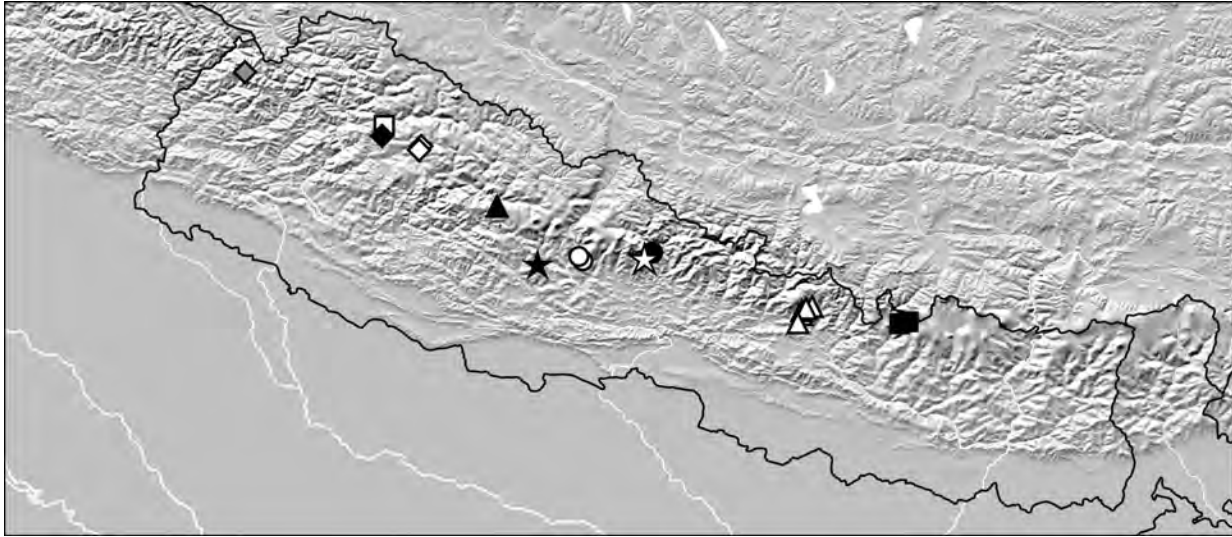
Elytra short, approximately 0.6 times as long as pronotum (Fig. 87); humeral angles weakly marked; punctation shallow and weakly defined; interstices without distinct microsculpture. Hind wings completely reduced. Metatibia slightly compressed.

Abdomen broader than elytra; punctation moderately fine and dense, somewhat sparser on posterior than on anterior tergites; posterior margin of tergite VII without pal-

isade fringe; posterior margin of tergite VIII weakly convex.

♂: protarsomeres I–IV strongly dilated; sternite VII extensively impressed and with sparse long black setae in postero-median portion, posterior margin weakly concave (Fig. 88); sternite VIII moderately transverse, with shallow median impression, this impression with weakly modified black setae, posterior excision small and almost V-shaped (Fig. 89); aedeagus 1.5 mm long, ventral process thin and blade-shaped, dorsal plate lamellate and moderately sclerotised, internal sac with a long membranous tube (Figs 90–91).

♀: unknown.



**Fig. 96.** Distributions of the species of the *L. muguicum* (open square), the *L. emodense* (stars, circles), the *L. jumense* (diamonds), the *L. excisum* (filled square), and the *L. aculeatum* groups (triangles): *L. planissimum* (grey diamond); *L. muguicum* (open square); *L. jumense* (black diamond); *L. inustum* (white diamonds); *L. aculeatum* (black triangle); *L. curvum* (black star); *L. emodense* (white circles); *L. spinosissimum* (white star); *L. annapurnense* (black circle); *L. spiculatum* (white triangles); *L. excisum* (black squares).

**Comparative notes.** Neither the external nor the male sexual characters suggest a closer relationship to any of the other species recorded from Nepal. In general external appearance, *L. muguicum* is somewhat similar to the species of the *L. nepalense* group, but at once distinguished from them by absence of microsculpture on the pronotum and by the completely different male sexual characters.

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

**Distribution and natural history.** The species is known only from one locality in Mugu district, northwestern Nepal (Fig. 96). The holotype was collected at an altitude of 3200 m.

#### The *Lathrobium emodense* species group

##### *Lathrobium emodense* Coiffait, 1975 (Figs 92–96)

*Lathrobium emodense* Coiffait, 1975: 183 f.

*Lathrobium goropanensis* [sic] Coiffait, 1983: 172; **syn. n.**

**Type material examined.** *L. emodense*: Holotype ♀: “Umg. Goropani, W. Pokhara / Pa 143 [overleaf] / Zentral-Nepal, Sept.-Okt. 1971, lg. H. Franz / Holotype / *Lathrobium emodense* H. Coiffait 1975 / *Lathrobium emodense* Coiffait, det. V. Assing 2011” (NHMW).

*L. goropanense*: Holotype ♀: “Umg. Goropani, W. Pokhara / Pa 111 [overleaf] / Holotype / *Lathrobium goropanensis* H. Coiffait 1983 / *Lathrobium emodense* Coiffait, det. V. Assing 2011” (MNHNP).

**Comment.** *Lathrobium emodense* was described from a single female from “Environs de Goropani à l’ouest de Pokhara” (Coiffait 1975) deposited in the Franz collection at the NHMW. In the original description of *L. goropanense*, which is based on a unique female holotype from “Népal, environs de Goropani” (Coiffait 1983) deposited in the Coiffait collection at the MNHNP, there is no reference whatsoever to *L. emodense*, although the type localities of both species are practically the same. Also, the locality labels of both specimens are identical, except for the overleaf sample number. A comparison revealed that the holotype of *L. emodense* is slightly smaller than that of *L. goropanense*, but otherwise they are indistinguishable. In consequence, there is little doubt that both names refer to the same species, so that *L. goropanense* is placed in synonymy with *L. emodense*.

Fortunately, a male from the vicinity of the environs of Ghorepani has become available, so that an interpretation of this species is now possible.

**Additional material examined. Nepal:** 1♂, 1♀, Parbat district, Punhill at Ghoropani Pass, 3050–3100 m, 8.X.1983, leg. Smetana & Löbl (MHNG, cAss).

**Redescription.** Body length 5.5–6.7 mm; length of fore-body 2.4–2.9 mm. Coloration: body more or less uniformly reddish.

Head approximately as long as broad or weakly transverse; punctation coarse and moderately dense; interstices without distinct microsculpture (some shallow traces may be visible on frons), at least as broad as diameter of punctures in median dorsal portion, narrower than diameter of punctures in lateral and posterior dorsal portions. Eyes not projecting from lateral contours of head, small, composed of approximately 20 ommatidia.

Pronotum 1.20–1.25 times as long as broad and as broad as head; punctation similar to that of head; interstices without microsculpture.

Elytra short, 0.55–0.60 times as long as pronotum; humeral angles weakly marked; punctation shallow; interstices without distinct microsculpture. Hind wings completely reduced. Metatibia somewhat compressed.

Abdomen broader than elytra; punctation moderately fine and dense; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII truncate in both sexes.

♂: protarsomeres I–IV strongly dilated; sternite VII extensively impressed and with moderately dense modified setae in postero-median portion, posterior margin broadly and weakly concave (Fig. 92); sternite VIII broadly impressed along the middle and with moderately numerous modified setae, posterior margin with small posterior excision, on either side of this excision acutely produced (Fig. 93); aedeagus 1.2 mm long, with straight and apically acute ventral process (lateral view), a long, straight (lateral view), and distinctly sclerotised dorsal plate, and with several strongly sclerotised internal structures of characteristic shape (Figs 94–95).

♀: protarsomeres I–IV dilated, but slightly less so than in male; sternite VIII oblong and convexly produced posteriorly; tergite IX undivided; tergite X distinctly longer than tergite IX in the middle.

**Comparative notes.** As can be inferred from the similar external morphology, the similar shapes and chaetotaxy of the male sternites VII and VIII, and particularly by the similarly derived morphology of the aedeagus (shape of ventral process, long and straight dorsal plate, numerous long sclerotised structures in internal sac), *L. emodense* is closely related to the three following species. It is distinguished from them by larger body size and especially by the shape of the male sternite VIII and by the morphology of the aedeagus.

**Distribution and natural history.** The species is currently known only from the environs of Ghorepani in the southwestern extension of the Annapurna range (Fig. 96). The additional specimens were collected at an altitude of 3050–3100 m. According to Franz' diary, the holotype of *L. goropanense* was sifted from leaf litter in a montane forest on a southwestern slope on 19.IX.1971, and the

holotype of *L. emodense* was collected near Goropani by sifting leaf litter on 27.IX.1971.

### *Lathrobium curvum* sp. n. (Figs 96–101)

**Type material.** Holotype ♂: "Nepal Himalaya, Dhawalagiri, 2004, Baglung Lekh / 30 km west Baglung, N Tara Khola [28°22'N, 83°20'E], 27–2900 m, 20.05.04, leg. J. Schmidt / Holotypus ♂ *Lathrobium curvum* sp. n., det. V. Assing 2011" (cAss).

**Description.** Body length 6.3 mm; length of forebody 2.9 mm. Coloration: body brown with somewhat paler legs and abdominal apex (apparently darkened post-mortem, coloration of body in freshly collected material probably reddish).

Head (Fig. 97) approximately as long as broad; punctation coarse and rather dense; interstices without distinct microsculpture, approximately as broad as diameter of punctures in median dorsal portion. Eyes not projecting from lateral contours of head, small, composed of approximately 20 ommatidia.

Pronotum (Fig. 97) 1.25 times as long as broad and as broad as head; punctation similar to that of head, but slightly less coarse; interstices without microsculpture.

Elytra short, 0.6 times as long as pronotum (Fig. 97); humeral angles weakly marked; punctation shallow and ill-defined; interstices without distinct microsculpture. Hind wings completely reduced. Metatibia slightly compressed.

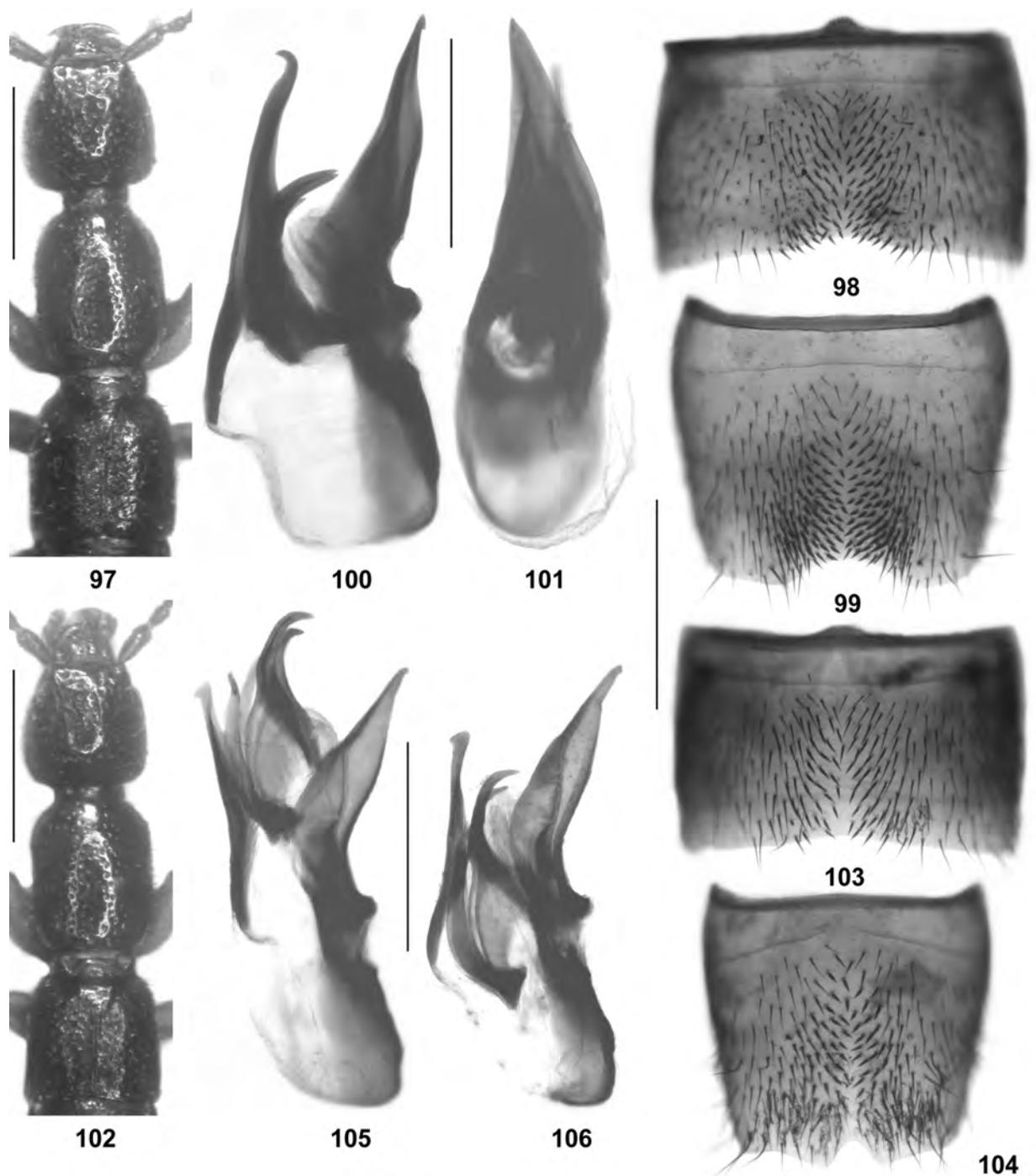
Abdomen broader than elytra; punctation fine and moderately dense; posterior margin of tergite VII without palisade fringe.

♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII truncate; sternite VII impressed and with numerous modified setae in postero-median portion, posterior margin concave in the middle (Fig. 98); sternite VI–II broadly impressed along the middle and with numerous modified setae, posterior margin with broadly concave posterior excision in the middle (Fig. 99); aedeagus large, 1.3 mm long, with apically acute ventral process, strongly sclerotised and apically curved dorsal plate, and with large, strongly curved, and strongly sclerotised internal structures (Figs 100–101).

♀: unknown.

**Comparative notes.** Based on the similarly derived shape and chaetotaxy of the male sternite VII and VIII, as well as on the similar general morphology of the aedeagus (strongly sclerotised dorsal plate; distinctly sclerotised internal structures; shape of ventral process), *L. curvum* and the two following species form a well-defined species group confined to the Annapurna and Dhaulagiri ranges





**Figs 97–106.** *Lathrobium curvum* (97–101) and *L. spinosissimum* (102–106). 97, 102: forebody; 98, 103: male sternite VII; 99, 104: male sternite VIII; 100, 105–106: aedeagus in lateral view; 101: aedeagus in ventral view. Scale bars: 97, 102: 1.0 mm; 98–101, 103–106: 0.5 mm.

in central Nepal. Among the species of this group, *L. curvum* and *L. spinosissimum* are evidently most closely related, as is suggested by the similarly derived morphology of the aedeagus (shape of internal structures and of the dorsal plate). From *L. spinosissimum* and *L. annapurnense*, both from the Annapurna, *L. curvum* is distinguished particularly by the male primary and secondary sexual characters (especially the shape and chaetotaxy of the male sternite VIII and the morphology of the aedeagus), from *L. annapurnense* additionally by larger size.

*nense*, both from the Annapurna, *L. curvum* is distinguished particularly by the male primary and secondary sexual characters (especially the shape and chaetotaxy of the male sternite VIII and the morphology of the aedeagus), from *L. annapurnense* additionally by larger size.



**Etymology.** The name (Latin, adjective) alludes to the sickle-shaped internal structures of the aedeagus.

**Distribution and natural history.** The type locality is situated in the Dhaulagiri range, central Nepal (Fig. 96), at an altitude of 2700–2900 m.

*Lathrobium spinosissimum* sp. n. (Figs 96, 102–106, 125)

**Type material.** Holotype ♂: “S Lamjun Himal, W-slope Taunja Danda [28°25'N, 84°12'E], 3700 m, 9.8.95 / Nepal Annapurna-Mts., leg. Frabrizi, Jäger, Schmidt / Holotypus ♂ *Lathrobium spinosissimum* sp. n., det. V. Assing 2011” (SDEI). Paratypes: 1♂, 1♀: same data as holotype (SDEI, cAss).

**Description.** Body length 5.8–6.1 mm; length of forebody 2.7 mm. Coloration: body brown to dark-brown; legs and antennae reddish-brown.

Head (Fig. 102) approximately as long as broad or weakly oblong; punctation coarse and rather dense; interstices without distinct microsculpture (some shallow traces may be visible on frons), at least as broad as diameter of punctures in median dorsal portion, narrower than diameter of punctures in lateral and posterior dorsal portions. Eyes not projecting from lateral contours of head, small, composed of approximately 20 ommatidia.

Pronotum (Fig. 102) approximately 1.25 times as long as broad and as broad as head; punctation similar to that of head, but slightly less coarse; interstices without microsculpture.

Elytra short, approximately 0.55 times as long as pronotum (Fig. 102); humeral angles weakly marked; punctation shallow and ill-defined; interstices without distinct microsculpture. Hind wings completely reduced. Metatibia somewhat compressed.

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

♂: protarsomeres I–IV strongly dilated; sternite VII shallowly impressed and with moderately dense modified setae in postero-median portion, posterior margin broadly concave (Fig. 103); sternite VIII broadly impressed along the middle and with moderately numerous modified setae, posterior margin with small posterior excision in the middle (Fig. 104); aedeagus 1.0 mm long, with straight and apically acute ventral process (lateral view), a long, distinctly sclerotised, and apically hooked dorsal plate, and with several strongly sclerotised internal structures of characteristic shape (Figs 105–106).

♀: protarsomeres I–IV dilated, but slightly less so than in male; sternite VIII oblong and convexly produced posteriorly (Fig. 125); tergite IX undivided; tergite X slightly longer than tergite IX in the middle.

**Comparative notes.** *Lathrobium spinosissimum* is characterised particularly by the morphology of the aedeagus (shape of ventral process and dorsal plate, internal structures), as well as by the shape and chaetotaxy of the male sternites VII and VIII. The similar primary and secondary sexual characters suggest that the species is closely related to the smaller *L. annapurnense*.

**Etymology.** The specific epithet (adjective, superlative of spinosus) alludes to the conspicuous assortment of sclerotised internal structures.

**Distribution and natural history.** The type locality is situated in the southern Lamjun (or Lamjung) Himal in central Nepal (Fig. 96). The specimens were collected at an altitude of 3700 m.

*Lathrobium annapurnense* sp. n. (Figs 96, 107–111)

**Type material.** Holotype ♂: “Nepal-Himalaya, Annapurna Mts., S Lamjun Himal, Namun Pass, S Hang, 4900 m, 28.5.1993, leg. J. Schmidt / Holotypus ♂ *Lathrobium annapurnense* sp. n., det. V. Assing 2011” (cAss). Paratypes: 1♂, 1♀: same data as holotype (cKle).

**Description.** Body length 5.0–5.5 mm; length of forebody 2.4–2.5 mm. Coloration: body dark-brown; legs reddish-brown; antennae reddish.

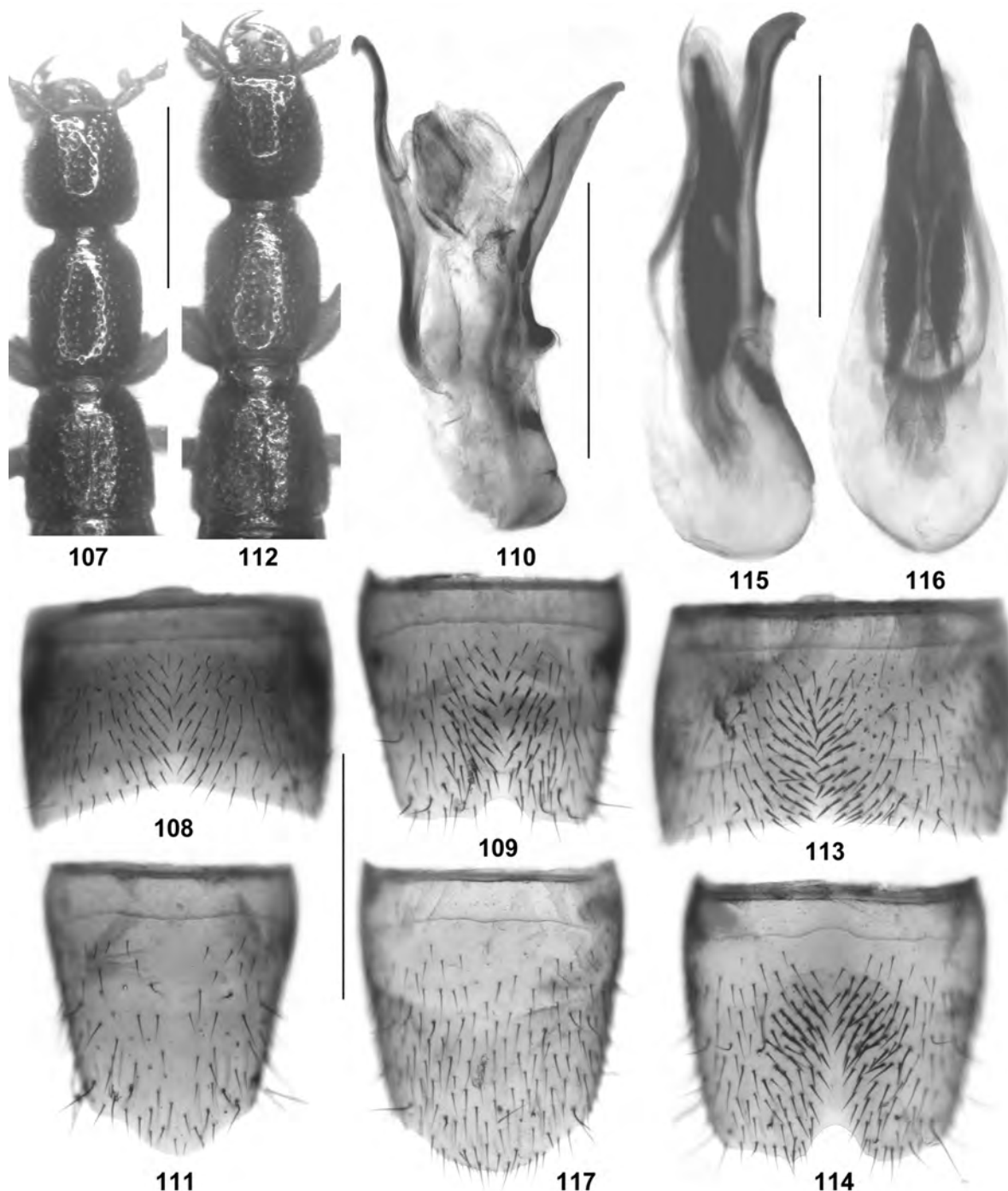
Head (Fig. 107) approximately as long as broad; punctation coarse and rather dense; interstices without microsculpture, approximately as broad as diameter of punctures in median dorsal portion, narrower than diameter of punctures in lateral and posterior dorsal portions. Eyes not projecting from lateral contours of head, small, composed of approximately 25 ommatidia.

Pronotum (Fig. 107) 1.20–1.25 times as long as broad and as broad as head; punctation similar to that of head, but slightly less coarse; interstices without microsculpture.

Elytra short, 0.6 times as long as pronotum (Fig. 107); humeral angles weakly marked; punctation shallow and ill-defined; interstices without distinct microsculpture. Hind wings completely reduced. Metatibia weakly compressed.

Abdomen broader than elytra; punctation fine and dense; posterior margin of tergite VII without palisade fringe.

♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII truncate; sternite VII shallowly impressed and with relatively sparse, weakly modified setae in postero-median portion, posterior margin broadly concave (Fig. 108); sternite VIII broadly impressed along the middle and with moderately numerous modified setae, posterior margin with concave posterior excision in the middle (Fig. 109); aedeagus 0.83 mm long, with rel-



**Figs 107–117.** *Lathrobium annapurnense* (107–111) and *L. excisum* (112–117). 107, 112: forebody; 108, 113: male sternite VII; 109, 114: male sternite VIII; 110, 115–116: aedeagus in lateral view; 111, 117: female sternite VIII; 116: aedeagus in ventral view. Scale bars: 107, 112: 1.0 mm; 108–111, 113–117: 0.5 mm.

actively broad ventral process (lateral view), a long, strongly sclerotised, and apically hooked dorsal plate, and with membranous internal structures (Fig. 110).

♀: protarsomeres I–IV dilated, but slightly less so than in male; posterior margin of tergite VIII weakly convex;

sternite VIII weakly elongated, convexly produced posteriorly (Fig. 111); tergite IX undivided; tergite X approximately as long as tergite IX in the middle.

**Comparative notes.** Among the species of the *L. emodense* group, *L. annapurnense* is characterised particularly by the morphology of the aedeagus (shape of ventral process and dorsal plate, internal sac without spine-like sclerotised structures), the shape and chaetotaxy of the male sternites VII and VIII, as well as by its small size. From most Himalayan *Lathrobium* species of similarly small size, it is additionally distinguished by the darker coloration.

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

**Distribution and natural history.** The species is known from only one locality in the Annapurna range (Fig. 96), where the specimens were collected at an altitude of 4900 m.

#### The *Lathrobium excisum* group

*Lathrobium excisum* sp. n. (Figs 96, 112–117, 295)

**Type material.** Holotype ♂: “Ost-Nepal, Rolwaling Himal / nordöstl. unterh. d. Daldung La Pass, 3800 m, 27.05.2000 leg. A. Kleeberg / Holotypus ♂ *Lathrobium excisum* sp. n., det. V. Assing 2011” (cAss). Paratypes: 2♀♀: same data as holotype (cKle); 3♀♀: “Ost-Nepal, Rolwaling Himal / Rolwaling Tal, Nyimare, 3300 m, 19.05.2000 leg. A. Kleeberg” (cKle, cAss).

**Description.** Body length 5.5–6.7 mm; length of forebody 2.5–3.0 mm. Coloration: body reddish, with slightly darker abdominal segments III–VI and with slightly paler legs.

Head (Fig. 112) weakly oblong, 1.05–1.10 times as long as broad; punctuation relatively coarse and moderately dense; interstices with very indistinct traces of microreticulation, glossy. Eyes composed of approximately 20 ommatidia, with pigmentation.

Pronotum (Fig. 112) approximately 1.3 times as long as broad and slightly narrower than head; punctuation approximately as dense as that of head, but less coarse; interstices without microsculpture.

Elytra short, approximately 0.6 times as long as pronotum (Fig. 112). Hind wings completely reduced. Legs not compressed.

Abdomen broader than elytra; punctuation rather fine and dense; interstices with distinct microsculpture; posterior margin of tergite VIII without palisade fringe.

♂: protarsomeres I–IV more strongly dilated than in female; posterior margin of tergite VIII truncate; sternite VII extensively, but not very deeply impressed in posterior median portion, this impression with numerous modified se-

tae, posterior margin weakly concave (Fig. 113); sternite VIII broadly impressed along the middle, this impression with pair of clusters of numerous modified setae, posterior margin with distinct median excision (Fig. 114); aedeagus 1.15 mm long, with apically weakly curved ventral process (lateral view) and with lamellate dorsal plate (Figs 115–116).

♀: posterior margin of tergite VIII unmodified; sternite VIII (Fig. 117) convexly produced posteriorly; tergite IX not divided in the middle; tergite X distinctly longer than tergite IX in the middle.

**Comparative notes.** *Lathrobium excisum* is distinguished from other microphthalmous and depigmented representatives of the genus particularly by the shapes and chaetotaxy of the male sternites VII and VIII, as well as by the morphology of the aedeagus. Based on the similar shape and chaetotaxy of the male sternite VIII, this species is probably most closely affiliated with the species of the *L. emodense* group, from which it is separated by the morphology of the aedeagus (absence of sclerotised spines in internal sac, lamellate dorsal plate, shape of ventral process).

**Etymology.** The specific epithet (Latin, adjective) refers to the posterior excision of the male sternite VIII, one of the characters distinguishing *L. excisum* from the geographically close and externally similar *L. janetscheki*.

**Distribution and natural history.** *Lathrobium excisum* was collected in two localities in the Rolwaling Himal, eastern Nepal (Fig. 96), at altitudes of 3300 and 3800 m (Fig. 295). In one of the localities, the species was found together with *L. kleebergi*.

#### The *Lathrobium gladiator* group

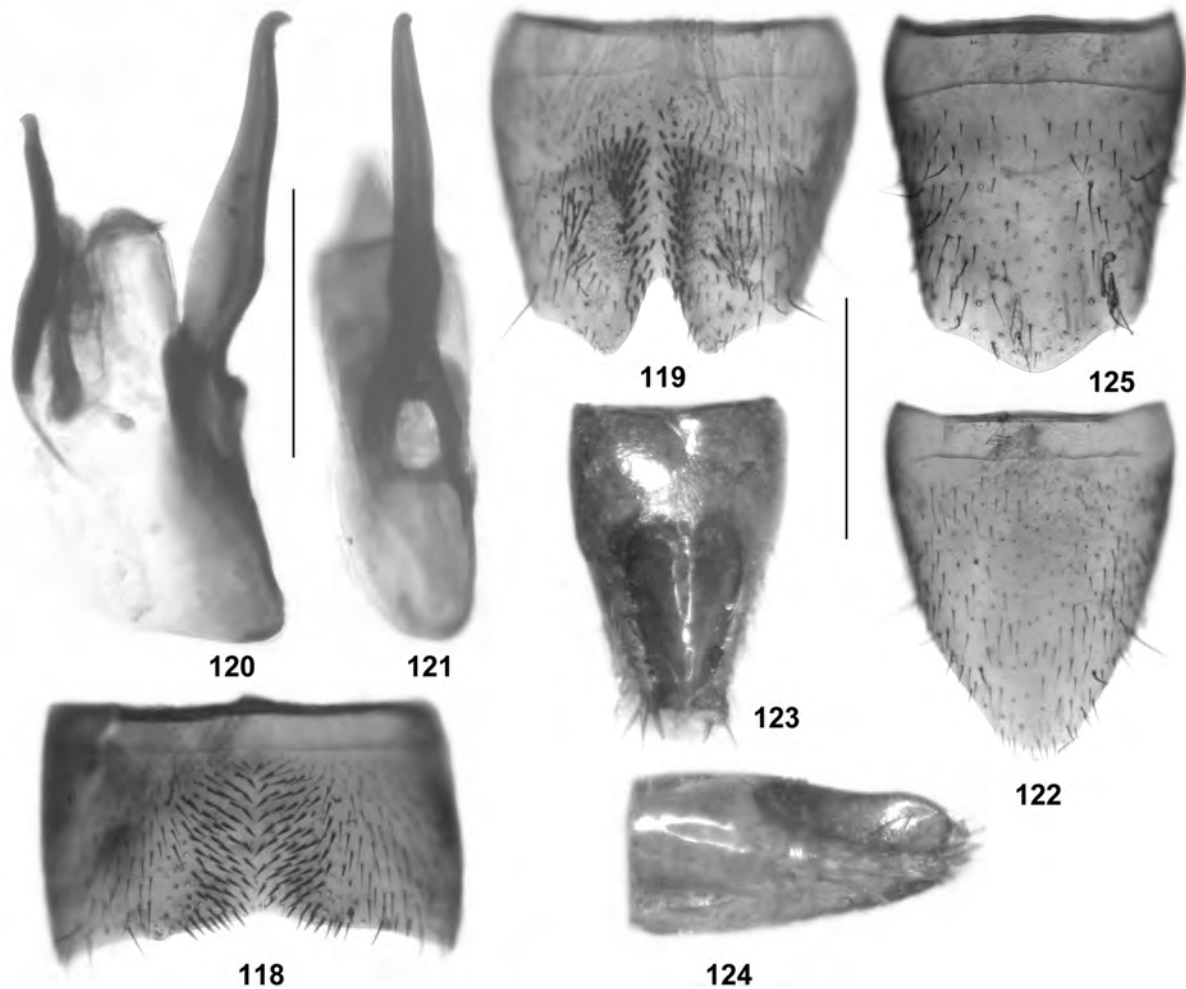
*Lathrobium gladiator* Coiffait, 1982 (Figs 118–124)

*Lathrobium gladiator* Coiffait, 1982b: 286 f.

**Type material examined.** Holotype ♂: “Inde Samum, Bhadarwak, 3200–3700 T.D / Holotype / *Lathrobium gladiator* H. Coiffait 1982 / *Lathrobium gladiator* Coiffait, det. V. Assing 2011” (MNHNP). Paratype ♀: same data as holotype (MNHNP).

**Comment.** The original description is based on a male holotype and a female paratype from “Inde, Pir Panjal, Ghadarwak, Samum, 3200 m” (Coiffait 1982b), both deposited in the Coiffait collection at the MNHNP.

**Redescription.** Body length 5.0–5.2 mm; length of forebody 2.5 mm. Coloration: body uniformly reddish-yellow.



**Figs 118–125.** *Lathrobium gladiator* (118–124) and *L. spinosissimum* (125). 118: male sternite VII; 119: male sternite VIII; 120: aedeagus in lateral view; 121: aedeagus in ventral view; 122, 125: female sternite VIII; 123: female tergites IX–X in dorsal view. 124: female tergites IX–X in lateral view. Scale bars: 0.5 mm.

Head approximately as long as broad or weakly oblong; punctation coarse and relatively sparse; interstices with distinct microreticulation, on average broader than diameter of punctures. Eyes not projecting from lateral contours of head, small, composed of approximately ten ommatidia.

Pronotum 1.25–1.30 times as long as broad and slightly narrower than head, weakly tapering posteriorly; punctation finer than, and of similar density as that of head; interstices without microsculpture.

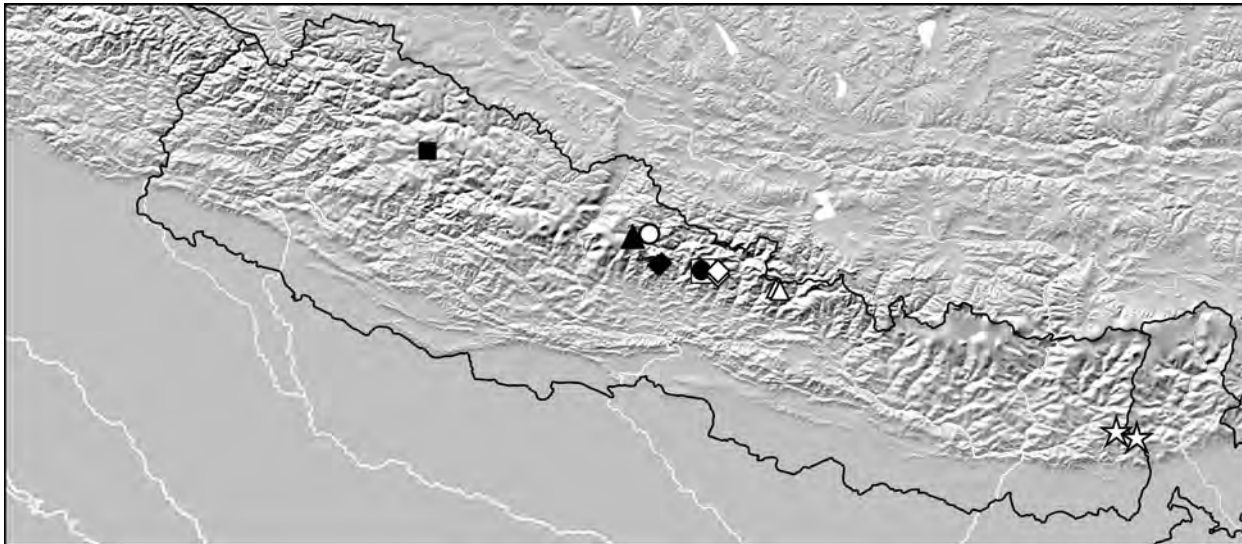
Elytra short, 0.55–0.60 times as long as pronotum; humeral angles weakly marked; punctation shallow; interstices without distinct microsculpture. Hind wings completely reduced. Metatibia somewhat compressed.

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

♂: protarsomeres I–IV strongly dilated; sternite VII with extensive and distinct impression, this impression with numerous modified setae, posterior margin broadly concave, in the middle with additional concavity (Fig. 118); sternite VIII narrowly and distinctly impressed along the middle, this impression with numerous modified, short and stout setae, posterior excision V-shaped and moderately deep, on either side of this incision with acute projections (Fig. 119); aedeagus 1.2 mm long, ventral process long and apically hooked, dorsal plate strongly sclerotised, internal sac with sclerotised internal structure (Figs 120–121).

♀: protarsomeres I–IV dilated, but distinctly less so than in male; sternite VIII oblong, longer than tergite VIII, and rather narrowly produced posteriorly (Fig. 122); tergite IX undivided; tergite X distinctly longer than tergite IX in the middle, strongly bulging, almost keeled in posterior half in cross-section (Figs 123–124).





**Fig. 126.** Distributions of the species of the *L. discissum* (stars) and the *L. devei* groups (other symbols): *L. barthei* (filled square); *L. palatum* (filled triangle); *L. aciforme* (open circle); *L. lamjunense* (filled diamonds); *L. apalatum* (filled circles); *L. devei* (open square); *L. rupinaicum* (open diamonds); *L. ganeshense* (open triangles); *L. discissum* (open stars).

**Comparative notes.** Based on the male primary and secondary sexual characters, this species is most closely allied to the species of the *L. emodense* group. It is distinguished from them particularly by the distinctive shape and chaetotaxy of the male sternite VII (shape somewhat similar to that of *L. emodense*), the morphology of the aedeagus, as well as by the conspicuous shape of the female tergite X.

**Distribution and natural history.** The species is currently known only from the environs of the Pir Panjal pass [ca. 33°38'N, 74°31'E] in Kashmir. According to the labels attached to the type specimens they were collected between 3200 and 3700 m.

### The *Lathrobium devei* group

*Lathrobium devei* Coiffait, 1981 (Figs 126–130)  
*Lathrobium devei* Coiffait, 1981: 329.

**Type material examined.** Holotype ♂: “Nepal VIII.80, Dudh Pokari / 4300 Himal Chuli D.L / Holotype / *Lathrobium devei* H. Coiffait 1981 / *Lathrobium devei* Coiffait, det. V. Assing 2011” (MNHN). Paratypes: 1♂, 1♀: same data as holotype (but labelled “Paratype” and “Allotype”, respectively) (MNHN).

**Comment.** The original description is based on the male holotype and nine paratypes from “Duth [sic] Pokhari, Himal Chuli 4300 m” deposited in the Coiffait collection.

**Redescription.** Body length 7.5–8.5 mm; length of forebody 3.7–3.9 mm. Coloration: body reddish-brown to dark-brown.

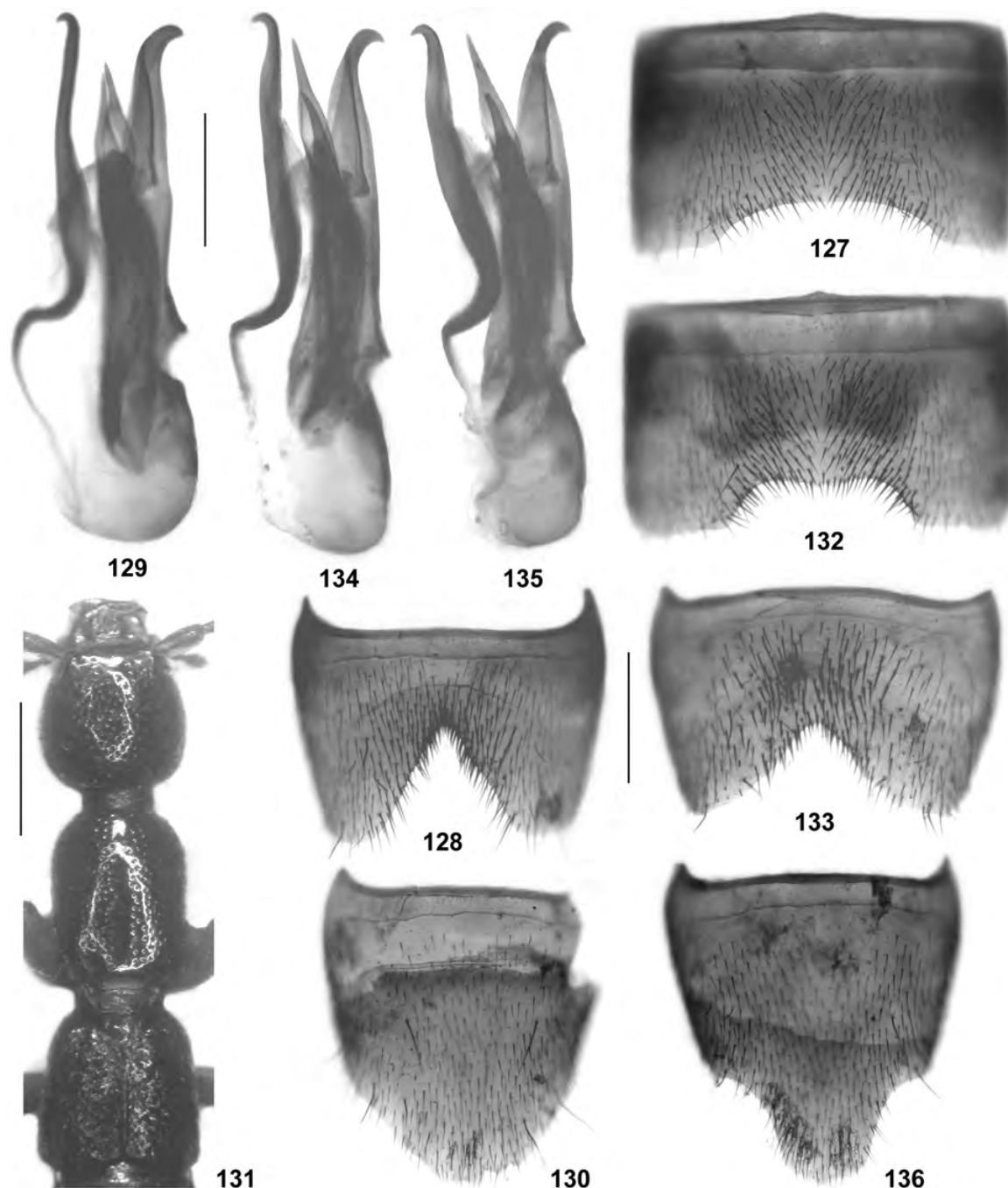
Head approximately as broad as long; punctation coarse and dense; interstices in lateral and posterior dorsal portions on average narrower than diameter of punctures; interstices without microreticulation, glossy. Eyes very small, composed of approximately ten ommatidia.

Pronotum relatively slender, 1.25–1.30 times as long as broad and approximately 0.95 times as broad as head, noticeably tapering posteriad; punctation similar to that of head, but slightly finer; interstices on average as broad as, or slightly wider than diameter of punctures, without microsculpture and glossy.

Elytra short, approximately 0.6 times as long as pronotum; humeral angles weakly marked; punctation shallow and ill-defined; interstices without distinct microsculpture. Hind wings completely reduced. Metatibia unmodified.

Abdomen broader than elytra, widest at segment VI; punctation dense and fine; interstices with shallow finely transverse microsculpture; posterior margin of tergite VII without palisade fringe.

♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII weakly convex; sternite VII strongly transverse, with shallow and rather extensive impression posteriorly, this impression with numerous black setae, posterior margin with broadly and rather deeply concave posterior excavation, middle of this excavation not distinctly bisinuate (Fig. 127); sternite VIII with numerous short black setae, particularly at margin of posterior excision, posterior excision large, acute, and very deep, reaching clearly beyond middle of sternite (Fig. 128);



**Figs 127–136.** *Lathrobium devei* (127–130) and *L. lamjunense* (131–136). 127, 132: male sternite VII; 128, 133: male sternite VIII; 129, 134–135: aedeagus in lateral view; 130, 136: female sternite VIII; 131: forebody. Scale bars: 131: 1.0 mm; 127–130, 132–136: 0.5 mm.

aedeagus large, approximately 1.9 mm long; ventral process long, slender, and apically hooked; dorsal plate with lamellate basal portion and with long, slender, strongly sclerotised, and apically hooked apical portion; internal sac with very long, slender, and apically acute sclerotised structures (Fig. 129).

♀: protarsomeres I–IV dilated, but somewhat less so than in male; tergite VIII of similar shape as in male; sternite VIII posteriorly convex, not conspicuously produced (Fig. 130); tergite IX not divided in the middle; tergite X much shorter than tergite IX in the middle.

**Comparative notes.** *Lathrobium deuvei* and the six following species form a group of highly similar and undoubtedly closely related species, all of which are distributed in central and western Nepal. The representatives of this group, hereafter referred to as the *L. deuvei* group, are practically indistinguishable based on external characters and characterised by moderate to large body size, minute eyes with very few ommatidia, a slender and posteriorly tapering pronotum, a strongly transverse and posteriorly distinctly excavated male sternite VII, a transverse sternite VIII with a deep (exception: *L. ganeshense*) and broadly V-shaped posterior excision and often conspicuous fringes or cluster of dense dark setae, a large and slender aedeagus with an apically acute, either hooked or straight ventral process, with a dorsal plate composed of a lamellate basal portion and a slender, distinctly sclerotised and apically hooked apical portion, and with long, distinctly sclerotised, and apically acute internal structures. In addition, some species have a posteriorly distinctly produced female sternite VIII.

*Lathrobium deuvei* is distinguished from other species of the *L. deuvei* group particularly by the shape of the ventral process of the aedeagus, the shape of the male sternite VII (strongly transverse, posterior excavation regularly concave and without bisinuate anterior margin), the shape of the male sternite VIII (posterior excision conspicuously deep, its depth much more than half the length of sternite), and by the weakly modified female sternite VIII.

**Distribution and natural history.** *Lathrobium deuvei* is known only from the type locality, the Himal Chuli in the Manaslu range (Fig. 126). The type specimens were collected at an altitude of 4300 m.

***Lathrobium lamjunense* sp. n.** (Figs 126, 131–136)

**Type material.** Holotype ♂: “Lamjun Himal, Dudh Pokhari [28°26'N, 84°16'E], 44–4600 m [sic], 15.8.95 / Nepal Annapurna-Mts., leg. Fabrizi, Jäger, Schmidt / Holotypus ♂ *Lathrobium lamjunense* sp. n., det. V. Assing 2011” (SDEI). Paratypes: 15 exs.: same data as holotype (SDEI, cAss); 3 exs.: “S Lamjun Himal, Wasserscheide Khudi-Miyardi-Chhar Khola [28°25'N, 84°15'E], 15.8.95, 4300 m / Nepal Annapurna-Mts., leg. Fabrizi, Jäger, Schmidt” (SDEI, cAss); 2 exs.: “S Lamjun Himal, E Taunja Danda, Quellgeb. Chhar Khola [28°25'N, 84°14'E], 4300 m, 14.8.95 / Nepal Annapurna-Mts., leg. Fabrizi, Jäger, Schmidt” (SDEI).

**Description.** Rather large species; body length 7.5–9.0 mm; length of forebody 3.5–4.0 mm. Coloration: body reddish-brown to dark-brown. Forebody as in Fig. 131. External characters as in *L. deuvei*.

♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII indistinctly angled in the middle; sternite VII weakly impressed and with numerous blackish setae posteriorly, posterior margin strongly excavated in the middle, anterior margin of this excavation weakly bisinuate (Fig. 132); sternite VIII weakly impressed and with numerous short black setae, posterior excision pronounced, deeply and broadly V-shaped (Fig. 133); aedeagus large, 1.8–2.0 mm long; ventral process long, slender, and apically hooked; dorsal plate with lamellate basal portion and with long, slender, strongly sclerotised, and apically hooked apical portion; internal sac with very long, slender, and apically acute sclerotised structures (Figs 134–135).

♀: protarsomeres I–IV dilated, but somewhat less so than in male; tergite VIII of similar shape as in male; sternite VIII posteriorly conspicuously produced in the middle (Fig. 136); tergite IX not divided in the middle; tergite X shorter than tergite IX in the middle.

**Comparative notes.** *Lathrobium lamjunense* is reliably distinguished from other species of the *L. deuvei* group only by the male primary and secondary sexual characters.

**Etymology.** The specific epithet (adjective) is derived from the name of the mountain range where the species was discovered.

**Distribution and natural history.** *Lathrobium lamjunense* may be endemic to the Lamjun Himal in central Nepal (Fig. 126). The species has been collected at altitudes of 4300–4600 m.

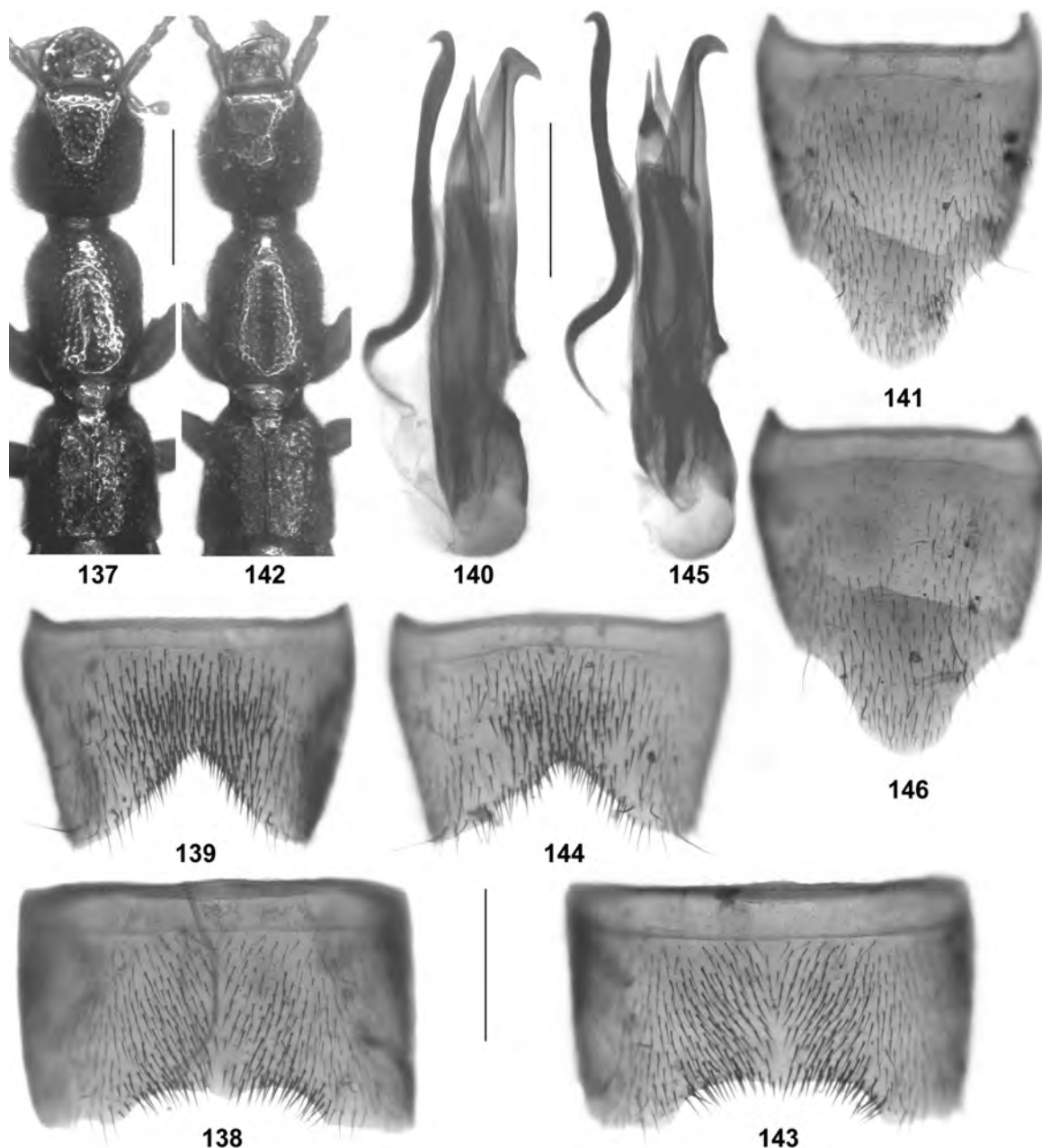
***Lathrobium palatum* sp. n.** (Figs 126, 137–141)

**Type material.** Holotype ♂: “Nepal c.: Annapurna Mts.: Kang La-Pass, N- / slope, E Manang, 5000 m, 5.VI.1994, leg. J. Schmidt / Holotypus ♂ *Lathrobium palatum* sp. n., det. V. Assing 2011” (SDEI). Paratypes: 2 ♀♀: same data as holotype (SDEI, cAss).

**Description.** Body length 6.5–8.0 mm; length of forebody 3.4–3.8 mm. Coloration: whole body uniformly reddish. Head weakly oblong (Fig. 137). Other external characters as in *L. deuvei*.

♂: posterior margin of tergite VIII weakly convex in the middle; sternite VII similar to that of *L. deuvei*, but posterior excavation shallower and with more distinctly bisinuate anterior margin (Fig. 138); sternite VIII similar to that of *L. deuvei* (Fig. 139); aedeagus similar to that of *L. deuvei*, but smaller, 1.7 mm long, ventral process apically angled, not curved (Fig. 140).





**Figs 137–146.** *Lathrobium palatum* (137–141) and *L. aciforme* (142–146). 137, 142: forebody; 138, 143: male sternite VII; 139, 144: male sternite VIII; 140, 145: aedeagus in lateral view; 141, 146: female sternite VIII. Scale bars: 137, 142: 1.0 mm; 138–141, 143–146: 0.5 mm.

♀: secondary sexual characters similar to those of *L. devei*, but sternite VIII strongly produced posteriorly (Fig. 141)

**Comparative notes.** *Lathrobium palatum* is distinguished from the similar *L. devei* particularly by the noticeably oblong head, smaller average size, paler coloration, the shape of the posterior excavation of the male

sternite VII, by the morphology of the smaller aedeagus (shape of the apex of the ventral process and of the internal structures), and by the shape of the female sternite VIII.

**Etymology.** The name is an adjective derived from the Latin noun *pala* (shovel, spade) and alludes to the shape of the female sternite VIII.



**Distribution and natural history.** The type locality is situated in the northern Annapurna Himal to the east of Manang, central Nepal (Fig. 126). The specimens were collected at an altitude of 5000 m.

*Lathrobium aciforme* sp. n. (Figs 126, 142–146)

**Type material.** Holotype ♂: “Nepal: N-Annapurna Mts.: Pisang Peak, / N-slope, 4500–4700 m, 6.VI.1994, leg. J. Schmidt / Holotypus ♂ *Lathrobium aciforme* sp. n., det. V. Assing 2011” (SDEI). Paratypes: 5♂♂, 19♀♀: same data as holotype (SDEI, cAss).

**Description.** Body length 7.0–8.5 mm; length of forebody 3.4–3.9 mm. Coloration: whole body reddish-brown. Head often noticeably oblong and posteriorly tapering (Fig. 142). Other external characters as in *L. deuvei*.

♂: posterior margin of tergite VIII weakly convex; sternite VII similar to that of *L. deuvei*, but posterior excavation shallower and with more distinctly bisinuate anterior margin (Fig. 143); sternite VIII similar to that of *L. deuvei*, but posterior excision shallower and somewhat asymmetric (Fig. 144); aedeagus similar to that of *L. deuvei*, but smaller, 1.7–1.8 mm long, apex of ventral process of slightly different shape, and internal structures subapically abruptly narrowed and apically needle-shaped (Fig. 145).

♀: sternite VIII similar to that of *L. palatum*, but posterior projection shorter and basally broader; other secondary sexual characters as in *L. deuvei*.

**Comparative notes.** *Lathrobium aciforme* is reliably distinguished from other representatives of the *L. deuvei* group by the shape of the aedeagus (especially the shape of the apex of the ventral process and the shape of the internal structures), the shape and chaetotaxy of the male sternite VII, the shallower and somewhat asymmetric posterior excision of the male sternite VIII, as well as by the shape of the female sternite VIII.

**Etymology.** The specific epithet (Latin, adjective) alludes to the needle-shaped apex of the internal structures of the aedeagus, one of the characters separating this species from its closest relatives.

**Distribution and natural history.** The type locality, the Pisang Himal, is situated in the northern Annapurna Himal (Fig. 126), not far from the type locality of *L. palatum*. The specimens were collected at an altitude of 4500–4700 m. One of the females is teneral.

*Lathrobium apalatum* sp. n. (Figs 126, 147–151)

**Type material.** Holotype ♂: “Meme Pokhari Lekh, Meme Pokhari [28°22'N, 84°35'E], 4300 m, 8.9. / Nepal Himalaya, Manaslu-Mts., lg. Schmidt 1995 / Holotypus ♂ *Lathrobium apalatum* sp. n., det. V. Assing 2011” (SDEI). Paratypes: 3♂♂, 1♀: same data as holotype (SDEI, cAss); 7♂♂, 5♀♀: “Himal Chuli, Meme Pokhari Lekh: Dudh Pokhari [28°23'N, 84°35'E], 4400 m, 9.9. / Nepal Himalaya, Manaslu-Mts., lg. Schmidt 1995” (SDEI, cAss).

**Description.** Body length 7.0–8.5 mm; length of forebody 3.4–3.9 mm. Forebody as in Fig. 147. Coloration: whole body reddish to reddish-brown, with the abdominal segments III–VI or III–VII often darker. Other external characters as in *L. deuvei*.

♂: posterior margin of tergite VIII weakly convex or truncate; sternite VII similar to that of *L. deuvei*, but posterior excavation shallower and with more distinctly bisinuate anterior margin (Fig. 148); sternite VIII similar to that of *L. deuvei*, but posteriorly with denser blackish pubescence and posterior excision even deeper and broader (Fig. 149); aedeagus similar to that of *L. deuvei*, but smaller, 1.7–1.8 mm long, ventral process apically stouter, apical portion of dorsal plate shorter, and internal structures of slightly different shape (Fig. 150).

♀: sternite VIII not conspicuously produced posteriorly, posterior margin obtusely angled (Fig. 151); other secondary sexual characters as in *L. deuvei*.

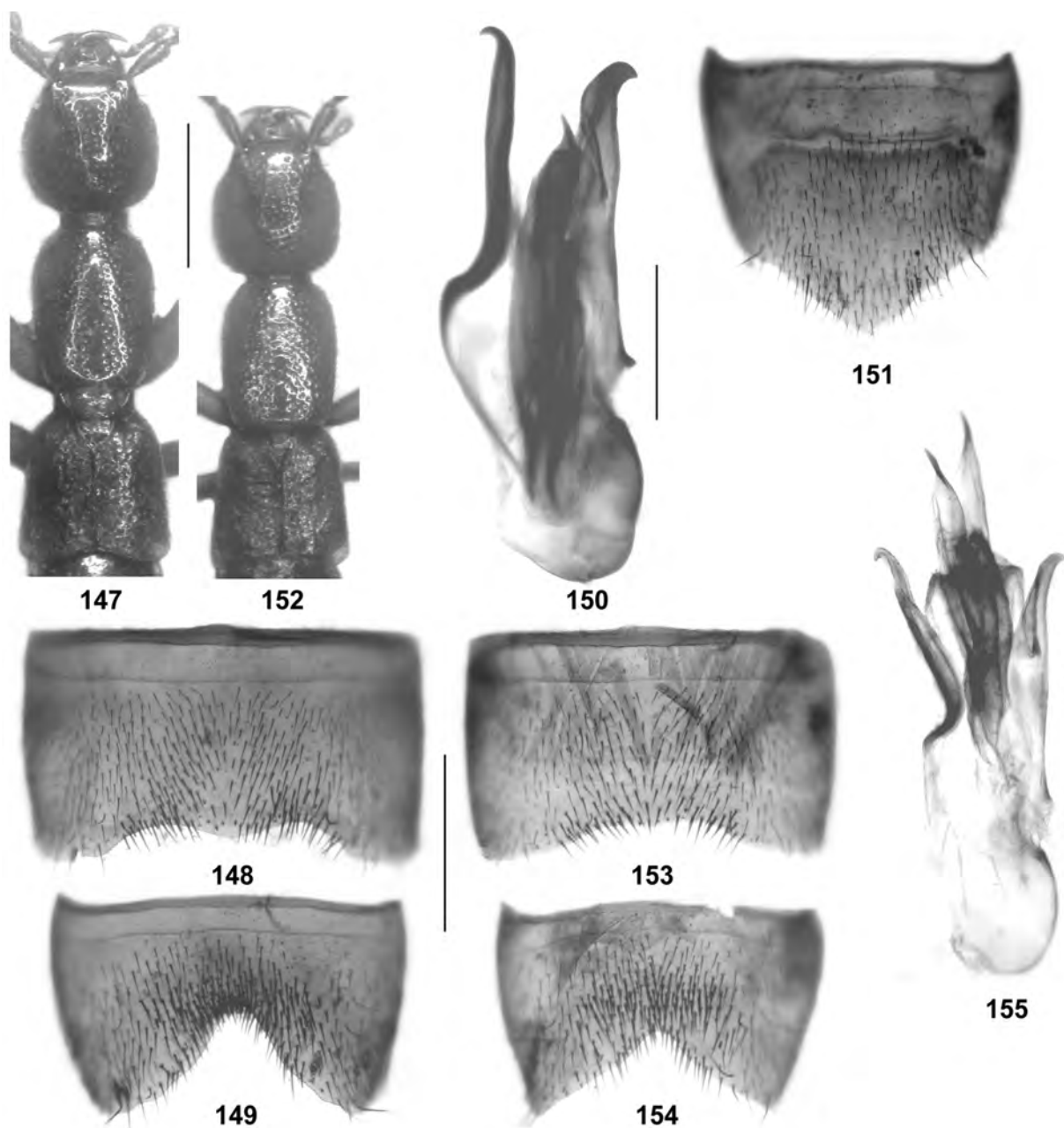
**Comparative notes.** *Lathrobium apalatum* is reliably distinguished from other representatives of the *L. deuvei* group by the shape of the aedeagus (especially the stouter apex of the ventral process), the shape and chaetotaxy of the male sternite VII, the deeper and broader posterior excision of the male sternite VIII, as well as by the completely different shape of the female sternite VIII.

**Etymology.** The specific epithet (Latin, adjective) signifies that, in contrast to other species of the *L. deuvei* group, the female sternite VIII is not conspicuously produced posteriorly.

**Distribution and natural history.** The species is only known from the Meme (or Mimi) Pokhari in the southern Manaslu Himal (Fig. 126). The specimens were collected at an altitude of 4300–4400 m; one of them is teneral.

*Lathrobium rupinaicum* sp. n. (Figs 126, 152–155)

**Type material.** Holotype ♂ [dissected prior to present study]: “Nepal-Expeditionen Jochen Martens / 241 Gorkha Dist., Rupina La, S-Seite, 4500–4100 m, 9 Aug



**Figs 147–155.** *Lathrobium apalatum* (147–151) and *L. rupinaicum* (152–155). 147, 152: forebody; 148, 153: male sternite VII; 149, 154: male sternite VIII; 150, 155: aedeagus in lateral view; 151: female sternite VIII. Scale bars: 147, 152: 1.0 mm; 148–151, 153–155: 0.5 mm.

83 Martens & Schawaller leg. / *Lathrobium* n. sp. cf. *deuvei* Coiff., det. 198 [sic] G. de Rougemont / Holotypus ♂ *Lathrobium rupinaicum* sp. n., det. V. Assing 2011” (SMNS). Paratypes: 1♂ [dissected prior to present study]: “Nepal-Expeditionen Jochen Martens / 239 Gorkha Dist., zw. Tabruk und Rupina La, 4400-4500 m, 9Aug83 Martens & Schawaller” (SMNS); 1♂ [dissected prior to present study]: “Nepal-Expeditionen Jochen Martens / 238

Gorkha Dist., zw. Tabruk und Rupina La, 4100–4400 m, 9 Aug 83 Martens & Schawaller” (cAss).

**Comment.** Two of the type specimens have evidently been subject to post-mortem darkening, most likely as a result of the application of a chemical of unknown identity.

**Description.** Body length 6.8–7.5 mm; length of forebody 3.2–3.4 mm. Coloration: whole body reddish. Externally highly similar to the preceding species, except for the smaller size (Fig. 152).

♂: posterior margin of tergite VIII truncate; sternite VII with shallow and weakly bisinuate posterior excavation, anterior margin of this excavation with longer black setae (Fig. 153); sternite VIII in the middle with extensive cluster of dense blackish setae, posterior excision broad and moderately deep (Fig. 154); aedeagus (Fig. 155) 1.3–1.4 mm long, of similar general morphology as in *L. deuvei*.

♀: unknown.

**Comparative notes.** *Lathrobium rupinaicum* is distinguished from other representatives of the *L. deuvei* group by the smaller average size (see measurements of length of forebody), by the shape and chaetotaxy of the male sternites VII and VIII, as well as by the distinctly smaller aedeagus with a much shorter dorsal plate.

**Etymology.** The specific epithet (adjective) is derived from the name of the pass where this species was discovered.

**Distribution and natural history.** The type specimens were collected in three localities near Rupina La, a pass in the southern Manaslu Himal (Fig. 126), central Nepal, at altitudes of 4100–4500 m.

***Lathrobium barthei* Coiffait, 1987** (Figs 126, 156–160)

*Lathrobium alticola* Coiffait, 1975: 331 f.; preoccupied.

*Lathrobium barthei* Coiffait, 1987: 497; replacement name.

**Type material examined.** Holotype ♂: “Umg. Mahidoela-Paß, 5000 m, b. Maharigaon / Pa 208 [overleaf] / Gebiet von Jumla, Westnepal, lg. H. Franz / Holotype / *Lathrobium alticola* H. Coiffait 1975 / *Lathrobium barthei* Coiffait, det. V. Assing 2011” (NHMW).

**Comment.** The original description of *L. alticola* is based on a unique male holotype from “Environs du Col de Mahidoela, 5000 m, près de Maharigaon, région de Jula, Népal occidental” (Coiffait 1975). The preoccupied name *L. alticola* was subsequently replaced with *L. barthei* by Coiffait (1987).

**Redescription.** Body length 8.2 mm; length of forebody 4.3 mm. Forebody as in Fig. 156. Coloration: whole body reddish. Other external characters similar to those of *L. deuvei*.

♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII weakly convex; sternite VII shallowly, but extensively impressed and with numerous blackish se-

tae posteriorly, posterior margin strongly excavated in the middle, anterior margin of this excavation not bisinuate (Fig. 157); sternite VIII weakly impressed and with dense blackish pubescence in the middle, posterior excision pronounced, deep, acute, and slightly asymmetric (Fig. 158); aedeagus large, approximately 1.6 mm long; ventral process long and slender; dorsal plate with lamellate basal portion and with long, slender, strongly sclerotised, and apically hooked apical portion; internal sac with very long, slender, and apically acute sclerotised structures (Figs 159–160). (Note that the apex of the ventral process is evidently broken off in the holotype.)

♀: unknown.

**Comparative notes.** As can be inferred from the similarly derived shape and chaetotaxy of the male sternites VII and VIII, as well as from the similarly derived morphology of the aedeagus, *L. barthei* is evidently closely related to *L. deuvei* and its allies. It is reliably distinguished from other representatives of this group only by the male primary and secondary sexual characters.

**Distribution and natural history.** *Lathrobium barthei* is the only representative of the *L. deuvei* group in West Nepal; all other species of this group are distributed in central Nepal. The holotype was collected at the Mahidoela pass [29°20'N, 82°23'E] near Maharigaon, Jumla region (Fig. 126), at an altitude of 5000 m. According to Franz' diary, the holotype was sifted from moss at rocks near snow on 23.V.1972. In contrast to the altitude stated on the label, the altitude specified in the diary is 5200 m.

***Lathrobium ganeshense* Coiffait, 1983** (Figs 126, 161–166)

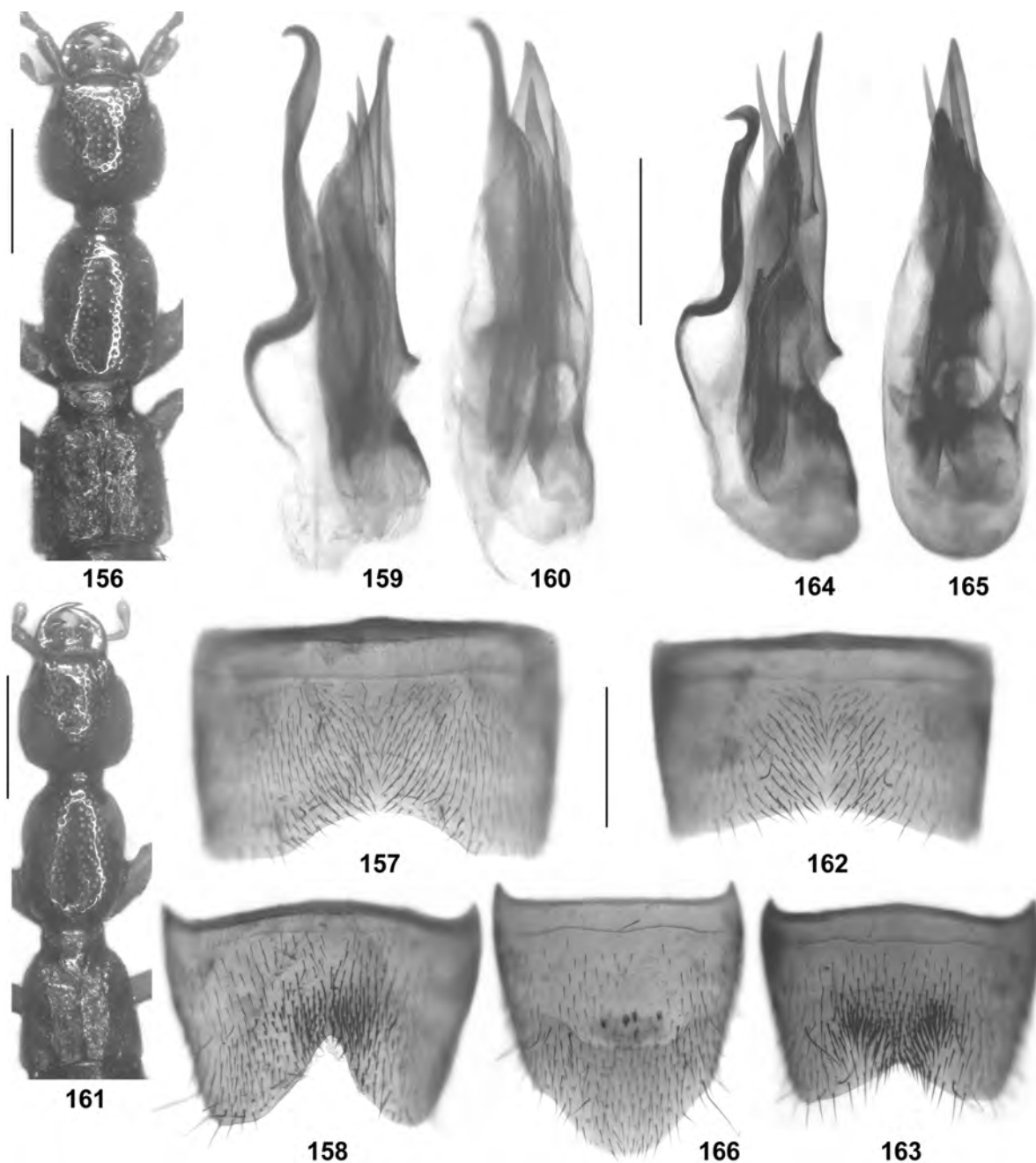
*Lathrobium ganeshensis* [sic] Coiffait, 1983: 170.

**Type material examined.** Holotype ♂: “Népal VII.82, Ganesh Himal, Lari, 4500 TD / Holotype / *Lathrobium ganeshensis* [sic] H. Coiffait 1983 / *Lathrobium ganeshense* Coiffait, det. V. Assing 2011” (MNHNP). Paratypes: 1♂, 1♀: same data as holotype (MNHNP).

**Comment.** The original description is based on a male holotype and five paratypes (four males and one female) from “Ganesh Himal, Lari, 4500 m” (Coiffait 1983), all of them deposited in the Coiffait collection.

**Additional material examined.** Nepal: 20 exs., Ganesh Himal, Jaisuli Kund env., 4300–4500 m, 13.–16.VI.2000 (SNSD, cAss).

**Redescription.** Body length 6.7–8.0 mm; length of forebody 3.2–3.9 mm. Forebody as in Fig. 161. Apart from the slightly smaller body size, externally highly similar to *L. barthei* (including coloration).



**Figs 156–166.** *Lathrobium barthei* (156–160) and *L. ganeshense* (161–166). 156, 161: forebody; 157, 162: male sternite VII; 158, 163: male sternite VIII; 159, 164: aedeagus in lateral view; 160, 165: aedeagus in ventral view; 166: female sternite VIII. Scale bars: 156, 161: 1.0 mm; 157–160, 162–166: 0.5 mm.

♂: protarsomeres I–IV moderately dilated; posterior margin of tergite VIII weakly convex; sternite VII strongly transverse, with shallow, extensive median impression posteriorly, this impression with numerous blackish setae, posterior margin broadly concave (Fig. 162); sternite VIII transverse, with shallow impression posteriorly, this impression with cluster of very dense black setae, posterior excision broadly V-shaped, but not

very deep, its depth approximately 1/4 the length of sternite (Fig. 163); aedeagus 1.6 mm long, with long, almost straight, slender, and apically acute ventral process, a bisinuate (lateral view) and apically strongly hooked dorsal plate composed of a lamellate basal and a strongly sclerotised apical portion, internal sac with two long sclerotised structures (Figs 164–165).



♀: protarsomeres I–IV dilated, but slightly less so than in male; posterior margin of tergite VIII weakly convex; sternite VIII distinctly longer than tergite VIII, its posterior margin moderately convexly produced in the middle (Fig. 166); tergite IX undivided in the middle; tergite X shorter than tergite IX in the middle.

**Comparative notes.** *Lathrobium ganeshense* is distinguished from other species of the *L. deuvei* group by slightly smaller body size, the shape of the posterior margin of the strongly transverse male sternite VII, the shape (posteriorly less deeply excised) and chaetotaxy (presence of a cluster of dense black setae in the middle) of the male sternite VIII, the morphology of the aedeagus, as well as by the shape of the female sternite VIII.

**Distribution and natural history.** The type locality, Lari (a zinc mine; approximately 28°14'N, 85°11'E), is situated to the southeast of the Paldol peak in the Ganesh Himal, central Nepal. The additional material was collected near Jaisuli Kund [28°13'N, 85°13'E] (Fig. 126). The specimens were collected at an altitude of 4300–4500 m.

### The *Lathrobium discissum* group

*Lathrobium discissum* sp. n. (Figs 126, 167–174)

**Type material.** Holotype ♂: “India W. Bengal, Darjeeling distr., Tonglu 3100 m 16.X.1978, Besuchet-Löbl / Holotypus ♂ *Lathrobium discissum* sp. n., det. V. Assing 2012” (MHNG). Paratypes: 4♂♂, 4♀♀ [4 exs. at least slightly teneral]: same data as holotype (MHNG, cAss); 1♂: same data, but 2700 m (cAss); 2♂♂, 1♀: “Nepal-Expeditionen Jochen Martens / 324 Panchthar Distr., Dhorpar Kharka, mature *Rhododendron-Lithocarpus* forest, 2700 m, 13.–16 Apr 88 Martens & Schawaller” (SMNS, cAss).

**Description.** Species of moderately large size; body length 7.5–9.0 mm; length of forebody 3.1–3.8 mm. Habitus as in Fig. 167. Coloration: head and pronotum reddish-brown to blackish-brown; elytra reddish to reddish-brown; abdomen dark-brown to blackish; legs reddish to dark-brown; antennae reddish.

Head (Fig. 168) approximately as broad as long or weakly oblong; punctation moderately coarse and rather sparse; interstices with distinct fine microreticulation, almost matt, distinctly broader than diameter of punctures. Eyes small, but composed of more than 20 ommatidia, not projecting from lateral contours of head, and 1/5–1/4 the length of postocular region in dorsal view.

Pronotum (Fig. 168) relatively slender, 1.25–1.30 times as long as broad and approximately as broad as head, or nearly so; lateral margins almost subparallel in dorsal

view; punctation similar to that of head; interstices without microsculpture and glossy.

Elytra short, approximately 0.55 times as long as pronotum (Fig. 168); humeral angles weakly marked; punctation fine, shallow, and ill-defined; interstices with barely noticeable traces of microsculpture. Hind wings completely reduced. Metatibia somewhat compressed, but otherwise unmodified.

Abdomen broader than elytra, widest at segment VI; punctation dense and moderately fine; interstices with shallow, finely transverse microsculpture; posterior margin of tergite VII without palisade fringe.

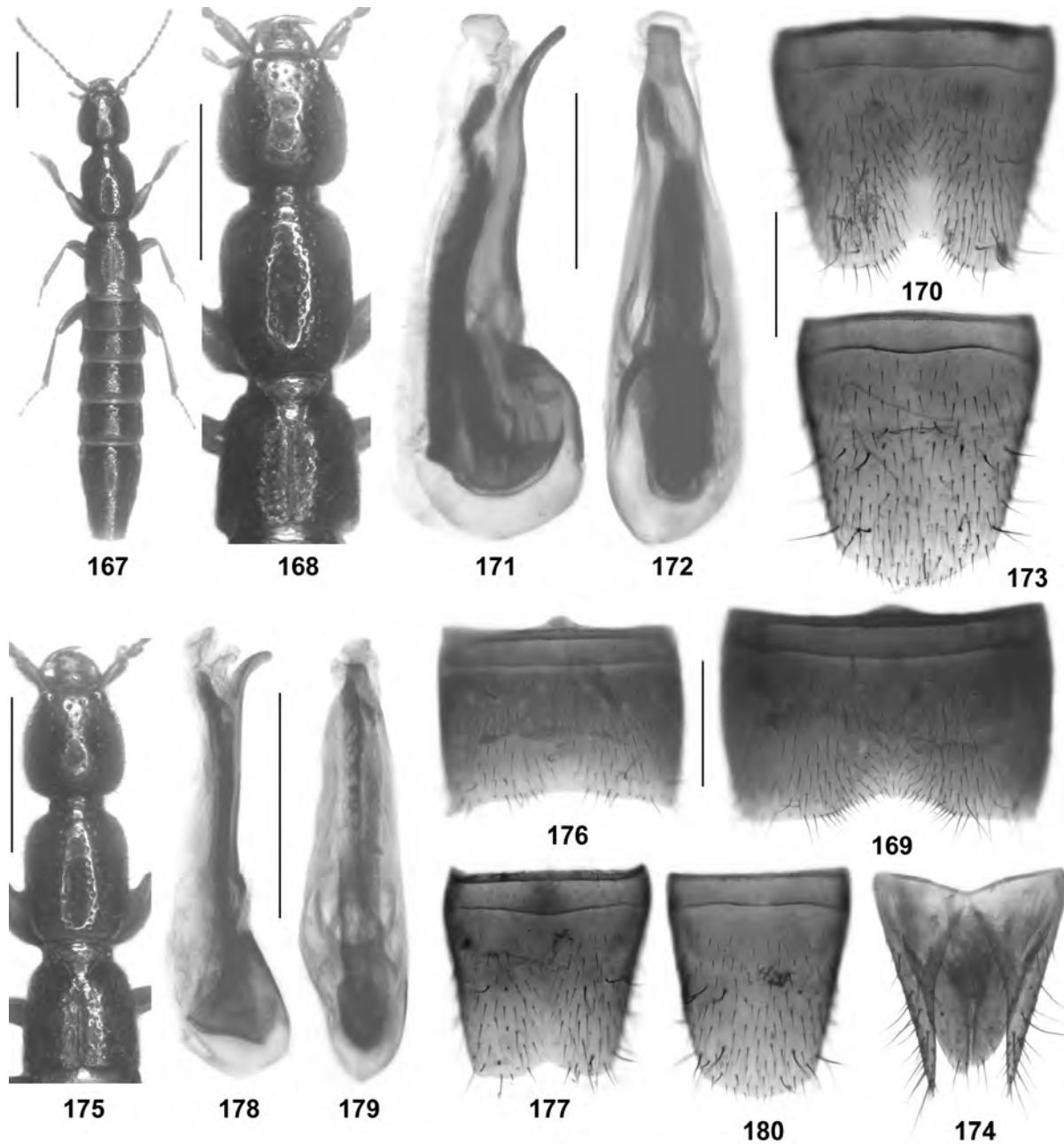
♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII weakly convex; sternite VII with shallow median impression posteriorly, posterior margin distinctly concave in the middle, this concavity with fringe of longer setae (Fig. 169); sternite VIII with impunctate median impression posteriorly, posterior excision moderately deep and broad (Fig. 170); aedeagus approximately 1.5 mm long and slender, without distinct dorsal plate; ventral process long, slender, and apically truncate in ventral view; internal sac with long, dark, membranous tube (Figs 171–172).

♀: protarsomeres I–IV dilated, but somewhat less so than in male; tergite VIII of similar shape as in male; sternite VIII only slightly longer than tergite VIII and with strongly convex posterior margin (Fig. 173); tergite IX almost completely divided in the middle, tergite X almost reaching anterior margin of tergite IX (Fig. 174).

**Comparative notes.** *Lathrobium discissum* is undoubtedly most closely related to the similar, but distinctly smaller, syntopic *L. separatum*; for characters distinguishing these species see the comparative notes in the following section. Both species are separated from all other Himalayan congeners by the modifications of the male sternites VII and VIII, by the morphology of the aedeagus (slender, ventral process apically truncate in ventral view, long dark membranous tube in the internal sac, absence of a distinct dorsal plate), as well as by the almost completely divided female tergite IX.

**Etymology.** The specific epithet (Latin, past participle of *discindere*: to tear or cut apart) refers to the divided female tergite IX.

**Distribution and natural history.** *Lathrobium discissum* was found in two localities near Tonglu [27°02'N, 88°05'E] in Darjeeling district, West Bengal, North India, and in one locality [27°05'N, 87°55'E] in the very east of Nepal (Fig. 126). The specimens were collected at altitudes of 2700 and 3100 m, in two localities together with *L. separatum*. Some of the type specimens from India are teneral.



**Figs 167–180.** *Lathrobium discissum* (167–174) and *L. separatum* (175–180). 167: habitus; 168, 175: forebody; 169, 176: male sternite VII; 170, 177: male sternite VIII; 171, 178: aedeagus in lateral view; 172, 179: aedeagus in ventral view; 173, 180: female sternite VIII; 174: female abdominal segments IX–X. Scale bars: 167–168, 175: 1.0 mm; 169–174, 176–180: 0.5 mm.

***Lathrobium separatum* sp. n.** (Figs 3, 175–180)

**Type material.** Holotype ♂: “India W. Bengal, Darjeeling distr., Tonglu 3100 m 16.X.1978, Besuchet-Löbl / Holotypus ♂ *Lathrobium separatum* sp. n., det. V. Assing 2011” (MHNG). Paratypes: 2♂♂, 2♀♀: same data as holotype (MHNG, cAss); 5♀♀: same data, but 2700 m (MHNG, cAss).

**Description.** Rather small species; body length 5.5–6.5 mm; length of forebody 2.7–3.0 mm. Coloration: head and pronotum reddish to brown; elytra reddish to reddish-brown; abdomen dark-brown; legs and antennae reddish.

Head (Fig. 175) weakly oblong; punctuation moderately coarse and rather sparse; interstices with distinct fine microsculpture, almost matt, distinctly broader than diameter of punctures. Eyes small, but composed of more than

20 ommatidia, not projecting from lateral contours of head, and approximately 1/5 the length of postocular region in dorsal view.

Pronotum (Fig. 175) relatively slender, approximately 1.3 times as long as broad, or nearly so, and approximately as broad as head; lateral margins almost subparallel in dorsal view; punctation similar to that of head; interstices without microsculpture and glossy.

Elytra short, 0.55–0.60 times as long as pronotum (Fig. 175); humeral angles weakly marked; punctation fine, shallow, and ill-defined; interstices with barely noticeable traces of microsculpture. Hind wings completely reduced. Metatibia somewhat compressed, but otherwise unmodified.

Abdomen broader than elytra, widest at segment VI; punctation dense and moderately fine; interstices with fine transverse microsculpture; posterior margin of tergite VII without palisade fringe.

♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII weakly convex; sternite VII with shallow median impression posteriorly and with sparse, unmodified pubescence, posterior margin broadly and weakly concave (Fig. 176); sternite VIII with narrow impunctate median impression posteriorly, pubescence unmodified, posterior excision very shallow (Fig. 177); aedeagus 0.9–1.0 mm long and slender, without distinct dorsal plate; ventral process long, slender, subapically curved (lateral view), and apically truncate (ventral view); internal sac with long, dark, membranous tube (Figs 178–179).

♀: protarsomeres I–IV dilated, but somewhat less so than in male; tergite VIII of similar shape as in male; sternite VIII only slightly longer than tergite VIII and with convex posterior margin (Fig. 180); tergite IX almost completely divided in the middle, tergite X almost reaching anterior margin of tergite IX.

**Comparative notes.** Based on the similar morphology of the male sexual characters, as well as on the almost completely separated female tergite IX, clearly a synapomorphic character, *L. separatum* is apparently the sister species of the syntopic *L. discissum*. It is distinguished from this species by distinctly smaller body size (no overlap), the shape and chaetotaxy of the male sternite VII and VIII, and the much smaller and more slender aedeagus.

**Etymology.** The specific epithet (Latin, adjective) refers to the divided female tergite IX.

**Distribution and natural history.** *Lathrobium separatum* was found in two localities near Tonglu in Darjeeling district, West Bengal, North India (Fig. 3). The specimens were collected at altitudes of 2700 and 3100 m, together with *L. discissum*.

### The *Lathrobium jumlense* group

*Lathrobium jumlense* Coiffait, 1982 (Figs 96, 181–186)  
*Lathrobium jumlensis* [sic] Coiffait, 1982a: 89 f.

**Type material examined.** Holotype ♂: “Dampa-Paß, gegen Chauta / Gebiet von Jumla, Westnepal, lg. H. Franz / Pa 229 [overleaf] / Type / *Lathrobium jumlensis* [sic] H. Coiffait 1979 / *Lathrobium jumlense* Coiffait, det. V. Assing 2011” (NHMW). Paratype ♀: same data as holotype (NHMW).

**Comment.** The original description is based on a male holotype and three paratypes, a male and two females, from “Népal, Dampa Pass, près Chanta, région de Jumla” (Coiffait 1982a). The holotype and a female paratype were located in the Franz collection at the NHMW.

**Redescription.** Small species, body length 4.1–4.5 mm; length of forebody 1.8–1.9 mm. Coloration: body uniformly yellowish-red.

Head (Fig. 181) weakly oblong, nearly 1.1 times as long as broad, dilated posteriorly; punctation moderately coarse and very sparse; interstices much broader than diameter of punctures and with shallow microreticulation. Eyes not projecting from lateral contours of head, very small, composed of approximately ten ommatidia.

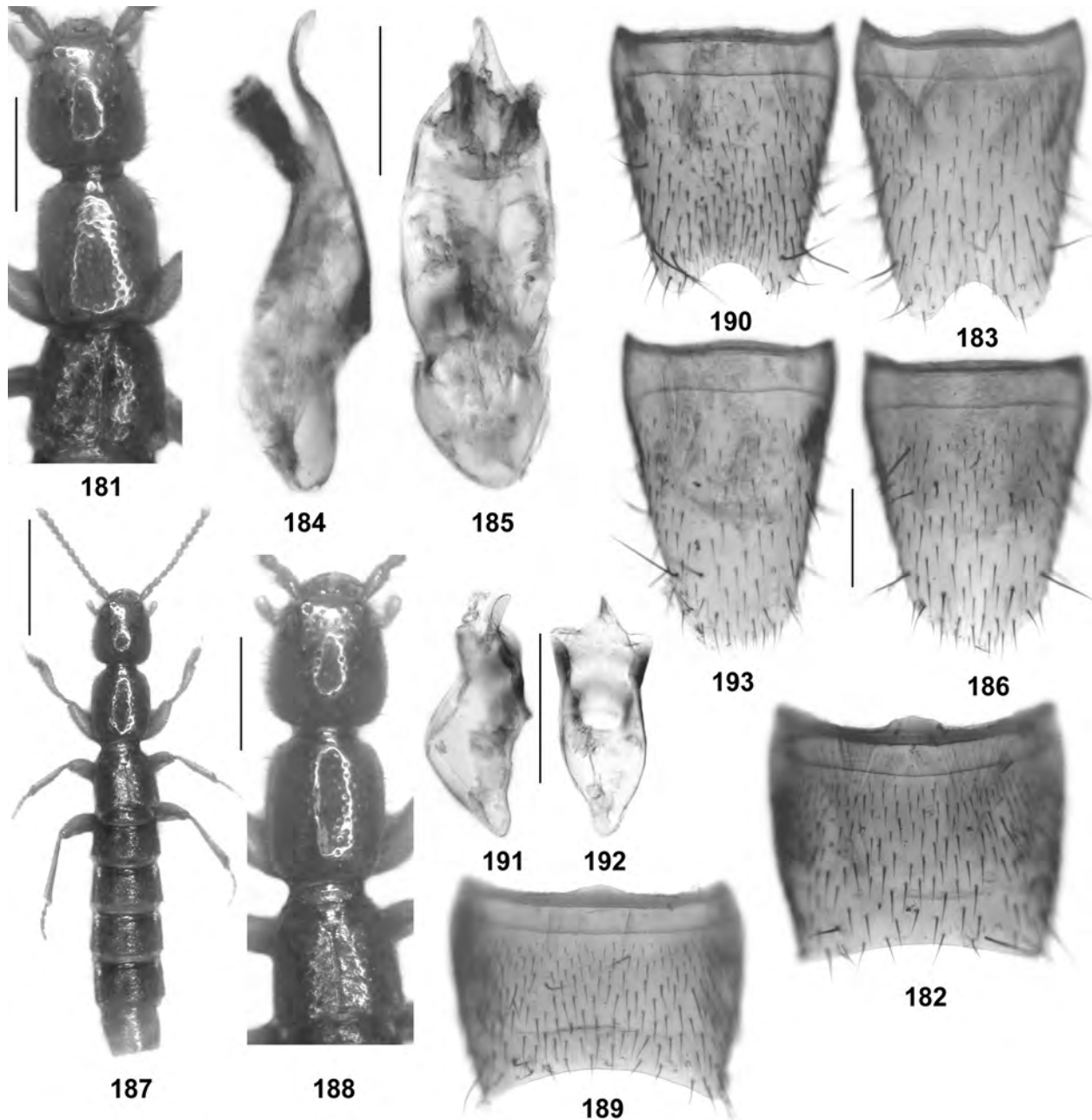
Pronotum (Fig. 181) rather broad, approximately 1.2 times as long as broad and as broad as head; posterior margin truncate to weakly concave; punctation similar to that of head, but somewhat less sparse; interstices without microsculpture.

Elytra short, approximately 0.6 times as long as pronotum (Fig. 181); humeral angles weakly marked; punctation shallow, fine, and sparse; interstices without distinct microsculpture. Hind wings completely reduced. Metatibia slightly compressed.

Abdomen slender and with subparallel margins, approximately as broad as elytra; punctation moderately fine and dense; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII truncate to weakly convex in both sexes.

♂: protarsomeres I–IV strongly dilated; sternite VII relatively weakly transverse, without modified setae, and with very weakly concave posterior margin (Fig. 182); sternite VIII distinctly oblong, without modified setae, and with rather broad, moderately deep, and almost semi-circular posterior excision (Fig. 183); aedeagus small, approximately 0.65 mm long, ventral process broad and apically very acute in ventral view, thin and sinuate in lateral view; dorsal plate weakly sclerotised (Figs 184–185).

♀: protarsomeres I–IV dilated, but slightly less so than in male; sternite VIII oblong, only slightly longer than tergite VIII, and convexly produced posteriorly (Fig. 186);



**Figs 181–193.** *Lathrobium jumlense* (181–186) and *L. inustum* (187–193). 181, 188: forebody; 182, 189: male sternite VII; 183, 190: male sternite VIII; 184, 191: aedeagus in lateral view; 185, 192: aedeagus in ventral view; 186, 193: female sternite VIII; 187: habitus. Scale bars: 187: 1.0 mm; 181, 188: 0.5 mm; 182–186, 189–193: 0.2 mm.

tergite IX undivided; tergite X approximately as long as tergite IX in the middle.

**Comparative notes.** The similar external characters and particularly the similar general morphology of the aedeagus (ventral process broad and apically acute in ventral view, sclerotised internal structures absent) suggest that

*L. jumlense* is closely related to *L. inustum*. For characters separating these two species see the following section. From the externally similar species of the *L. pectinatum* and *L. aculeatum* groups, *L. jumlense* is readily distinguished by the absence of pectinate setae on the male sternite VII and by the completely different morphology of the aedeagus, respectively.



**Distribution and natural history.** The type locality is situated in Jumla district, western Nepal (Fig. 96). According to Franz' diary, the type specimens were sifted from leaf litter in a birch and fir forest with bamboo at an altitude of 3500 m on 29.IX.1972.

***Lathrobium inustum* Coiffait, 1982** (Figs 96, 187–193)  
*Lathrobium inustum* Coiffait, 1982a: 88 f.

**Type material examined.** Holotype ♂: “Umgi. Maharigaon, 3000–3500 m / Pa 200 [overleaf] / Gebiet von Jumla, Westnepal, lg. H. Franz / Type / *Lathrobium inustum* H. Coiffait 1979 / *Lathrobium inustum* Coiffait, det. V. Assing 2011” (NHMW). Paratypes: 2♂♂, 1♀ [♀ without head and pronotum]: same data as holotype (NHMW); 1♀: “Dzunda Khola-Tal b. Talphi 3000–3500 m / Pa 194 [overleaf] / Gebiet von Jumla, Westnepal, lg. H. Franz / Paratype” (NHMW).

**Comment.** The original description is based on a male holotype and five paratypes, two males and three females, from “Népal, environs de Maharigaon, région de Jumla”, one male paratype from “Népal, Environs de Alm Darghari, 4000 m”, and four paratypes, one male and three females, from, “Népal, Dzunda Khola Tal, près Talphi” (Coiffait 1982a). The holotype and four paratypes were located in the Franz collection at the NHMW. The specimens listed as additional material below were evidently collected together with the types, but not included in the type series.

**Additional material examined. Nepal:** 6 exs., “Dzunda Khola-Tal b. Talphi 3000–3500 m / Pa 194 [overleaf] / Gebiet von Jumla, Westnepal, lg. H. Franz” (NHMW, cAss); 3 exs., “Umgi. Alm Darghari b. Maharigaon, 4000 m / Pa 211 [overleaf] / Gebiet von Jumla, Westnepal, lg. H. Franz” (NHMW, cAss).

**Redescription.** Small species, body length 3.6–4.8 mm; length of forebody 1.7–2.1 mm. Habitus and forebody as in Figs 187–188. Coloration: body uniformly yellowish-red. External characters as in *L. jumlense*.

♂: protarsomeres I–IV strongly dilated; sternite VII moderately transverse, without modified setae, and with broadly concave posterior margin (Fig. 189); sternite VIII distinctly oblong, without modified setae, and with rather broad, moderately deep, and almost semi-circular posterior excision (Fig. 190); aedeagus minute, approximately 0.30–0.35 mm long, subapical portion broad in ventral view; ventral process weakly sclerotised, almost membranous, and apically acute in ventral view; dorsal plate weakly sclerotised (Figs 191–192).

♀: protarsomeres I–IV dilated, but slightly less so than in male; sternite VIII oblong, only slightly longer than tergite VIII, and with convex posterior margin (Fig. 193); ter-

gite IX undivided; tergite X approximately as long as tergite IX in the middle.

**Comparative notes.** As can be inferred from the similar external characters and particularly the similar sexual characters (male sternite VII without modified setae; male sternite VIII without modified setae and with almost semi-circular posterior excision; aedeagus small, subapically broad in ventral view, with weakly sclerotised, short, and apically acute ventral process, and with weakly sclerotised dorsal plate; shape of female sternite VIII), *L. inustum* is most closely related to *L. jumlense*. It is readily distinguished from this species by the more transverse male sternite VII, as well as by the much smaller and differently shaped aedeagus. In fact, the aedeagus is distinctly smaller than in any other Himalayan representative of the genus.

**Distribution and natural history.** This species is currently known from three geographically close localities near Maharigaon [29°20'N, 82°23'E] and Talphi [29°18'N, 82°22'E] in Jumla district, western Nepal (Fig. 96). The specimens were collected at altitudes of 3000–4000 m. According to Franz' diary, the holotype was sifted near “Sinamoro [?]” from leaf litter and moss in a forest on 21.IX.1972, the specimens from “Alm Darghari” near “Sinamoro [?]” from leaf litter, and the specimens from the environs of Talphi were collected in a forest near “Alm Kharana [?]” on 20.IX.1972.

***Lathrobium planissimum* sp. n.** (Figs 96, 274–281)

**Type material.** Holotype ♂: “Nepal P. Mahakali, D Darchula, 14 km NNE, Ghusa, 3450 m, plateau before Api / 29°56'06"N, 80°56'36"E, leg. M. Hartmann, 8./9.VI.2005, sieving in deciduous forest / Holotypus ♂ *Lathrobium planissimum* sp. n., det. V. Assing 2012” (NME). Paratypes: 2♂♂, 5♀♀: same data as holotype (NME, cAss).

**Description.** Small species, body length 4.2–4.6 mm; length of forebody 1.9–2.1 mm. Habitus as in Fig. 274. Coloration: body uniformly reddish. External characters as in *L. jumlense* and *L. inustum*.

♂: protarsomeres I–IV strongly dilated; sternite VII moderately transverse, without modified setae, and with broadly concave posterior margin (Fig. 275); sternite VIII oblong, without modified setae, and with broadly V-shaped posterior excision (Fig. 276); aedeagus small, approximately 0.60 mm long, dorso-ventrally conspicuously flattened; ventral process broad; dorsal plate weakly sclerotised (Figs 277–279).

♀: protarsomeres I–IV dilated, but slightly less so than in male; sternite VIII oblong, only somewhat longer than tergite VIII, and with convex posterior margin (Figs

280–281); tergite IX undivided; tergite X approximately as long as tergite IX in the middle.

**Comparative notes.** As can be inferred from the similar external and male sexual characters, *L. planissimum* belongs to the *L. jumense* group. It is distinguished from the other two species of this group only by the different shape of the posterior excision of the male sternite VIII, as well as by the different morphology of the aedeagus.

**Distribution and natural history.** The type locality is situated in the southern slopes of the Byasrikh Himal, Mahakali province, in the very northwest of Nepal. The specimens were sifted from leaf litter in a deciduous forest at an altitude of 3450 m.

### The *Lathrobium aculeatum* group

***Lathrobium aculeatum* Coiffait, 1982** (Figs 96, 194–198)  
*Lathrobium aculeatum* Coiffait, 1982a: 88.

**Type material examined.** Holotype ♂: “nördl. Dhaulagiri, Gompa/Tarakot [ca. 28°51'N, 83°00'E], 3300–3400 m, 2.–6.VI.1973 / Type / Holotypus / *Lathrobium aculeatum* H. Coiffait 1979” (FSF). Paratype ♀: same data as holotype, but “Paratypus” (FSF).

**Comment.** The original description is based on a male holotype and five paratypes from “Népal, nördl. Dhaulagiri, Gompa/Tarakot, 3300–3400 m” (Coiffait 1982a). The holotype and a female paratype were examined. The former is somewhat teneral, which explains the misleading illustration of the aedeagus in Coiffait (1982a).

**Redescription.** Body length 5.0–5.3 mm; length of forebody 2.3–2.4 mm. Coloration: body more or less uniformly reddish.

Head distinctly oblong, approximately 1.1 times as long as broad; punctation moderately coarse and rather sparse in median dorsal portion, somewhat less sparse in posterior and lateral portions, but interstices on average broader than diameter of punctures; interstices with fine, shallow microreticulation. Eyes very small, with fewer than ten ommatidia.

Pronotum approximately 1.25 times as long as broad and slightly broader than head; punctation similar to that of head, but slightly finer; interstices without microsculpture.

Elytra short, approximately 0.6 times as long as pronotum; humeral angles weakly marked; punctation shallow and ill-defined; interstices without distinct microsculpture. Hind wings completely reduced. Metatibia unmodified.

Abdomen broader than elytra; punctation relatively coarse and dense; posterior margin of tergite VII without palisade fringe.

♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII truncate; sternite VII weakly impressed posteriorly, pubescence unmodified, posterior margin broadly and weakly concave (Fig. 194); sternite VIII oblong, pubescence unmodified, posterior excision relatively narrow and moderately deep (Fig. 195); aedeagus 1.0 mm long and slender, with very long and thin ventral process (but ventral process shorter than basal portion of aedeagus), lamellate dorsal plate, and without sclerotised internal structures (Figs 196–197).

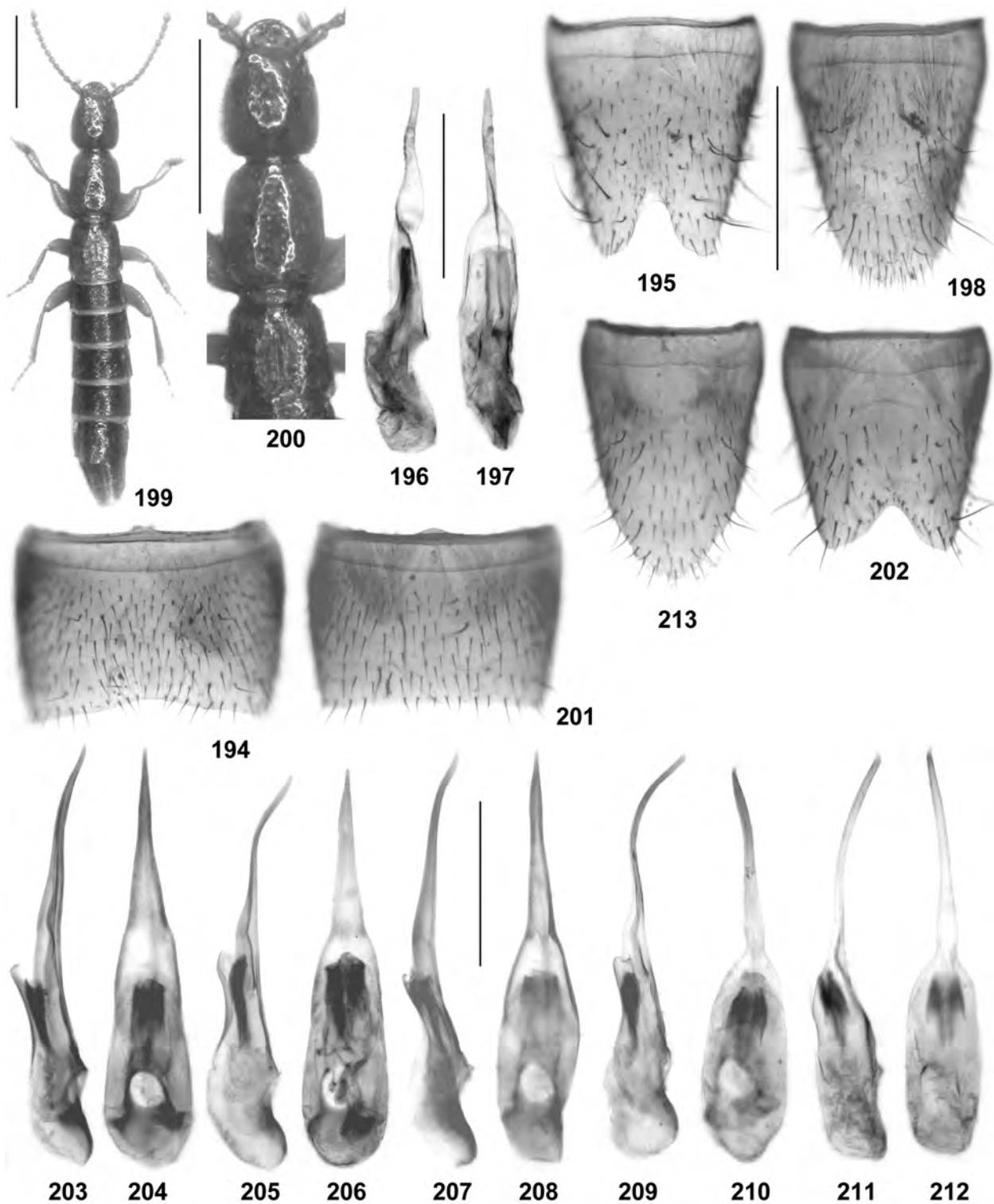
♀: protarsomeres I–IV distinctly dilated, but slightly less so than in male; tergite VIII with weakly convex posterior margin; sternite VIII oblong, gradually tapering posteriorly, posterior margin convex (Fig. 198); tergite IX not divided in the middle; tergite X slightly longer than tergite IX in the middle.

**Comparative notes.** *Lathrobium aculeatum* is characterised particularly by the conspicuously slender shape of the aedeagus and the ventral process, as well as by the reduced eyes, oblong head, and the shape and chaetotaxy of the male sternites VII and VIII. It is evidently most closely related to *L. spiculatum*, from which it is distinguished particularly by the distinctly shorter ventral process of the aedeagus and by the narrower posterior excision of the male sternite VIII.

**Distribution and natural history.** *L. aculeatum* is probably endemic to the Dhaulagiri range (Fig. 96). The type specimens were collected at an altitude of 3300–3400 m.

### *Lathrobium spiculatum* sp. n. (Figs 96, 199–213)

**Type material:** Holotype ♂: “Nepal (Prov. Bagmati), Yangri Ridge, 4200 m, 21.IV.81, Löbl & Smetana / Holotypus ♂ *Lathrobium spiculatum* sp. n., det. V. Assing 2011” (cSme). Paratypes: 4♂♂, 7♀♀: same data as holotype (MHNG, cSme, cAss); 5♀♀: “Nepal (Prov. Bagmati), Yangri Ridge, 4200 m, 23.IV.81, Löbl & Smetana” (MHNG, cAss); 7♂♂, 2♀♀: “Nepal (Prov. Bagmati), Yangri Ridge, 4150 m, 24.IV.81, Löbl & Smetana” (cSme, cAss); 7♂♂, 8♀♀ [2 exs. teneral]: “Nepal (Prov. Bagmati), Yangri Ridge, 4350 m, 22.IV.81, Löbl & Smetana” (MHNG, cSme, cAss); 2♂♂, 2♀♀: “Nepal (Prov. Bagmati), Yangri Ridge, 4700–4800 m, 22.IV.81, Löbl & Smetana” (MHNG, cSme, cAss); 9♂♂, 8♀♀ [partly teneral]: “Nepal (Prov. Bagmati), Mere Dara, 3200 m, 8.IV.81, Löbl & Smetana” (MHNG, cSme, cAss); 1♀: “Nepal (Prov. Bagmati), Mere Dara, 3100–3300 m, 7.IV.81, Löbl & Smetana” (cSme); 1♂, 2♀♀: “Nepal (Prov. Bagmati), near Mere Dara, 3000 m, 7.IV.81, Löbl & Smetana” (MHNG, cSme); 7♂♂, 5♀♀ [partly slightly teneral]: “Nepal (Prov. Bagmati), below Thare Pati, 3300 m, 11.IV.81, Löbl & Smetana” (MHNG, cSme, cAss); 2♂♂: same data, but



**Figs 194–213.** *Lathrobium aculeatum* (194–198) and *L. spiculatum* (199–213). 194, 201: male sternite VII; 195, 202: male sternite VIII; 196, 203, 205, 207, 209, 211: aedeagus in lateral view; 197, 204, 206, 208, 210, 212: aedeagus in ventral view; 198, 213: female sternite VIII; 199: habitus; 200: forebody. Scale bars: 199–200: 1.0 mm; 194–198, 201–213: 0.5 mm.

“10.IV.81” (cSme, cAss); 1♂, 6♀♀: “Nepal (Prov. Bagmati), below Thare Pati, 3500 m, 12.IV.81, Löbl & Smetana” (MHNG, cSme, cAss); 2♀♀: “Nepal (Prov. Bagmati), below Thare Pati, 3400 m, 13.IV.81, Löbl & Smetana” (cSme); 4♀♀: “Nepal (Prov. Bagmati), Malemchi, 2900 m, 14.IV.81, Löbl & Smetana” (MHNG, cSme, cAss); 1♂: “Nepal Nuwakot Di., betw. Ghopte and Thare Pati 3150 m, 24.IV.85 A. Smetana” (cAss); 2♂♂ [1 teneral]: same data, but “25.IV.85” (cAss); 1♀: same data, but “3200 m 23.IV.85” (cSme); 1♂: same data, but “3200 m, 26.IV.85” (cSme); 2♀♀: “Zw. Mulkharka u. Tare-Pati / Pa 158\* [overleaf] / Zentral-Nepal, Sept.–Okt. 1971, lg. H. Franz / Paratype [of *L. franzi*]” (NHMW).

**Description.** Body length 4.3–5.3 mm; length of forebody 2.0–2.5 mm. Habitus as in Fig. 199. Coloration: body uniformly reddish.

Head (Fig. 200) distinctly oblong, approximately 1.1 times as long as broad; punctation moderately coarse and rather sparse in median dorsal portion, somewhat less sparse in posterior and lateral portions, but interstices on average broader than diameter of punctures; interstices with fine, shallow microreticulation. Eyes very small, with fewer than ten ommatidia.

Pronotum (Fig. 200) approximately 1.20–1.25 times as long as broad and slightly broader than head; posterior margin weakly concave; punctation similar to that of head; interstices without microsculpture.

Elytra short, approximately 0.6 times as long as pronotum (Fig. 200); humeral angles weakly marked; punctation shallow and ill-defined; interstices without distinct microsculpture. Hind wings completely reduced. Metatibia somewhat flattened in both sexes.

Abdomen broader than elytra; punctation relatively coarse and dense; posterior margin of tergite VII without palisade fringe.

♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII weakly convex; sternite VII weakly impressed posteriorly, pubescence unmodified, posterior margin broadly and weakly concave (Fig. 201); sternite VIII oblong, posterior excision almost V-shaped and moderately deep, margin of excision with very fine and short setae; tergites and sternite of segments IX–X extremely elongated (Fig. 202); aedeagus 1.2–1.3 mm long and slender, ventral process of somewhat variable shape and variable length, long, thin, and more or less strongly bent ventrad in lateral view, dorsal plate lamellate and weakly sclerotised, internal sac without distinctly sclerotised structures (Figs 203–212).

♀: protarsomeres I–IV dilated, but less so than in male; tergite VIII with truncate to weakly convex posterior margin; sternite VIII oblong, gradually tapering posteriad, posterior margin strongly convex (Fig. 213); tergite IX not divided in the middle; tergite X slightly longer than tergite IX in the middle.

**Intraspecific variation.** The ventral process of the aedeagus is of remarkably variable length and shape (Figs 203–212). The relative length ranges from slightly shorter to somewhat longer than the basal portion of the aedeagus. The ventral keel in the basal half of the ventral process may be pronounced to practically obsolete. Moreover, the base of the ventral process (ventral view) may range from very thin (much thinner than the basal portion of the aedeagus) to relatively broad and apically gradually tapering. These character conditions are linked by transitional states, even in material from the same locality, so that the observed differences are attributed to intra- rather than interspecific variation.

**Comparative notes.** This species is characterised particularly by the extremely long ventral process of the aedeagus (distinctly longer even than that of *L. aculeatum*), as well as by the reduced eyes, oblong head, the shape and chaetotaxy of the male sternites VII and VIII, the conspicuously elongated sclerites of the male segments IX and X, and the long female tergite IX (longer in the middle than tergite X).

**Etymology.** The specific epithet is an adjective derived from the Latin noun *spiculum* (spine, sting) and alludes to the conspicuously long and thin ventral process of the aedeagus.

**Distribution and natural history.** *Lathrobium spiculatum* is probably endemic to the Langtang region to the north and northeast of Kathmandu (Fig. 96). The – partly teneral – specimens were collected at altitudes of 2900–4800 m. In some localities, this species was collected together with *L. nepalense* and/or *L. exsertum*. According to Franz’ diary, his specimens were collected in a rhododendron forest above “Bulumje” [?] on 7.X.1971.

### The *Lathrobium pectinatum* group

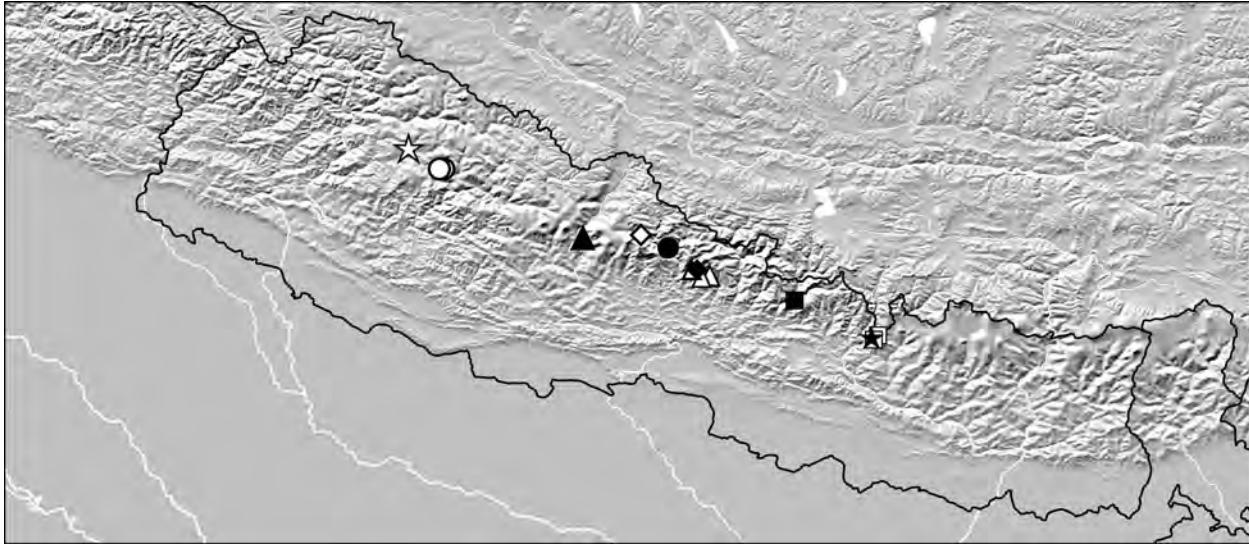
#### *Lathrobium pectinatum* Coiffait, 1981 (Figs 214–218)

*Lathrobium pectinatum* Coiffait, 1981: 329 ff.

**Type material examined.** Holotype ♂: “Nepal VIII.80, Dudh Pokari / 3000 Himal Chuli D.L / Holotype / *Lathrobium pectinatum* H. Coiffait 1981 / *Lathrobium pectinatum* Coiffait, det. V. Assing 2011” (MNHNP). Paratype ♂: same data as holotype (but labelled “Paratype”) (MNHNP).

**Comment.** The original description is based on a male holotype and three paratypes from “Dudh Pokhari, Himal Chuli 3000 m” (Coiffait 1981) deposited in the Coiffait collection.





**Fig. 214.** Distributions of the species of the *L. pectinatum* group: *L. privum* (open star); *L. fodens* (open circles); *L. calcaratum* (filled triangle); *L. barbulatum* (open diamond); *L. barbatum* (filled circle); *L. compressicrus* (filled diamond); *L. pectinatum* (open triangles); *L. cavicus* (westernmost open triangle); *L. attritum* (filled star); *L. cassagnaui* (open squares).

**Additional material examined. Nepal:** 1♂, Manaslu, Dudh Pokhari Lekh, between Kharka and Malemchi Kharka [28°18'N, 84°35'E], 3300–3500 m, 12.–13.IX.1995, leg. Schmidt (cAss); 1♂, 11♀♀, Manaslu, SW Merne Pokhari, affluent of Ngadi Khola, spring area, 28°22'N, 84°31'E, 3200–3300 m, 11.V.2005, leg. Schmidt (NME, cAss); 1♂, 2♀♀, Manaslu, E-slope of Ngadi Khola Valley, 28°22'N, 84°30'E, 2800–3000 m, 13.V.2005, leg. Schmidt (NME, cAss).

**Redescription.** Body length 5.3–6.0 mm; length of forebody 2.5–2.6 mm. Coloration: body uniformly reddish.

Head approximately as long as wide; punctation coarse and rather sparse; interstices with distinct microreticulation, broader than diameter of punctures in median dorsal portion. Eyes not projecting from lateral contours of head, very small, composed of fewer than ten ommatidia.

Pronotum approximately 1.25 times as long as broad and as broad as head; punctation similar to that of head, but slightly less coarse; interstices without microsculpture.

Elytra short, 0.55–0.60 times as long as pronotum; humeral angles weakly marked; punctation shallow and ill-defined; interstices without distinct microsculpture. Hind wings completely reduced. Metatibia distinctly compressed and somewhat bent, sexually dimorphic.

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

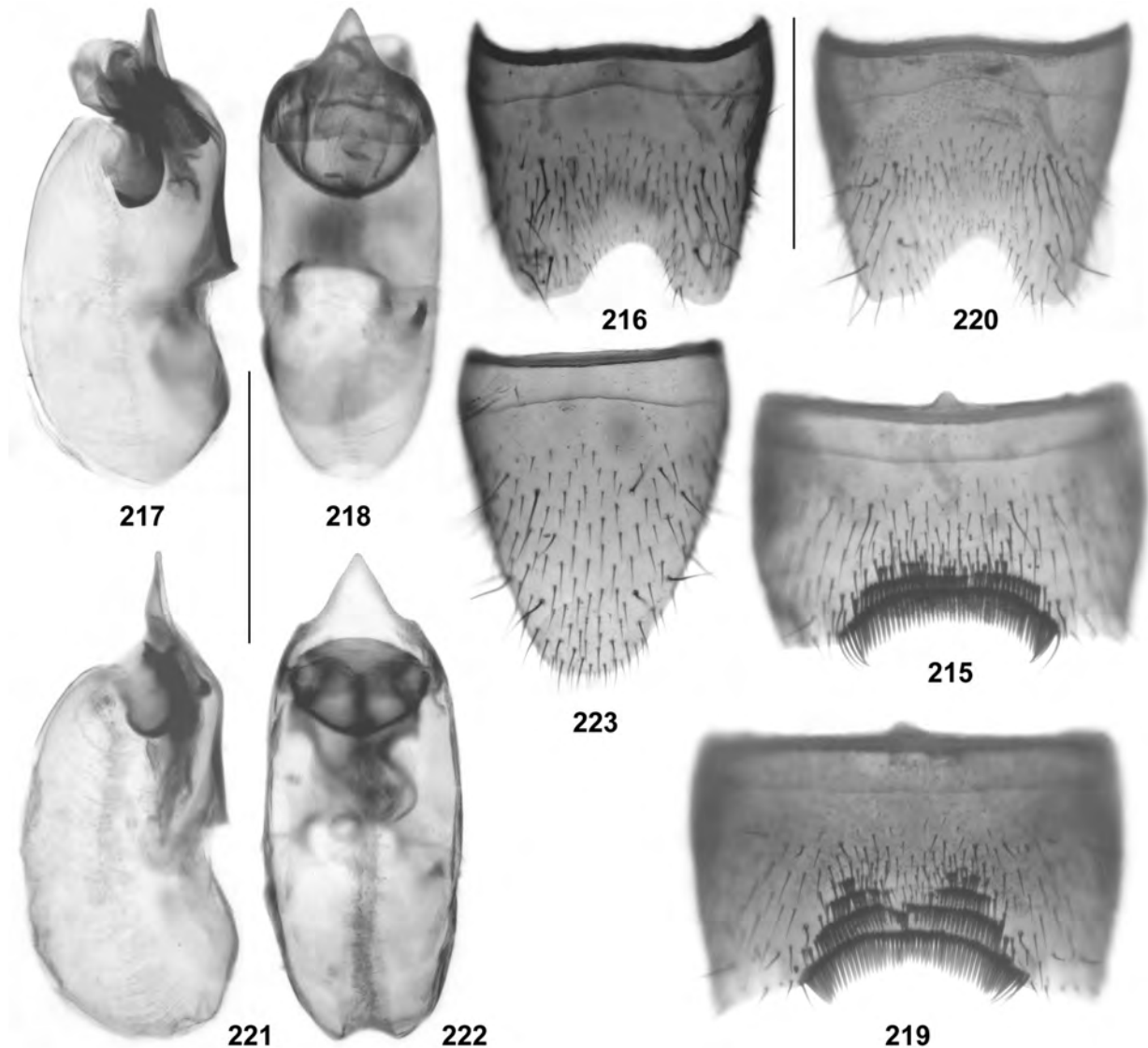
♂: protarsomeres I–IV strongly dilated; metatibia conspicuously flattened; posterior margin of tergite VIII convex in the middle; sternite VII posteriorly impressed and

with two transverse rows each composed of numerous palisade setae, anterior to these rows with additional long black setae, posterior margin distinctly concave (Fig. 215); sternite VIII in the middle impressed and with very sparse pubescence, posterior margin with rather deep and asymmetric excision (Fig. 216); aedeagus 0.85 mm long, with symmetric ventral process of roughly triangular shape and with lamellate dorsal plate (Figs 217–218).

♀: protarsomeres I–IV dilated, but somewhat less so than in male; metatibia noticeably flattened in apical half; tergite VIII with convex posterior margin; sternite VIII oblong, slightly longer than tergite VIII, and convexly produced posteriorly; tergite X slightly longer than tergite IX in the middle.

**Comparative notes.** *Lathrobium pectinatum* is readily distinguished from other small-sized and subanophthalmous Himalayan *Lathrobium* species particularly by the modifications of the male sternites VII and VIII, as well as by the morphology of the aedeagus. Females are separated from those of the syntopic *L. cavicus* by the less strongly flattened metatibiae and by the posteriorly less broadly produced sternite VIII.

**Distribution and natural history.** The species is known from four localities in the Manaslu Himal, in central Nepal (Fig. 214). It has been collected at altitudes of 2800–3500 m, in two localities together with the similar and closely related *L. cavicus*.



**Figs 215–223.** *Lathrobium pectinatum* (215–218) and *L. compressicrus* (219–223). 215, 219: male sternite VII; 216, 220: male sternite VIII; 217, 221: aedeagus in lateral view; 218, 222: aedeagus in ventral view; 223: female sternite VIII. Scale bars: 0.5 mm.

***Lathrobium compressicrus* sp. n.** (Figs 214, 219–223, 273)

**Type material.** Holotype ♂: “C-Nepal, Manaslu massif, Barapokhari Lekh, 23 km NE Besisahar Vill., 28°21’N, 84°33’E, 14.IX.2000, leg. A. Hetzel / 3800–4100 m, sieved from moss and Rhododendron leaf litter / Holotypus ♂ *Lathrobium compressicrus* sp. n. det. V. Assing 2011” (cAss). Paratypes: 2♂♂, 4♀♀: same data as holotype (cFel, cAss).

**Description.** Body length 5.0–6.2 mm; length of forebody 2.1–2.6 mm; males on average larger than females. Eyes composed of fewer than ten ommatidia.

Apical half of mesotibiae and all of metatibiae strongly flattened in both sexes. Other external characters highly similar to those of *L. barbatum* (see the following section).

♂: protarsomeres I–IV moderately dilated; posterior margin of tergite VIII convex; sternite VII strongly transverse and with concave posterior margin, in posterior median portion with four conspicuous transverse rows of pectinate setae, the two anterior rows interrupted in the middle and shorter than the two posterior rows (Fig. 219); sternite VIII with relatively broad and deep posterior excision (Fig. 220); aedeagus stout and approximately 0.9 mm long, ventral process subapically strongly narrowed and apically acute in ventral view (Figs 221–222).

♀: protarsomeres I–IV slightly less dilated than in male; posterior margin of tergite VIII strongly convex in the middle (Fig. 273); sternite VIII strongly narrowed posteriad (Fig. 223); tergite IX not divided in the middle; tergite X distinctly longer than tergite IX in the middle.

**Comparative notes.** *Lathrobium compressicrus* is evidently most closely related to the geographically close *L. pectinatum*, as is suggested by the similarly derived morphology of the metatibiae, the similar morphology of the aedeagus, and the similar modifications of the male sternites VII and VIII, but distinguished from this species by the flattened apical half of the mesotibia, the chaetotaxy of the male sternite VII, and the broader and slightly longer ventral process of the aedeagus.

**Etymology.** The specific epithet is a noun in apposition composed of the Latin adjective *compressus* and the Latin noun *crus* (shin); it refers to the conspicuous shape of the meso- and metatibiae.

**Distribution and natural history.** As can be inferred from the restricted distributions of other *Lathrobium* species in the Himalaya, as well as from the adaptive reductions of the pigmentation, the eyes, and the wings, the species is probably endemic to the Manaslu range, where it was found in the Barapokhari Lekh (Fig. 214). The type specimens were sifted from moss and rhododendron litter at an altitude of 3800–4100 m.

*Lathrobium barbatum* sp. n. (Figs 214, 224–231)

**Type material.** Holotype ♂: “Nepal, Annapurna Mts., above Temang, 3000–3500 m, 28°30'44N, 83°18'37E, 06.V.2007, leg. J. Schmidt / Holotypus ♂ *Lathrobium barbatum* sp. n. det. V. Assing 2011” (NME). Paratypes: 1♂, 2♀♀: same data as holotype (NME, cAss).

**Description.** Body length 4.8–5.5 mm; length of forebody 2.3–2.5 mm. Coloration: body uniformly reddish.

Head (Fig. 224) weakly oblong; punctation coarse and rather sparse; interstices with distinct microreticulation, broader than diameter of punctures in median dorsal portion, on average at least as broad as diameter of punctures in lateral and posterior dorsal portions. Eyes not projecting from lateral contours of head, very small, composed of approximately ten ommatidia.

Pronotum (Fig. 224) approximately 1.25 times as long as broad and as broad as head; punctation similar to that of head, but slightly less coarse; interstices without microsculpture.

Elytra short, 0.55–0.60 times as long as pronotum (Fig. 224); humeral angles weakly marked; punctation shallow and mostly ill-defined; interstices without distinct mi-

crosculpture. Hind wings completely reduced. Mesotibia abruptly dilated in basal half; metatibia modified and with conspicuous sexual dimorphism.

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

♂: protarsomeres I–IV strongly dilated; mesotibia dilated in basal third; metatibia in basal third with pronounced toothlike projection and in apical two thirds with pronounced concavity (Fig. 225); posterior margin of tergite VIII convex; sternite VII posteriorly impressed and with three transverse rows each composed of numerous palisade setae (Fig. 226); sternite VIII in the middle impressed and with very sparse pubescence, posterior margin with rather deep and asymmetric excision (Fig. 227); aedeagus approximately 0.9 mm long, with asymmetric ventral process and with lamellate dorsal plate (Figs 228–229).

♀: protarsomeres I–IV dilated, but less so than in male; modifications of metatibia much less pronounced than in male (Fig. 230); posterior margin of tergite VIII weakly convex; sternite VIII barely longer than broad, posterior margin obtusely and almost triangularly produced (Fig. 231); tergite IX undivided; tergite X slightly longer than tergite IX in the middle.

**Comparative notes.** *Lathrobium barbatum* is readily distinguished from other species of the *L. pectinatum* group by the modifications of the sexually dimorphic metatibiae, the conspicuous chaetotaxy of the male sternite VII, the asymmetric posterior excision of the male sternite VIII, as well as by the asymmetric aedeagus.

**Etymology.** The specific epithet (adjective: bearded) alludes to the conspicuous chaetotaxy of the male sternite VII.

**Distribution and natural history.** The type locality is situated near Temang [28°32'N, 84°19'E] in the northern slopes of the Annapurna range (Fig. 214) at an altitude of 3000–3500 m.

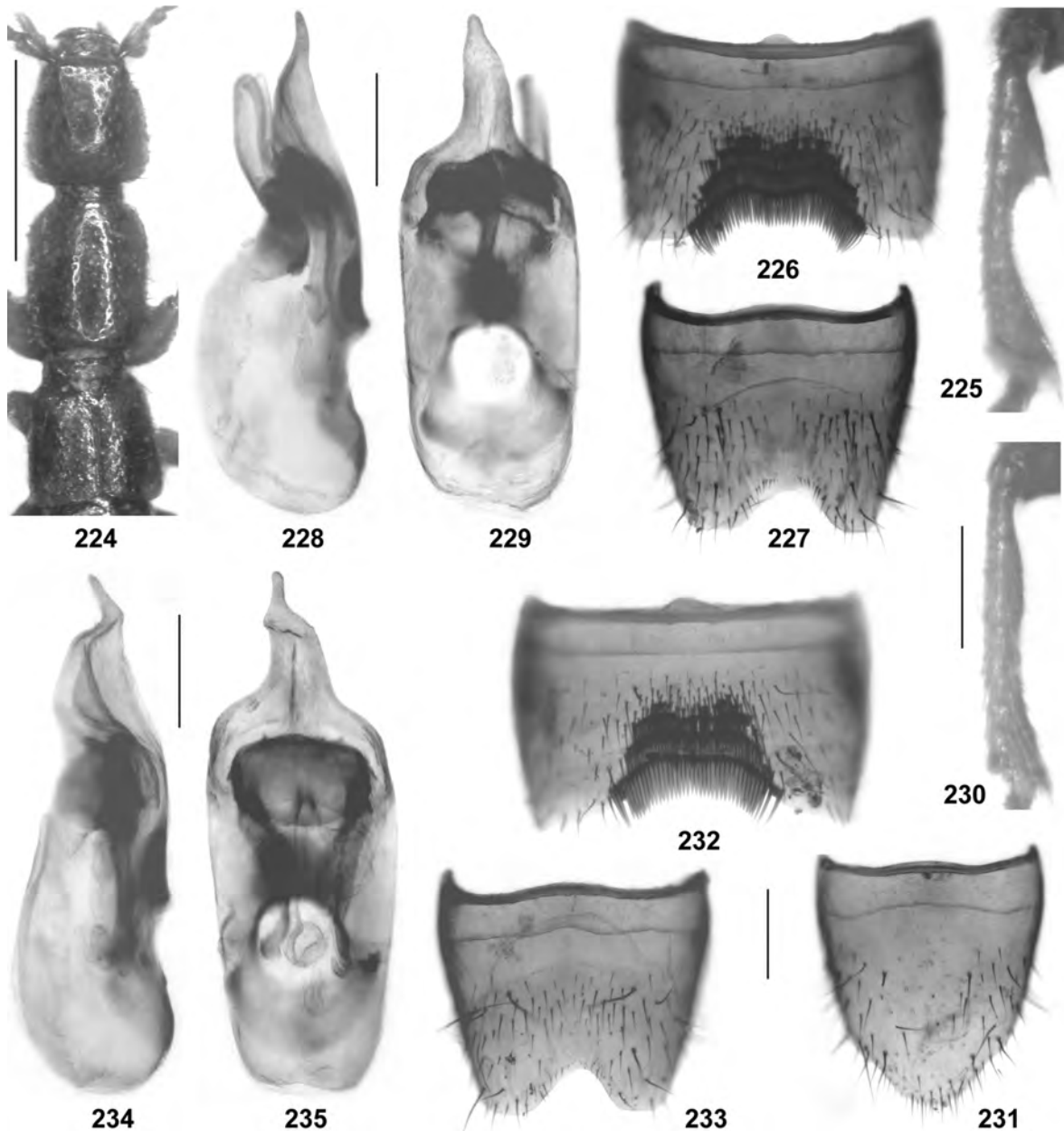
*Lathrobium barbulatum* sp. n. (Figs 214, 232–235)

**Type material.** Holotype ♂: “Nepal Manang Distr., 4 km SE Pisang 3050 m 26.IX.83 Smetana & Löbl / Holotypus ♂ *Lathrobium barbulatum* sp. n. det. V. Assing 2011” (MHNG).

**Description.** Body length 5.2 mm; length of forebody 2.4 mm. External characters as in *L. barbatum*, distinguished only by the male sexual characters:

♂: protarsomeres I–IV strongly dilated; modifications of meso- and metatibia as in *L. barbatum*; posterior mar-





**Figs 224–235.** *Lathrobium barbatum* (224–231) and *L. barbatulum* (232–235). 224: forebody; 225: male metatibia; 226, 232: male sternite VII; 227, 233: male sternite VIII; 228, 234: aedeagus in lateral view; 229, 235: aedeagus in ventral view; 230: female metatibia; 231: female sternite VIII. Scale bars: 224: 1.0 mm; 225–235: 0.2 mm.

gin of tergite VIII convex; sternite VII posteriorly impressed and with three transverse rows each composed of numerous palisade setae (Fig. 232); sternite VIII in the middle impressed and with very sparse pubescence, posterior margin with rather deep and weakly asymmetric excision (Fig. 233); aedeagus approximately 0.95 mm long, with asymmetric ventral process and with lamellate dorsal plate (Figs 234–235).

♀: unknown.

**Comparative notes.** *Lathrobium barbatulum* is distinguished from the highly similar and undoubtedly closely related *L. barbatum* by the shape of the apical row of palisade setae of the male sternite VII, the less strongly asymmetric posterior excision of the male sternite VIII, and by the morphology of the aedeagus (shape of the apex of the ventral process, transversely rectangular dorsal plate). From other species of the *L. pectinatum* group, it is readily distinguished also by the modifications of the male meso- and metatibiae.



**Etymology.** The specific epithet (Latin, adjective derived from *barbula*: small beard) alludes to the conspicuous chaetotaxy of the male sternite VII and to the close relationship with *L. barbatum*.

**Distribution and natural history.** The type locality is situated near Pisang [28°38'N, 84°06'E] in the northern slopes of the Annapurna range (Fig. 214), not far from the type locality of *L. barbatum*, at an altitude of 3050 m.

***Lathrobium cavicrus* sp. n.** (Figs 214, 282–289)

**Type material.** Holotype ♂: “Nepal Manaslu Mts., SW Merne Pokhari, 3200–3300 m, leg. Schmidt, 11.V.2005 / 28°21'41N 84°30'42E, Quellgebiet, mittl. Nebenfluß des Ngadi Khola / Holotypus ♂ *Lathrobium cavicrus* sp. n. det. V. Assing 2012” (NME). Paratypes: 7♂♂, 11♀♀: same data as holotype (NME, cAss); 7♀♀: “Nepal Manaslu Mts., 28°21'36N 84°30'04E, E slope of Ngali Khola Vall., 2800–3000 m, leg. Schmidt, 13.V.2005” (NME).

**Description.** Body length 5.0–6.0 mm; length of forebody 2.3–2.6 mm. Forebody as in Fig. 282.

Externally highly similar to the syntopic *L. pectinatum*; reliably distinguished only by the primary and secondary sexual characters.

♂: protarsomeres I–IV strongly dilated; metafemur enlarged, but without posterior tooth; metatibia with ventral tooth-like projection in basal third and in apical two thirds with pronounced concavity (Fig. 283); posterior margin of tergite VIII weakly convex; sternite VII strongly transverse and with weakly concave posterior margin, in posterior median portion with four conspicuous, transverse, almost straight, and uninterrupted rows of pectinate setae (Fig. 284); sternite VIII with relatively broad, moderately deep, and somewhat asymmetric posterior excision (Fig. 285); aedeagus stout and 0.90–0.95 mm long, ventral process subapically strongly narrowed, apically acute, and almost symmetric in ventral view (Figs 286–287).

♀: protarsomeres I–IV dilated, but somewhat less so than in male; posterior margin of tergite VIII convexly pointed in the middle (Fig. 288); sternite VIII oblong and convexly produced posteriorly (Fig. 289); tergite IX not divided in the middle; tergite X distinctly longer than tergite IX in the middle.

**Comparative notes.** As can be inferred from the similarly derived modifications of the male metatibiae and of the male sternites VII and VIII, as well as from the similar general morphology of the aedeagus, *L. cavicrus* is most closely related to *L. barbatus* and *L. barbatulus* from the Annapurna range. It is distinguished from them by the less distinctly concave posterior margin and the almost

straight transverse rows of pectinate setae of the male sternite VII, as well as by the differently shaped, almost symmetric ventral process of the aedeagus. From the syntopic and externally similar *L. pectinatum*, *L. cavicrus* is distinguished by the male primary and secondary sexual characters, by the more strongly flattened female metatibiae, as well as by the posteriorly more broadly produced female sternite VIII.

**Etymology.** The specific epithet is a noun in apposition composed of the Latin adjective *cavus* (excavate) and the Latin noun *crus* (shin); it refers to the conspicuous shape of the male metatibiae.

**Distribution and natural history.** This species is known only from two adjacent localities in the Manaslu range in central Nepal (Fig. 214), where it was collected at altitudes of 2800–3300 m, together with numerous specimens of *L. pectinatum*.

***Lathrobium franzi* Coiffait, 1975** (Figs 214, 236–241)

*Lathrobium franzi* Coiffait, 1975: 185.

**Type material examined.** Holotype ♂: “Zentral-Nepal, Sept.–Okt. 1971, lg. H. Franz / Wald unterhalb Fulung / Pa 174 [overleaf] / Holotype / *Lathrobium franzi* H. Coiffait 1974 / *Lathrobium franzi* Coiffait, det. V. Assing 2011” (NHMW). Paratypes: see type material of *L. spiculatum*.

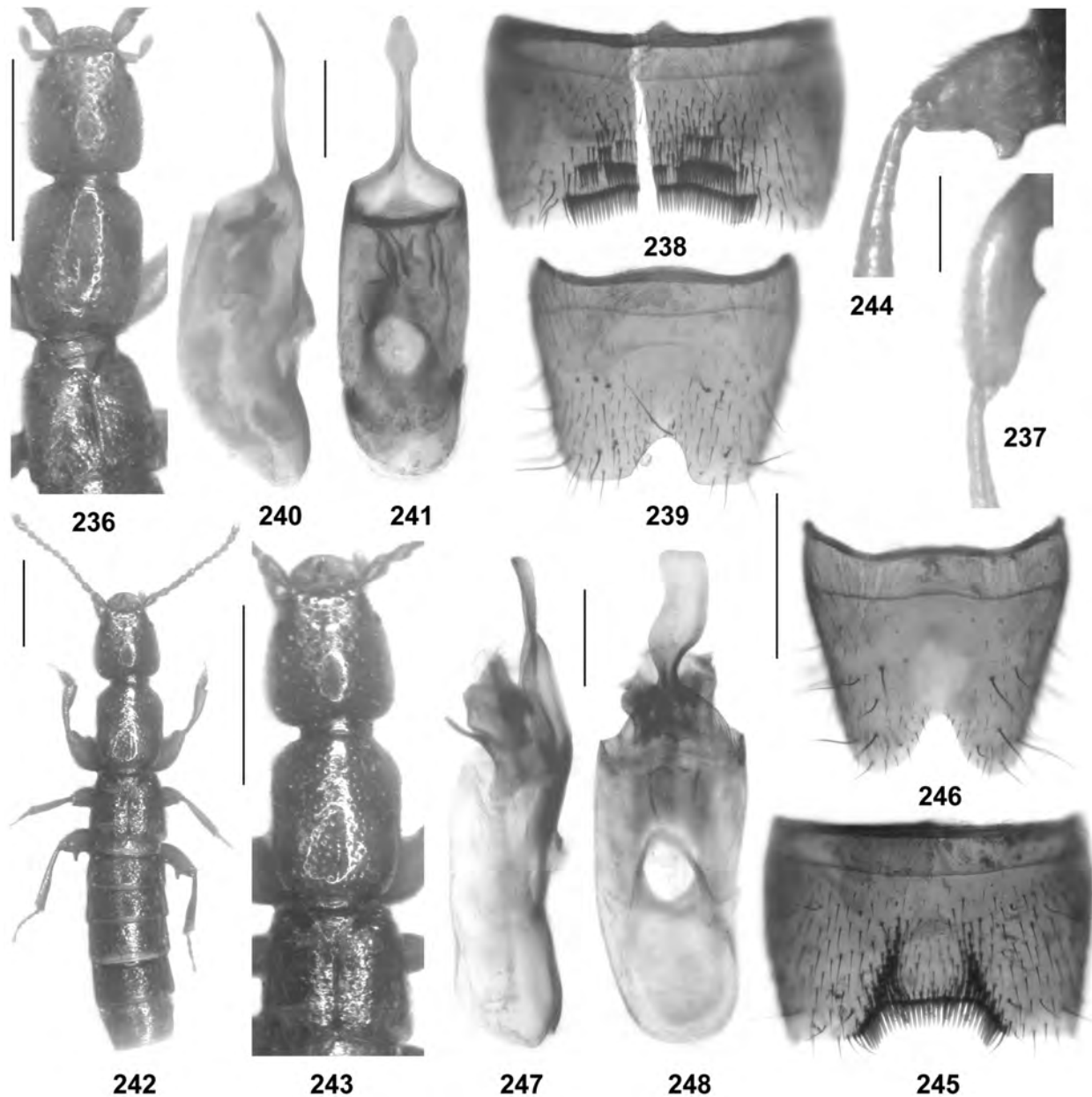
**Comment.** The original description is based on a male holotype from “Fulung, Népal central”, one female paratype from “chemin entre Gosatkunde et le monastère de Fulung”, and three female paratypes from “entre Mulkarka [sic] et Tare Pati” (Coiffait 1975). Two examined female paratypes from between Mulkarka and Thare Pati are not conspecific with the holotype; they refer to *L. spiculatum* (see below).

**Redescription.** Moderately small species, body length 5.7 mm; length of forebody 2.5 mm. Coloration: body uniformly yellowish-red.

Head (Fig. 236) distinctly oblong, approximately 1.1 times as long as broad; punctation coarse and moderately dense; interstices with distinct microreticulation, broader than diameter of punctures in median dorsal portion, on average at least as broad as diameter of punctures in lateral and posterior dorsal portions. Eyes not projecting from lateral contours of head, very small, composed of approximately 10 ommatidia.

Pronotum (Fig. 236) 1.25 times as long as broad and as broad as head; punctation similar to that of head, but slightly less coarse; interstices without microsculpture.

Elytra short, 0.55 times as long as pronotum (Fig. 236); humeral angles weakly marked; punctation shallow and



**Figs 236–248.** *Lathrobium franzi* (236–241) and *L. calcaratum* (242–248). 236, 243: forebody; 237, 244: male metafemur; 238, 245: male sternite VII; 239, 246: male sternite VIII; 240, 247: aedeagus in lateral view; 241, 248: aedeagus in ventral view; 242: habitus. Scale bars: 236, 242–243: 1.0 mm; 238–239, 245–246: 0.5 mm; 237, 240–241, 244, 247–248: 0.2 mm.

ill-defined; interstices without distinct microsculpture. Hind wings completely reduced.

Abdomen broader than elytra; punctuation moderately fine and dense; posterior margin of tergite VII without palisade fringe.

♂: protarsomeres I–IV strongly dilated; metafemur with distinct ventral tooth in the middle (Fig. 237); metatibia slightly sinuate and strongly dilated apically; sternite VII strongly transverse, posteriorly extensively impressed in the middle and with three transverse rows each composed

of numerous palisade setae, posterior margin weakly concave (Fig. 238); sternite VIII moderately transverse, posteriorly with long median impression, with sparse, unmodified pubescence, and with weakly asymmetric, moderately deep posterior excision (Fig. 239); aedeagus 1.0 mm long and of highly distinctive morphology; basal portion large, ventral process long, slender, and apically spear-shaped (Figs 240–241).

♀: not examined.

**Comparative notes.** This species is distinguished from other microphthalous and depigmented representatives of the genus particularly by the modifications of the metafemur and metatibia, by the conspicuous chaetotaxy of the male sternite VII, as well as by the conspicuous shape of the aedeagus.

**Distribution and natural history.** The type locality is situated near the Fulung Monastery, to the northwest of the Gosainkund lakes, to the north-northwest of Kathmandu, in central Nepal (Fig. 214). *Lathrobium ignoratum* was collected in the same locality. According to Franz' diary, the holotype was collected by sifting forest and rhododendron litter on 11.X.1971.

*Lathrobium calcaratum* sp. n. (Figs 214, 242–248)

**Type material.** Holotype ♂: “Kali-Gandaki-Tal, zw. Ghasa u. Lete / Pa 138 [overleaf] / Holotypus ♂ *Lathrobium calcaratum* sp. n., det. V. Assing 2011” (NHMW).

**Description.** Body length 5.7 mm; length of forebody 2.85 mm. Habitus as in Fig. 242. Coloration: body uniformly reddish.

Head (Fig. 243) weakly oblong, 1.04 times as long as broad; punctation coarse and rather sparse, even sparser in median dorsal portion; interstices with distinct, but shallow microreticulation, somewhat glossy, much broader than diameter of punctures in median dorsal portion, on average at least as broad as diameter of punctures in lateral and posterior dorsal portions. Eyes not projecting from lateral contours of head, very small, composed of approximately ten ommatidia.

Pronotum (Fig. 243) 1.25 times as long as broad and as broad as head; punctation similar to that of head; interstices without microsculpture.

Elytra short, 0.57 times as long as pronotum (Fig. 243); humeral angles weakly marked; punctation shallow, sparse, and fine; interstices without distinct microsculpture, much broader than diameter of punctures. Hind wings completely reduced. Metafemur with conspicuous sexual dimorphism.

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

♂: protarsomeres I–IV strongly dilated; metafemur with pronounced, apically rounded ventral tooth in the middle (Fig. 244); metatibia in apical two thirds somewhat dilated; sternite VII distinctly transverse, with pronounced median impression of triangular shape, this impression laterally delimited by a fringe of conspicuously dense pectinate setae, posterior margin in the middle with rather broad and not very deep excavation of trapezoid shape, anterior margin of this excavation with transverse row of nu-

merous pectinate setae (Fig. 245); sternite VIII with distinct median impression without pubescence, posterior excision relatively deep and V-shaped (Fig. 246); aedeagus 1.1 mm long, ventral process strongly asymmetric and of highly distinctive shape (Figs 247–248).

♀: unknown.

**Comparative notes.** As can be inferred from the shape and chaetotaxy of the male sternites VII and VIII, as well as from the similar general morphology of the aedeagus, *L. calcaratum* belongs to the *L. pectinatum* group. The similarly derived modifications (presence of a pronounced ventral tooth in the middle) of the male metafemur, a unique character among Himalayan representatives of the genus, suggests that *L. calcaratum* is most closely related to *L. franzi*. It is additionally separated from all its congeners particularly by the conspicuous shape and chaetotaxy of the male sternite VII, as well as by the shape of the strongly asymmetric ventral process of the aedeagus.

**Etymology.** The specific epithet (Latin, adjective: with spurs) alludes to the tooth-like ventral projections of the male metafemora.

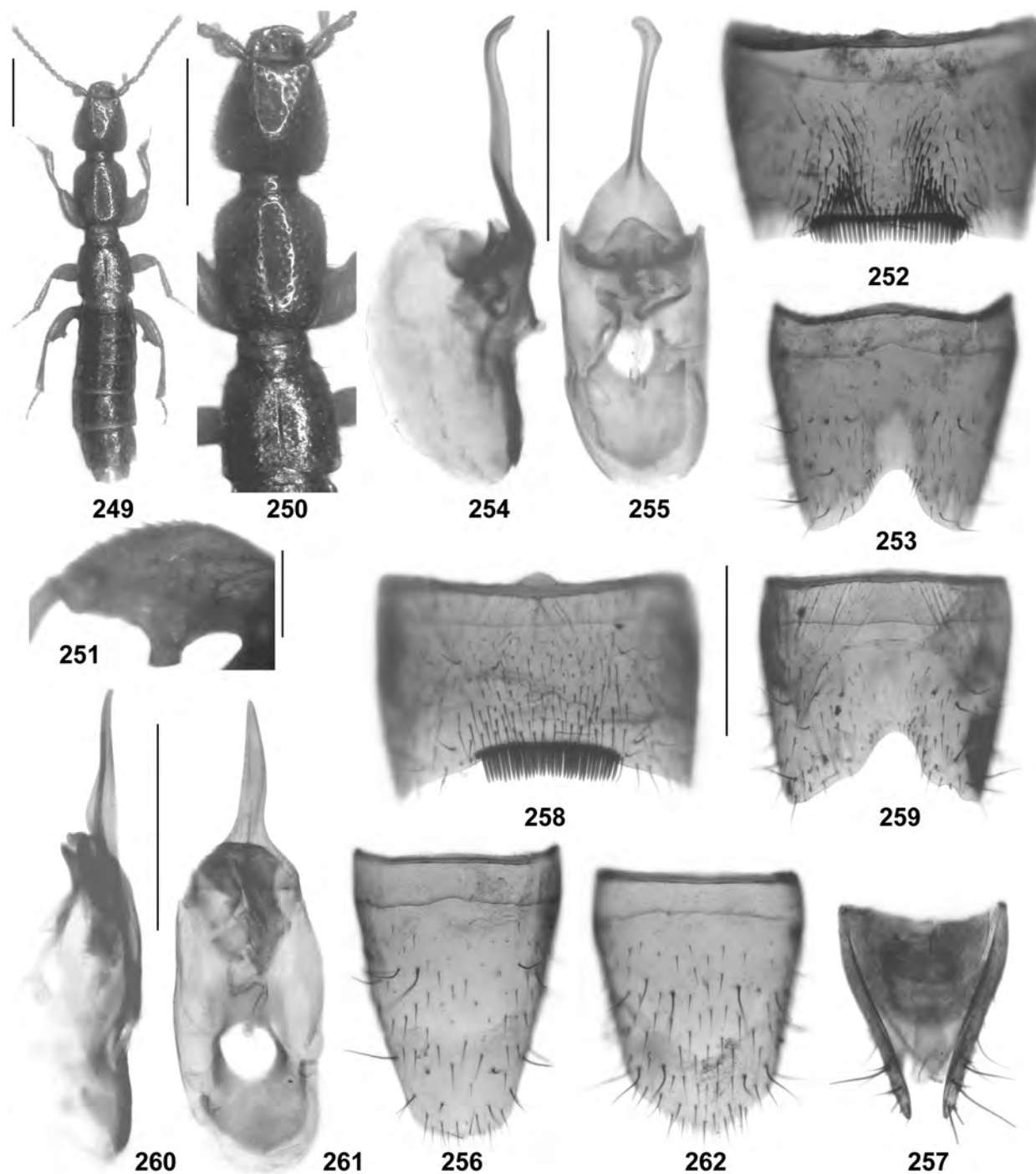
**Distribution and natural history.** The type locality is situated in the Kali-Gandaki valley, the valley separating the Dhaulagiri and Annapurna ranges, between Lete and Ghasa [approximately 28°37'N, 83°38'E] in central Nepal (Fig. 214). According to Franz' diary, the holotype was collected in a stand of alder, in the vicinity of a rhododendron forest, on 26.IX.1971.

*Lathrobium privum* sp. n. (Figs 214, 249–257)

**Type material.** Holotype ♂: “581 Nepal: Jumla Distr., Khali-Lagna pass, 3500 m, 16.–17.VI.1998, leg. W. Schawaller / Holotypus ♂ *Lathrobium privum* sp. n., det. V. Assing 2011” (SMNS). Paratypes: 1♀: same data as holotype (cAss).

**Description.** Body length 5.8–6.2 mm; length of forebody 2.7–3.1 mm. Habitus and forebody as in Figs 249–250. Coloration: body uniformly reddish. Posterior margin of abdominal tergite VIII distinctly convexly produced in the middle. Other external characters as in *L. calcaratum*.

♂: protarsomeres I–IV strongly dilated; metafemur strongly dilated in the middle and with pronounced, apically broadly truncate ventral tooth in the middle (Fig. 251); metatibia somewhat compressed, gradually dilated apically; sternite VII distinctly transverse, with shallow median impression, on either side of this impression with a cluster of dense dark setae posteriorly, posterior margin weakly concave and with transverse row of approximate-



**Figs 249–262.** *Lathrobium privum* (249–257) and *L. cassagnai* (258–262). 249: habitus; 250: forebody; 251: male metafemur; 252, 258: male sternite VII; 253, 259: male sternite VIII; 254, 260: aedeagus in lateral view; 255, 261: aedeagus in ventral view; 256, 262: female sternite VIII; 257: female abdominal segments IX and X in dorsal view. Scale bars: 249–250: 1.0 mm; 252–262: 0.5 mm; 251: 0.2 mm.

ly 30 pectinate setae (Fig. 252); sternite VIII with distinct median impression without pubescence posteriorly, posterior excision relatively deep and somewhat asymmetric

(Fig. 253); aedeagus 1.15 mm long, ventral process long and thin, somewhat shaped like a golf club (Figs 254–255).



♀: protarsomeres distinctly dilated, but less so than in male; sternite VIII much longer than broad and longer than tergite VIII, distinctly tapering posteriad (Fig. 256); tergite IX undivided anteriorly; tergite X reduced, apparently absent (Fig. 257).

**Comparative notes.** As can be inferred from the shape and chaetotaxy of the male sternites VII and VIII, as well as from the similar general morphology of the aedeagus, *L. privum* belongs to the *L. pectinatum* group. The similarly derived modifications (presence of a pronounced ventral tooth in the middle) of the male metafemur suggests that *L. privum* is most closely related to *L. franzi* and *L. calcaratum*. It is distinguished from these species particularly by the strongly dilated male metafemur, the shape of the tooth on the male metafemur, by the modifications of the male sternites VII and VIII, as well as by the shape of the ventral process of the aedeagus, which somewhat resembles a golf club.

**Etymology.** The specific epithet (Latin, adjective: free of) alludes to the reduced female tergite X.

**Distribution and natural history.** The type locality is situated in Jumla district, western Nepal (Fig. 214), at an altitude of 3500 m.

*Lathrobium cassagnai* Coiffait, 1982 (Figs 214, 258–262)

*Lathrobium cassagnai* Coiffait, 1982b: 287 ff.

**Type material examined.** Holotype ♂: “Nepal X.81, Kalingchok, 3000 m PC / Holotype / *Lathrobium cassagnai* H. Coiffait 1982 / *Lathrobium cassagnai* Coiffait, det. V. Assing 2011” (MNHN).

**Comment.** The original description is based on a unique male holotype from “Népal, Massif du Kalingchok, près de Barabise [sic]” (Coiffait 1982b).

**Additional material examined.** Nepal: 1♀, Dolakha district, SW Kalinchok, 3100 m, 19.–23.IV.1995, leg. Martens & Schawaller (SMNS).

**Redescription.** Moderately small species, body length 4.8–5.3 mm; length of forebody 2.2–2.3 mm. Coloration: body uniformly yellowish-red.

Head oblong, almost 1.1 times as long as broad; punctation coarse and rather sparse, even sparser in median dorsal portion; interstices with distinct microreticulation, broader than diameter of punctures. Eyes not projecting from lateral contours of head, very small, composed of approximately eight ommatidia.

Pronotum 1.28 times as long as broad and as broad as head; punctation similar to that of head, but slightly denser; interstices without microsculpture, except for some shallow traces in posterior half.

Elytra short, 0.58 times as long as pronotum; humeral angles weakly marked; punctation shallow and ill-defined; interstices without distinct microsculpture. Hind wings completely reduced.

Abdomen broader than elytra; punctation moderately fine and dense; posterior margin of tergite VII without palisade fringe.

♂: protarsomeres I–IV strongly dilated; hind legs without modifications, except for the slightly compressed metatibia; sternite VII strongly transverse, with shallow median impression posteriorly, posterior margin broadly and weakly concave, in the middle with one transverse row of numerous palisade setae (Fig. 258); sternite VIII weakly transverse, posteriorly with shallow median impression without pubescence, posterior excision rather deep and somewhat asymmetric (Fig. 259); aedeagus rather large in relation to body size, 1.2 mm long, ventral process straight, long, and spine-shaped (Figs 260–261).

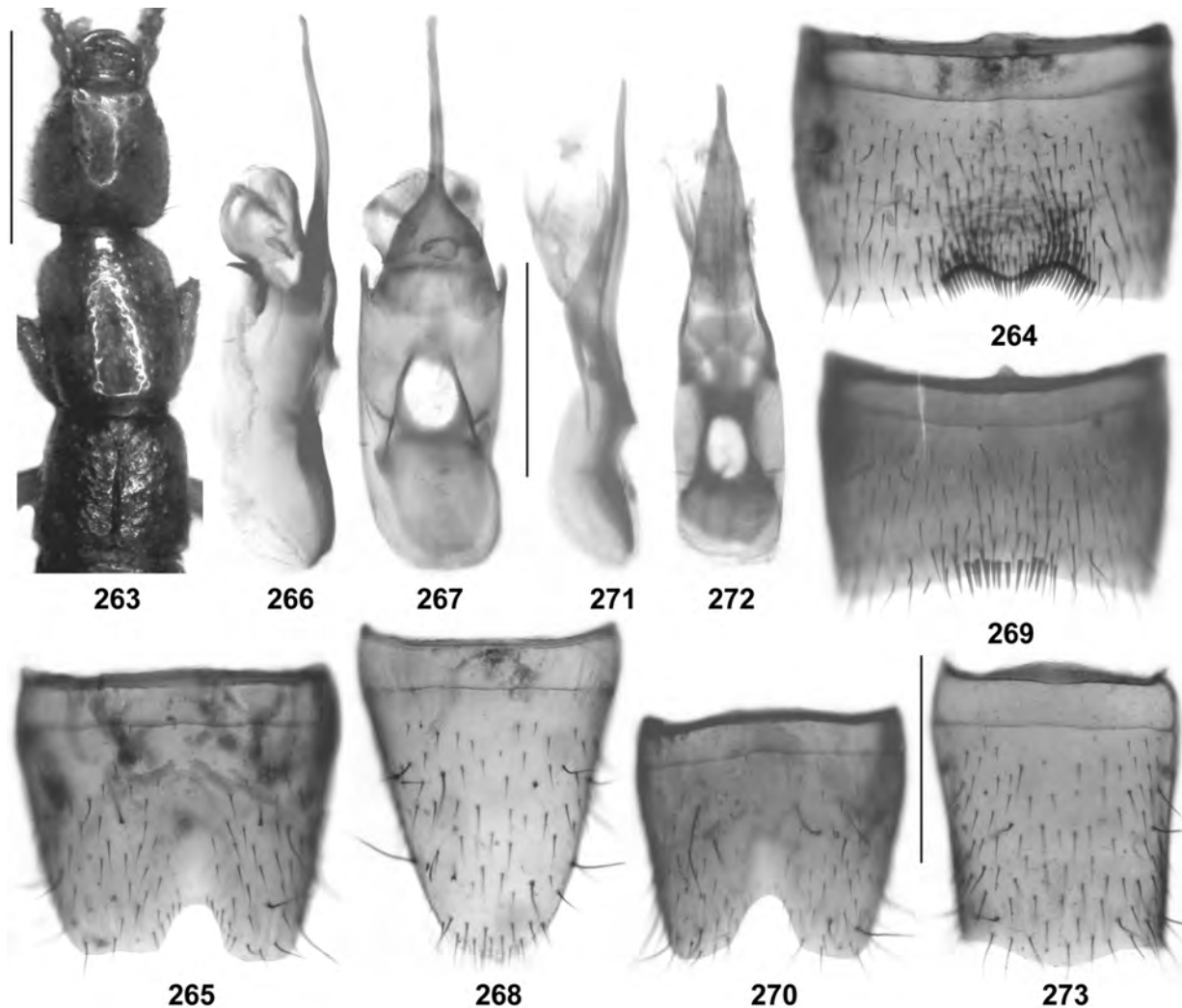
♀: protarsomeres I–IV moderately dilated; posterior margin of tergite VIII very obtusely angled in the middle; sternite VIII weakly oblong and with broadly convex posterior margin (Fig. 262); tergite IX not divided in the middle; tergite X slightly longer than tergite IX in the middle.

**Comparative notes.** This species is distinguished from other representatives of the *L. pectinatum* group particularly by the modifications of the male sternite VII and by the distinctive shape of the aedeagus.

**Distribution and natural history.** The species is currently known only from the type locality, the Kalinchok, a mountain some 13 km to the east of Barabise and almost 70 km to east-northeast of Kathmandu in central Nepal (Fig. 214). Apart from the altitude (3000 m), bionomic data are not available.

*Lathrobium fodens* sp. n. (Figs 214, 263–268)

**Type material.** Holotype ♂: “Nepal, Prov. Karnali, D: Jumla, Churta, E Jagdula valley, 3800–4100 m NN, 03.VI.2007 / 29°09'49"N, 82°31'09"E, alpine mats, leg. M. Hartmann / Holotypus ♂ *Lathrobium fodens* sp. n., det. V. Assing 2011” (NME). Paratypes: 1♂: same data as holotype (cAss); 1♂, 4♀♀: “Nepal, P: Karnali, D: Jumla, Churta, E below Mori La, 3550–3800 m NN, 01.VI.2007 / 29°09'58"N, 82°29'12"E, leg. M. Hartmann, mixed pine forest” (NME, cAss).



**Figs 263–273.** *Lathrobium fodens* (263–268), *L. attritum* (269–272), and *L. compressicrus* (273). 263: forebody; 264, 269: male sternite VII; 265, 270: male sternite VIII; 266, 271: aedeagus in lateral view; 267, 272: aedeagus in ventral view; 268: female sternite VIII; 273: female tergite VIII. Scale bars: 263: 1.0 mm; 264–273: 0.5 mm.

**Description.** Body length 5–6 mm; length of forebody 2.4–2.7 mm. Coloration: body more or less uniformly reddish.

Head (Fig. 263) approximately as long as broad or weakly oblong; punctation coarse and rather sparse; interstices with distinct microreticulation, much broader than diameter of punctures in median dorsal portion. Eyes not projecting from lateral contours of head, very small, composed of fewer than 10 ommatidia.

Pronotum (Fig. 263) approximately 1.25 times as long as broad and as broad as head; punctation similar to that of head; midline broadly impunctate; interstices without microsculpture.

Elytra short, approximately 0.6 times as long as pronotum (Fig. 263); humeral angles weakly marked; punctation shallow and rather ill-defined; interstices without dis-

tinct microsculpture. Hind wings completely reduced. Metatibia slightly compressed.

Abdomen broader than elytra; punctation shallow and moderately dense; posterior margin of tergite VII without palisade fringe.

♂: protarsomeres I–IV strongly dilated; posterior margin of tergite VIII truncate; sternite VII weakly impressed, posteriorly with a pair of clusters of blackish setae, posterior margin bisinuate in the middle and with fringe of numerous black palisade setae (Fig. 264); sternite VIII weakly transverse, median impression without setae, posterior excision somewhat U-shaped and in somewhat asymmetric position (Fig. 265); aedeagus 1.2–1.3 mm long; ventral process conspicuously long and thin; dorsal plate broad and lamellate (Figs 266–267).

♀: protarsomeres I–IV dilated, but somewhat less so than in male; posterior margin of tergite VIII weakly convex in the middle; sternite VIII oblong and convexly produced posteriorly (Fig. 268); tergite IX not divided in the middle; tergite X slightly longer than tergite IX in the middle.

**Comparative notes.** Among the species of the *L. pectinatum* group, *L. fodens* is particularly characterised by the conspicuously long and thin ventral process of the aedeagus, as well as by the shape and chaetotaxy of the male sternites VII and VIII.

**Etymology.** The specific epithet is the present participle of the Latin verb *fodere* (to sting) and refers to the conspicuous shape of the ventral process of the aedeagus.

**Distribution and natural history.** The species was collected in two localities in Karnali province, Jumla district, West Nepal (Fig. 214), at altitudes of 3550–4100 m.

*Lathrobium attritum* sp. n. (Figs 214, 269–272)

**Type material.** Holotype ♂: “Nepal (Prov. Bagmati), Yardang ridge NE Barabise, 3250 m, 5.V.81, Löbl & Smetana / Holotypus ♂ *Lathrobium attritum* sp. n., det. V. Assing 2012” (cAss).

**Description.** Body length 4.6 mm; length of forebody 2.2 mm. Coloration: body pale reddish. External characters as in *L. cassagnai*.

♂: protarsomeres I–IV moderately dilated; hind legs without modifications; sternite VII rather strongly transverse, with shallow median impression posteriorly, posterior margin broadly and weakly concave, in the middle with one transverse row of approximately 8 stout, but not very dense palisade setae (Fig. 269); sternite VIII weakly transverse, posteriorly with shallow median impression without pubescence, posterior excision weakly asymmetric and rather deep (Fig. 270); aedeagus 1.15 mm long, slender, with long, acute, and in lateral view almost straight ventral process (Figs 271–272).

♀: unknown.

**Comparative notes.** Based on the modifications of the male sternite VIII and on the similar general morphology of the aedeagus, *L. attritum* is undoubtedly most closely related to the geographically close *L. cassagnai*, from which it is distinguished particularly by the less numerous pectinate setae at the posterior margin of the male sternite VII, as well as by the shape of the aedeagus.

**Etymology.** The specific epithet (Latin, adjective: rubbed off, worn out) refers to the relatively sparse pectinate setae at the posterior margin of the male sternite VIII.

**Distribution and natural history.** The type locality is situated in the Yardang ridge to the west of Barabise, Bagmati province, central Nepal (Fig. 214). The holotype was collected at an altitude of 3250 m.

## UNIDENTIFIED AND UNDESCRIBED SPECIES

### *Lathrobium* sp. 1

**Material examined.** Nepal: 1♀, Manaslu, Barapokhari Lekh, 23 km NE Besisahar, 28°21'N; 84°33'E, 3800–4100 m, sifted from moss and rhododendron litter, 14.IX.2000, leg. Hetzel (cAss).

**Comment.** The above female was collected in the same locality as the types of *L. compressicrus*. It is smaller than *L. compressicrus* and does not have flattened femora and tibiae.

### *Lathrobium* sp. 2

**Material examined.** Nepal: 2♀♀: “Kali-Gandaki-Tal, zw. Ghasa u. Lete / Pa 138 [overleaf]” (NHMW, cAss).

**Comment.** This species is characterised by conspicuously small body size (length of forebody: 1.7–1.8 mm; much smaller than the syntopic *L. calcaratum*), a uniformly pale-reddish body, and eyes composed of fewer than ten ommatidia.

### *Lathrobium* sp. 3

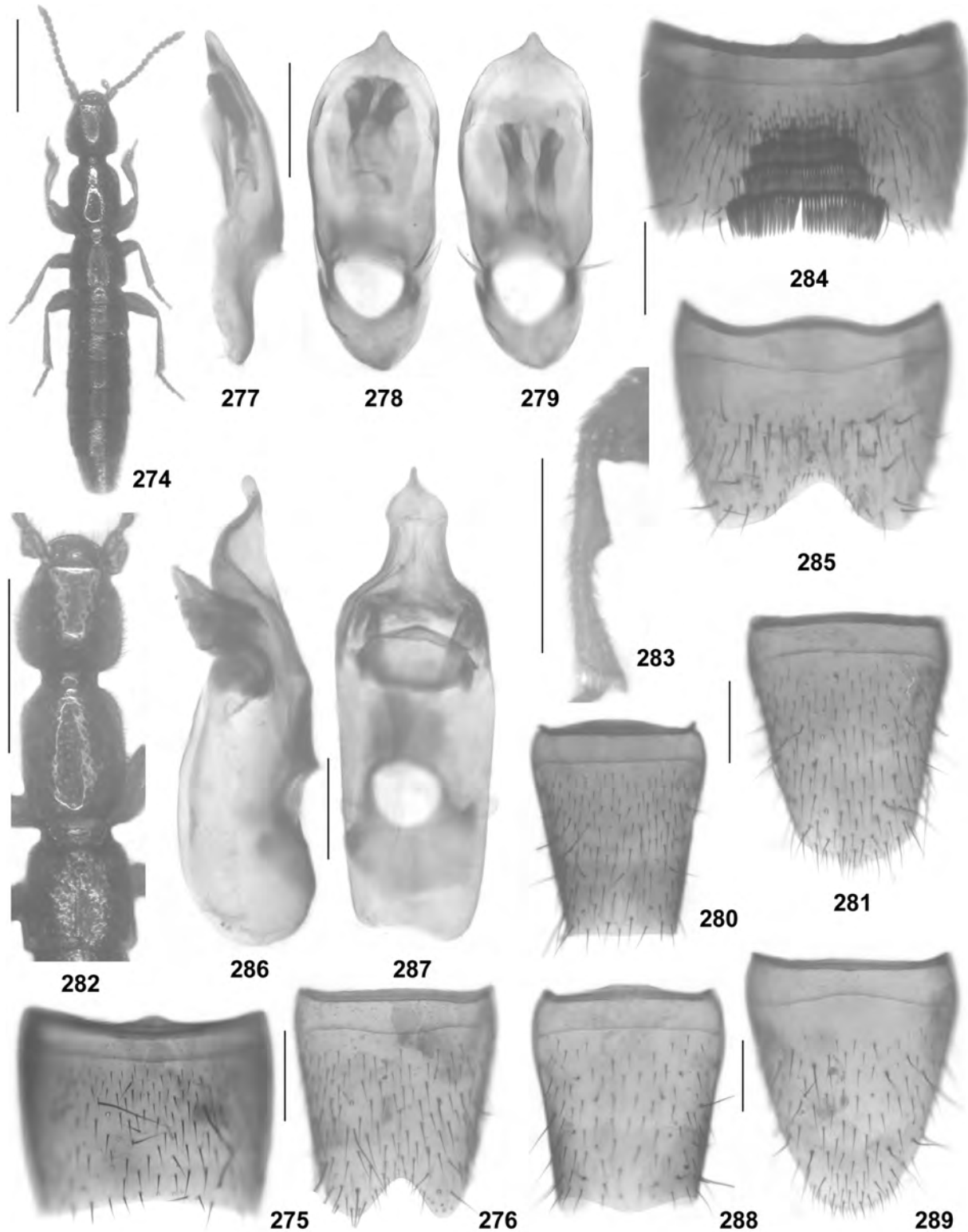
**Material examined.** Nepal: 1♀: “576 Nepal: Mugu Distr., SW Rara Lake, 3200 m, 12.VI.1998, leg. W. Schawaller” (SMNS).

**Comment.** This species is characterised by small body size (length of forebody: 2.9 mm), a uniformly pale-reddish body, and eyes composed of fewer than ten ommatidia.

### *Lathrobium* sp. 4

**Material examined.** Nepal: 1♀: “628 Nepal: Dolakha Distr., E Ting Sang La, 3100 m, 12.–13.VI.2000, leg. W. Schawaller” (SMNS).

**Comment.** This species is characterised by small body size (length of forebody: 2.2 mm), a uniformly pale-reddish body, and eyes composed of fewer than ten ommatidia.



**Figs 274–289.** *Lathrobium planissimum* (274–281) and *L. cavicus* (282–289). 274: habitus; 275, 284: male sternite VII; 276, 285: male sternite VIII; 277, 286: aedeagus in lateral view; 278–279, 287: aedeagus in ventral view; 280, 288: female tergite VI–II; 281, 289: female sternite VIII; 283: male metatibia. Scale bars: 274, 282: 1.0 mm; 283: 0.5 mm; 275–281, 284–289: 0.2 mm.



***Lathrobium* sp. 5**

**Material examined. Nepal:** 1♀: “215 Dhading Dist., Ankhu Khola Tal, Ankhu Sangi, 650 m, Kulturland, Waldreste, 24.–25. Jul 83 Martens & Schawaller “ (SMNS).

**Comment.** This species is characterised by small body size (length of forebody: 2.5 mm) and small eyes composed of fewer than ten ommatidia. The teneral specimen has evidently been subject to post-mortem darkening.

***Lathrobium* sp. 6**

**Material examined. Nepal:** 1♂ [teneral; dissected prior to present study; aedeagus damaged]: “282 Taplejung Dist. S. Gunsa, 3900–3600 m, Abies/Rhododend., 10 Sep 83 Martens & Daams l. “ (SMNS).

**Comment.** This species is characterised by small body size (length of forebody: 2.9 mm) and moderately small eyes. The teneral specimen has evidently been subject to post-mortem darkening.

***Lathrobium* sp. 7**

**Material examined. Nepal:** 2♀♀: “Nepal-Expeditionen Jochen Martens / 361 Taplejung Distr., upper Simbua Khola Valley, near Tseram, 3250–3350 m, mature Abies-Rho-

dodendron forest, 10–15 May 88 J. Martens & W. Schawaller leg.” (SMNS, cAss).

**Comment.** This species belongs to the *L. discissum* group. It is distinguished from *L. discissum* by even larger size.

***Lathrobium* sp. 8**

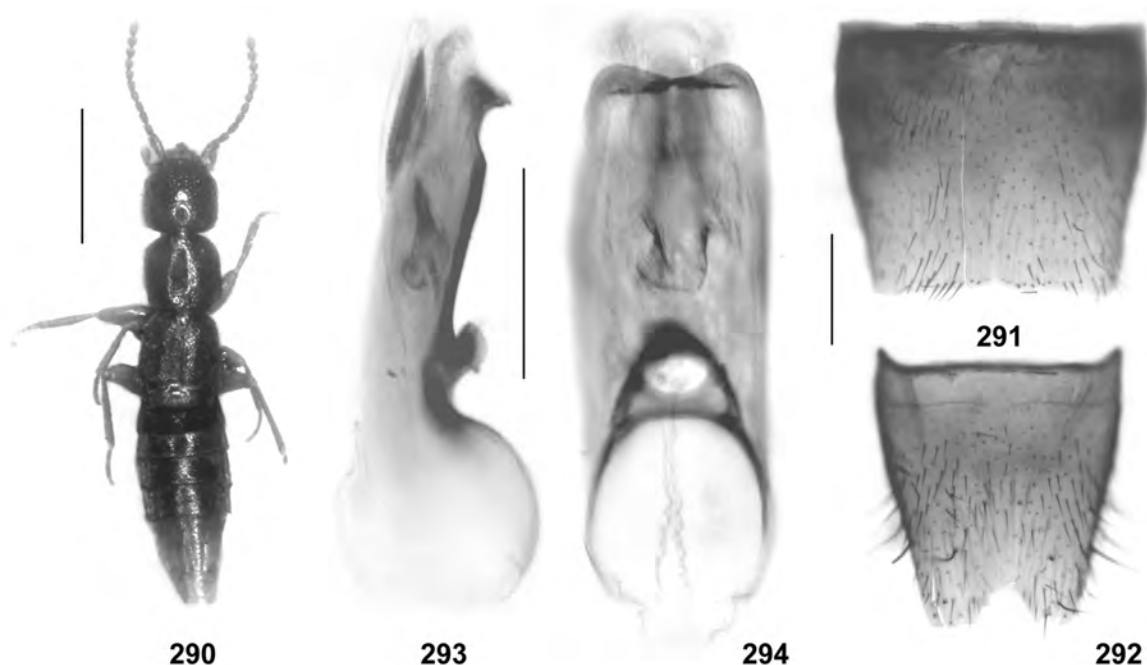
**Material examined. Nepal:** 2♀♀: “Nepal Khandbari Dis., Goru Dzire Dara, W slope 3600 m, 9.IV.84 Smetana & Löbl” (SMNS, cAss). 3♀♀: “Nepal (Prov. Bagmati), below Thare Pati, 3500 m, 12.IV.81, Löbl & Smetana” (MHNG, cAss).

**Comment.** This species belongs to the *L. nepalense* group. It is distinguished from most species of this group by its small size (length of forebody: 2.5–2.7 mm).

***Lathrobium* sp. 9**

**Material examined. Nepal:** 4♀♀: “Nepal (Prov. Bagmati), below Thare Pati, 3500 m, 12.IV.81, Löbl & Smetana” (MHNG, cSme, cAss).

**Comment.** This species is highly similar to, and was found together with *L. spiculatum*. It is distinguished from this species by on average slightly larger body size (length of forebody: 2.3–2.6 mm), a more oblong head and pronot-



**Figs 290–294.** *Medon jaljalensis*. 290: habitus; 291: male sternite VII; 292: male sternite VIII; 293: aedeagus in lateral view; 294: aedeagus in ventral view. Scale bars: 290: 1.0 mm; 291–294: 0.2 mm.



**295****296****297**

**Figs 295–297.** *Lathrobium* habitats in the Rolwaling Himal; photos: Andreas Kleeberg. **295:** type locality of *L. excisum* NE Daldung La pass, 3800 m; **296:** above Simigaon, 2700–2800 m (26 specimens of *L. kleebergi*); **297:** W Daldung La pass, 3300 m (28 specimens of *L. kleebergi*).



tum, larger eyes (composed of approximately 20 ommatidia), coarser punctation of the forebody, and by a broader, less oblong, and posteriorly less strongly convex female sternite VIII.

### SPECIES EXCLUDED FROM *LATHROBIUM*

In the course of the revision it was discovered that two species from Nepal that had originally been assigned to *Lathrobium*, *L. jaljalense* Coiffait, 1984 and *L. perpusillum* Coiffait, 1982, in fact belong to genera of the subtribe Medonina. The latter species is dealt with by Assing (2012d).

***Medon jaljalensis* (Coiffait, 1984), comb. n.** (Figs 290–294)

*Lathrobium jaljalensis* [sic] Coiffait, 1984: 382.

**Type material examined.** Holotype ♂: “Nepal XI.78 / Jaljale Himal, 2950 m PC31 / Holotype / *Lathrobium jaljalensis* H. Coiffait / *Medon jaljalensis* (Coiffait), det. V. Assing 2011” (MNHNP). Paratype ♂: “Nepal XI.78.3 / Jaljale Himal, 2920 m PC-3 / Paratype / *Lathrobium jaljalensis* H. Coiffait / *Medon jaljalensis* (Coiffait), det. V. Assing 2011” (MNHNP).

**Comment.** The original description is based on a male holotype and three paratypes, a male and two females, from “Népal oriental, Jaljale Himal 2950 m” deposited in the Coiffait collection (Coiffait 1984). An examination of the holotype and the male paratype revealed that the species belongs to the genus *Medon* Stephens, 1833.

**Redescription.** Body length 3.7–3.8 mm; length of forebody 2.0 mm. Habitus as in Fig. 290. Coloration: forebody uniformly reddish to dark-reddish; abdomen uniformly reddish to dark-brown with reddish apex; legs and antennae yellowish to reddish-yellow.

Head almost as wide as long; lateral margins behind eyes straight and subparallel; punctation moderately coarse and moderately sparse, somewhat sparser in median dorsal portion than elsewhere; interstices mostly broader than diameter of punctures and without microsculpture. Eyes moderately large and weakly convex, approximately 0.7 times as long as postocular region in dorsal view.

Pronotum approximately as long as broad and slightly broader than head; punctation similar to that of head, but somewhat denser; interstices without distinct microsculpture, glossy.

Elytra short, approximately 0.7 times as long as pronotum, slightly widened posteriorly; humeral angles weakly marked; punctation fine, shallow, and dense; interstices without distinct microsculpture. Hind wings completely reduced.

Abdomen broader than elytra; punctation very fine and moderately dense, barely noticeable in the pronounced microsculpture; posterior margin of tergite VII without palisade fringe.

♂: sternite VII weakly transverse, posterior margin with indistinct excision in the middle, on either side of middle with a row of approximately eight longer marginal setae (Fig. 291); sternite VIII oblong, with moderately deep posterior excision (Fig. 292); aedeagus approximately 0.5 mm long, shaped as in Figs 293–294.

**Comparative notes.** As can be inferred from the shape and chaetotaxy of the male sternite VII and from the morphology of the aedeagus, this species undoubtedly belongs to the *Medon apicalis* group. It is distinguished from other species of this group by the male sexual characters, from most of them additionally by the short elytra. For illustrations of the micropterous representatives of the *M. apicalis* group known from Nepal see Assing (2010a).

**Distribution and natural history.** *Medon jaljalensis* is currently known only from the type locality in eastern Nepal, where it was collected at an altitude of almost 3000 m. The reduced wings, the absence of a palisade fringe at the posterior margin of the abdominal tergite VII, and the absence of additional records suggest that the species has a restricted distribution.

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