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## A revision of the microphthalmous *Lathrobium* GRAVENHORST of Turkey, with descriptions of two new *Lathrobium* species from Italy and Albania (Insecta: Coleoptera: Staphylinidae)

V. Assing\*

### Abstract

Four species of *Lathrobium* GRAVENHORST (Staphylinidae: Paederinae) are described, illustrated, and distinguished from related congeners: *L. roessleri* sp.n. (northern Italy), *L. occultum* sp.n. (Albania), *L. paphlagonicum* sp.n. (northern Anatolia), and *L. uncinatum* sp.n. (northern Anatolia). *Lathrobium bodemeyeri* BERNHAUER, 1903 (= *L. besucheti* BORDONI, 1980, syn.n.) and *L. brignolii* BORDONI, 1980, whose male sexual characters were previously unknown, are redescribed; the male genitalia and female terminalia are figured. A lectotype is designated for *L. bodemeyeri* BERNHAUER. The microphthalmous *Lathrobium* species of Turkey are keyed and their distributions are mapped. *Lathrobium bodemeyeri* is for the first time recorded from Greece.

**Key words:** Coleoptera, Staphylinidae, Paederinae, *Lathrobium*, new species, new synonymy, taxonomy, Western Palaearctic region, Turkey, Albania, Italy, Greece, distribution.

### Zusammenfassung

Vier Arten der Gattung *Lathrobium* GRAVENHORST (Staphylinidae: Paederinae) werden beschrieben und von verwandten Arten unterschieden: *L. roessleri* sp.n. (Norditalien), *L. occultum* sp.n. (Albanien), *L. paphlagonicum* sp.n. (Nordanatolien) und *L. uncinatum* sp.n. (Nordanatolien). *Lathrobium bodemeyeri* BERNHAUER, 1903 (= *L. besucheti* BORDONI, 1983, syn.n.) und *L. brignolii* BORDONI, 1983, dessen männliche Sexualmerkmale bisher unbekannt waren, werden redeskribiert. Die männlichen Genitalien und die weiblichen Terminalia der untersuchten Arten werden abgebildet. Für *L. bodemeyeri* BERNHAUER wird ein Lectotypus designiert. Für die microphthalmen *Lathrobium*-Arten der Türkei werden Verbreitungskarten und eine Bestimmungstabelle erstellt. *Lathrobium bodemeyeri* wird erstmals aus Griechenland nachgewiesen.

### Introduction

The genus *Lathrobium* GRAVENHORST is relatively well-studied, especially in the Western Palaearctic region, although it comprises numerous species (see e. g. COIFFAIT 1982). This is mainly due to the fact that it has attracted the attention of many taxonomists, probably because the species are mostly of intermediate to relatively large size, because of the morphological diversity of the aedeagus, which facilitates an identification, and because many species have restricted distributions. More recent discoveries of new taxa in the Western Palaearctic region are almost exclusively confined to microphthalmous and subanophthalmous species, which are rarely collected, since they are more or less endemic and live in deeper humus layers or other subterranean habitats.

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A catalogue of the European representatives of this group of species was given by ASSING & SCHÜLKE (2000), but some additional taxa have been discovered in the meantime (ASSING & WUNDERLE 2001, NONVEILLER et PAVIČEVIĆ 2001). So far, three species of microphthalmous *Lathrobium* have been described from northern Anatolia: *L. bode-meyeri* BERNHAUER, 1903, *L. besucheti* BORDONI, 1980, and *L. brignolii* BORDONI, 1980.

European and Anatolian material recently made available to me from various museums and private collections contained several species new to science, among them a remarkable *Lathrobium* with fully developed eyes from northern Italy, which are described below. A subsequent study of types also revealed a new synonymy. Several new records of *L. bernhaueri* BERNHAUER show that, unlike most other microphthalmous congeners, this species is relatively widespread.

In accordance with the recent trend among staphylinid taxonomists to regard the former subgenera (*Platydomene* GANGLBAUER, *Lobrathium* MULSANT & REY, *Tetartopeus* CZWALINA, etc.) as distinct genera, the genus *Lathrobium* is here treated in the restricted sense (i. e. comprises only the species of the former subgenus *Lathrobium* s.str.).

### Material and measurements

Type specimens and additional material from the following institutions and collections were examined:

MHNG	Muséum d'Histoire Naturelle, Genève (Giulio Cuccodoro)
NHMW	Naturhistorisches Museum Wien (Harald Schillhammer)
cAss	author's private collection
cBor	private collection Arnaldo Bordoni, Firenze
cKor	private collection Horst Korge, Berlin
cRoe	private collection Gerhard Rößler, Wunsiedel (to be deposited in the Zoologische Staatssammlung München)
cSch	private collection Michael Schülke, Berlin
cVog	private collection Jürgen Vogel, Görlitz

The following abbreviations are used for the measurements, which are given in mm:

HL: head length from anterior margin of clypeus to neck; HW: head width; PW: maximal width of pronotum; PL: length of pronotum along median line; EL: length of elytra from apex of scutellum to hind margin; AL: length of aedeagus from apex of ventral process to base; TL: total length.

### 1. New European species

#### *Lathrobium roessleri* sp.n. (Figs. 1 - 4)

**Holotype** ♂: "Oblt. Prov. Trento, Darè, V. di S. Valentino, 1100-1200m, 9.5.90, G. Rößler leg. / Holotypus ♂ *Lathrobium roessleri* sp. n. det. V. Assing 2001" (cAss). **Paratypes**: 5 ♂♂ [1 ♂ without aedeagus]: same data as holotype (cAss, cRoe, cSch, cVog).

**Description**: Measurements (in mm) and ratios (range, n = 6): HL: 1.09 - 1.12; HW: 1.04 - 1.06; PW: 1.07 - 1.12; PL: 1.28 - 1.33; EL: 0.97 - 1.01; AL: 1.74 - 1.80; TL: 7.8 - 8.8; HL/HW: 1.03 - 1.06; HW/PW: 0.93 - 0.97; PL/PW: 1.15 - 1.21; EL/PL: 0.75 - 0.78.

Of similar facies and coloration as *L. fulvipenne* (GRAVENHORST, 1806). Head, pronotum, and abdomen blackish; elytra usually uniformly ferruginous, anterior margins rarely infuscate; legs, antennae, labrum, and maxillary palpi yellowish brown to reddish brown; mandibles dark brown to blackish brown.

Head of similar outline as that of *L. fulvipenne*, but relatively shorter and broader, only weakly oblong (see ratio HL/HW); integument with very shallow and fine microreticulation; puncturation, eye size, and morphology of antennae as in *L. fulvipenne*.

Pronotum shorter and less slender than that of *L. fulvipenne*, slightly wider than head (see ratios PL/PW and PW/HW); puncturation slightly coarser than in average specimens of *L. fulvipenne*; interstices without microsculpture and shining.

Elytra at suture distinctly shorter than pronotum (see ratio EL/PL); with moderately dense, distinct, well-defined puncturation; interstices without appreciable microsculpture, approximately as wide as average diameter of punctures; posterior margin of elytra without micropubescence; hind wings present, but apparently of reduced length.

Abdomen with shallow, fine transverse microsculpture, and with fine and dense puncturation (similar to that of *L. fulvipenne*); tergum VII with palisade fringe.

♂: abdominal sternum VII unmodified; sternum VIII with weakly concave hind margin, with two parallel clusters of black setae in characteristic arrangement in posterior 2/3 (Fig. 4); aedeagus of highly distinctive morphology, ventral process shaped like a fish-hook (Figs. 1 - 3).

♀: unknown.

**Derivatio nominis:** The species is dedicated to its collector, Gerhard Rößler, Wunsiedel.

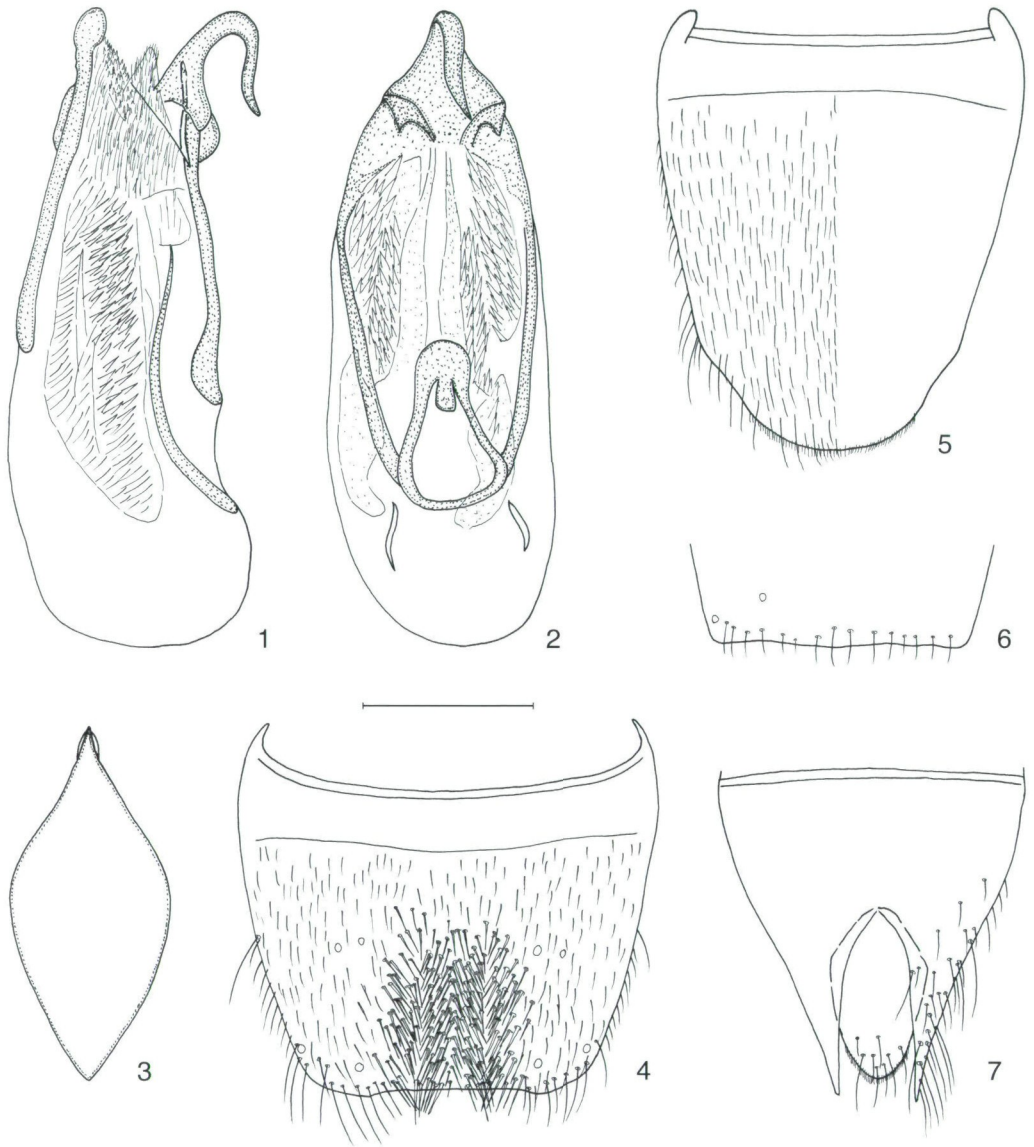
**Comparative notes:** *Lathrobium roessleri* is readily distinguished from all other species of the genus by the morphology of the aedeagus, especially by the characteristic hook-shaped ventral process, and by the shape and chaetotaxy of the male abdominal sternum VIII.

**Distribution and bionomics:** It seems remarkable that this *Lathrobium* has not been discovered earlier, particularly since other morphologically similar species of the genus (e. g. *L. fulvipenne* and its allies) are usually relatively widespread, and because the staphylinid fauna of northern Italy can be considered comparatively well-studied. The types were found in the Valle di San Valentino, a small valley extending westwards from the Val Rendena, southeast of the Adamello range, Trento. They were sifted from moss at the edge of a forest and from *Alnus* litter near a stream at an altitude of 1100 - 1200 m (RÖSSLER, pers. comm.).

### *Lathrobium occultum* sp.n. (Figs. 5 - 7)

**Holotype** ♀: "Tomor: Tomor, Alban. mer. / Winkler, Lona, Bischoff, V.1931 / Holotypus ♀ *Lathrobium occultum* sp. n. det. V. Assing 2001" (MHNG).

**Description:** Measurements (in mm) and ratios (holotype): HL: 1.12; HW: 1.04; PW: 0.88; PL: 1.15; EL: 0.74; TL: 7.0; HL/HW: 1.07; HW/PW: 1.19; PL/PW: 1.31; EL/PL: 0.64.



Figs. 1 - 7: (1 - 4) *Lathrobium roessleri* sp.n.: (1, 2) aedeagus in lateral and in ventral view; (3) dorso-apical sclerite of aedeagus in dorsal view; (4) ♂ sternum VIII; (5 - 7): *Lathrobium occultum* sp.n.: (5) ♀ sternum VIII, pubescence of right half omitted; (6) outline of ♀ tergum VIII; (7) ♀ terga IX and X, pubescence partly omitted. Scale: 0.5 mm.

Colour of body uniformly reddish brown, with the tarsi and maxillary palpi yellowish brown and the antennae darker brown.

Head large, ovoid, weakly oblong (see ratio HL/HW), posterior angles almost obsolete, postgenae in dorsal view smoothly rounded; integument somewhat shiny, with shallow,

fine microreticulation and with some shine; puncturation moderately coarse and moderately dense, interstices 2 - 4 times as wide as punctures. Eyes reduced to minute rudiments, almost obsolete, without ommatidia or pigmentation.

Pronotum slender, distinctly narrower than head (see ratios PL/PW and PW/HW); puncturation slightly coarser than that of head; interstices without microsculpture, shining.

Elytra at suture much shorter than pronotum (see ratio EL/PL); puncturation ill-defined; interstices without appreciable microsculpture; hind wings completely reduced.

Abdomen with relatively dense puncturation and with fine transverse microsculpture; tergum VII without palisade fringe.

♂: unknown.

♀: posterior margin of abdominal tergum VIII truncate (Fig. 6); sternum VIII much longer than the corresponding tergum, strongly convex and with marginal fringe of micropubescence posteriorly (Fig. 5); tergum IX dorsally not separated, its lateral processes long and acute; tergum X relatively short (Fig. 7).

**Derivatio nominis:** The name (Latin adjective: hidden, secret) refers to the presumably subterranean habitat of this species.

**Comparative notes:** *Lathrobium occultum* is readily distinguished from *L. anophthalmum* FAUVEL, 1885, the only known subanophthalmous congener occurring in the Balkans, and from the subanophthalmous *L. coecum* FRIVALSKY, 1883 from Romania, by its much larger size alone. It differs from all other microphthalmous *Lathrobium* described from the Balkans, by the more reduced eyes and by its larger size.

**Distribution:** The species is probably endemic to the Tomor range (= Quk'e Partizanit range, east of Berat), Albania.

## 2. The microphthalmous and subanophthalmous *Lathrobium* species of Turkey

Two distinct species groups occur in Turkey, both of them apparently restricted to the north. The monophylum *bodemeyeri* + *uncinatum* + *paphlagonicum* is characterized by several synapomorphies: the posteriorly concave male sternum VII with dark short modified setae in characteristic arrangement, the weakly sclerotized dorso-apical sclerite of the aedeagus, the distinctly sclerotized and apically hook-shaped apical structure projecting from the internal sac of the aedeagus, the slender and apically hooked ventral process of the aedeagus, the posteriorly projecting and extensively micropubescent female sternum VIII, and the female tergum X with extensive micropubescence in the posterior area. In addition, these species share some characters of doubtful polarity, e. g. the spine-like extension of the lateral processes of tergum IX in both sexes, the posteriorly pointed female tergum VIII, and the dorsally almost completely separated female tergum IX. This monophyletic group does not include *Lathrobium brignolii* BORDONI from northern Anatolia, which is characterized by strongly reduced eyes, the unmodified male sternum VII, the posteriorly deeply and sharply incised male sternum VIII, the short and apically rounded lateral processes of tergum IX, the anteriorly unseparated female tergum IX, the short female tergum X, the weakly sclerotized, short, apically asymmetrically bifid ventral process of the aedeagus, and the distinctive armatures of the internal sac of the aedeagus.

***Lathrobium bodemeyeri* BERNHAUER, 1903 (Figs. 8 - 16, Map 1)***Lathrobium bodemeyeri* BERNHAUER, 1903: 593.*Lathrobium besucheti* BORDONI, 1980: 79 **syn.n.**

**Types examined:** *L. bodemeyeri*: Lectotype ♂, here designated: "♂ / ASIA MINOR, GOEK-DAGH, v. BODEMEYER / Bodemeyeri Bernh. Type. / Dr. M. Bernhauer donavit 10.XI.1942 / TYPUS *Lathrobium Bodemeyeri* Bernhauer / Lectotypus ♂ *Lathrobium bodemeyeri* Bernhauer, desig. V. Assing 2001" (NHMW).

*L. besucheti*: Holotype ♂: "Turquie Bolu, Elmalik-Bakacak, 850m, 26.V.67, Cl. Besuchet / HOLOTYPUS / *Lathrobium besucheti* n. sp. Det. A. Bordon 1979" (MHNG). Paratypes: 3 ♀♀, same data as holotype (MHNG).

**Remarks:** The original description of *L. bodemeyeri* is based on two specimens from Goek Dagħ collected by v. Bodemeyer (BERNHAUER 1903). The examined syntype from the collections of the NHMW is here designated as the lectotype in order to fix a single name-bearing type ensuring the present interpretation of the species.

BORDONI (1980), when describing *L. besucheti*, apparently based the comparison with *L. bodemeyeri* on the original description of that species and not on type material. The examination of the types revealed that they are conspecific with *L. bodemeyeri*, so that the following synonymy is here established: *L. bodemeyeri* BERNHAUER, 1903 = *L. besucheti* BORDONI, 1980, **syn.n.**

**Additional material examined:**

**Turkey:** 1 ♂, Goek Dagħ, leg. v. Bodemeyer (NHMW); 1 ♀, Sündiken Dağl. ["Bos Dagħ"], leg. v. Bodemeyer (NHMW); 1 ♂, Bolu, Abant Gölü ["Abant See"], 20.V.1987, leg. Schönmann & Schillhammer (NHMW); 2 ♂♂, 1 ♀, Bolu, Abant Dağl. near Bolu, 30.V.1964, leg. Korge (cKor, cAss); 1 ♀, Bolu, Abant Dağl., 1500 - 1600 m, 22.V.1976, leg. Besuchet & Löbl (cSch); 1 ♂, Bolu, Yedigöller, 14.V.1987, leg. Schönmann & Schillhammer (NHMW); 1 ♂, 2 ♀♀, Bolu, Düzce-Akçakoca, 400 m, 26.V.1967, leg. Besuchet (MHNG, cSch, cAss); 1 ♂, 1 ♀ [♂ teneral], Bolu, S Akçakoca, 400 m, 16.VII.1965, leg. Korge & Heinz (cKor); 1 ♂, same locality, 300 - 400 m, 29.IV. - 10.V.1976, leg. Korge (cKor); 1 ♂, 2 ♀♀, Bolu, Ömerler near Bolu, 800 m, 21.V.1976, leg. Besuchet & Löbl (MHNG, cAss); 1 ♂, Zonguldak, Ereğli - Balıköy, 15.V.1976, leg. Besuchet & Löbl (MHNG).

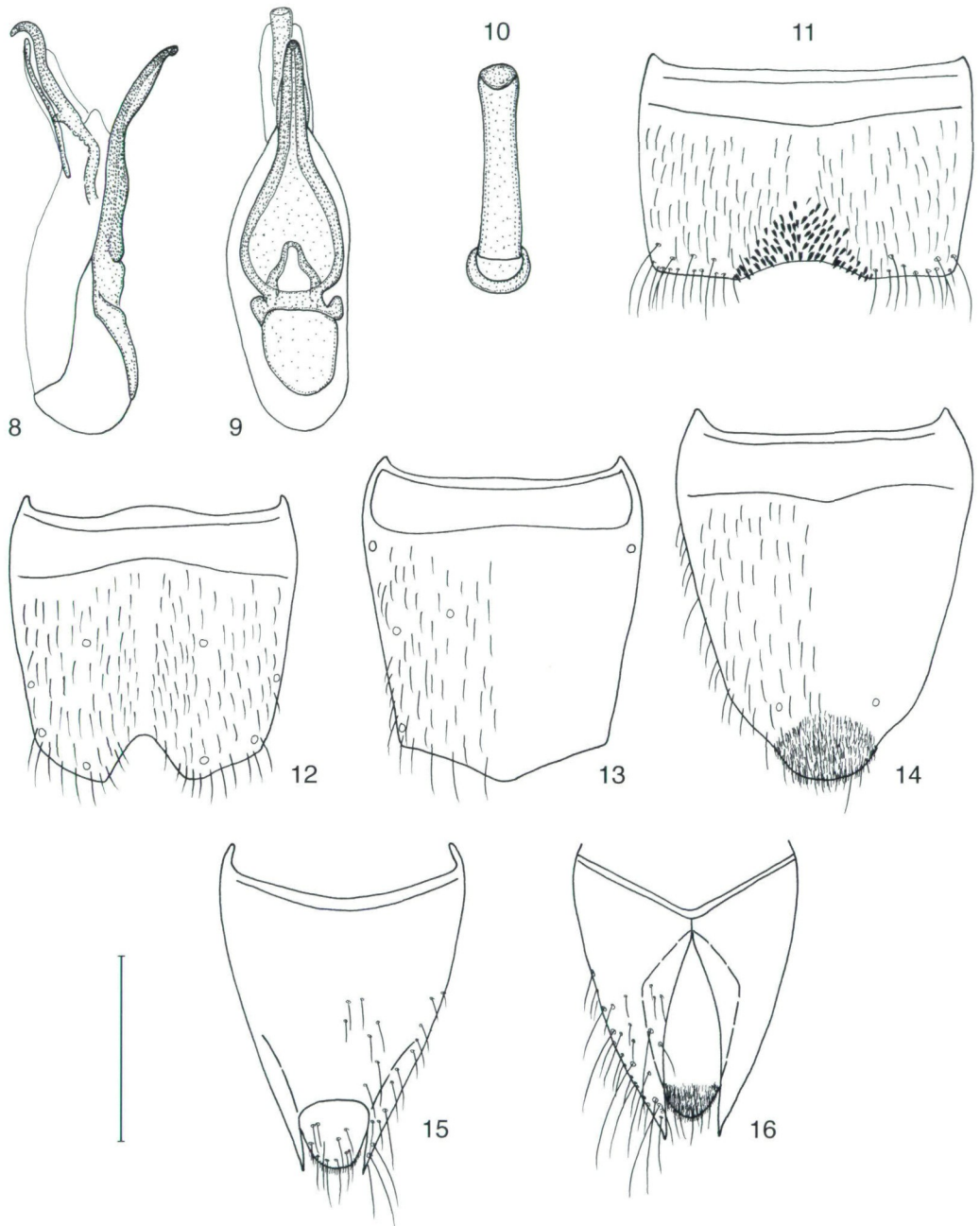
**Greece:** 1 ♂, Makedonia, W Kilikis, Metallikon, 20.III.1978, leg. Heinz (cKor).

**Description:** Measurements (in mm) and ratios (range, arithmetic mean; n = 23): HL: 0.71 - 0.83, 0.78; HW: 0.68 - 0.79, 0.73; PW: 0.63 - 0.76, 0.70; PL: 0.85 - 0.98, 0.93; EL: 0.47 - 0.63, 0.57; AL: 0.95 - 1.09, 1.04; TL: 5.4 - 6.7, 6.0; HL/HW: 1.02 - 1.12, 1.07; HW/PW: 1.00 - 1.08, 1.04; PL/PW: 1.27 - 1.38, 1.32; EL/PL: 0.55 - 0.67, 0.62.

In general appearance similar to its microphthalmous congeners occurring in the Balkans. Colour of body uniformly ferrugineous to castaneous, abdomen often darker than forebody; legs and maxillary palpi usually slightly lighter, yellowish to reddish brown.

Head weakly oblong (see ratio HL/HW); postgenae in dorsal view weakly convex, sometimes almost straight; posterior angles marked, but broadly rounded; head behind eyes not or only indistinctly dilated; integument with shallow fine microreticulation and with some shine; puncturation coarse, but not very dense, interstices on average slightly wider than punctures; eyes moderately reduced, their diameter subequal to that of antennomere I or even larger, with numerous (>30) ommatidia.

Pronotum slender, as wide as or slightly narrower than head (see ratios PL/PW and PW/HW); microsculpture absent; puncturation as coarse as and slightly denser than that of head.



Figs. 8 - 16: *Lathrobium bodemeyeri* BERNHAUER: (8, 9) aedeagus in lateral and in ventral view; (10) apical sclerotized structure of internal sac of aedeagus in dorsal view; (11) ♂ sternum VII; (12) ♂ sternum VIII, long setae omitted; (13) ♀ tergum VIII, long setae and pubescence of right half omitted; (14) ♀ sternum VIII, long setae and pubescence of right half omitted; (15) ♂ terga IX and X, pubescence of left half of tergum IX omitted; (16) ♀ terga IX and X, pubescence of right half of tergum IX omitted. Scales: 8 - 9, 11 - 16: 0.5 mm; 10: 0.25 mm.

Elytra at suture distinctly shorter than pronotum (see ratio EL/PL); puncturation more or less well-defined, somewhat finer and sparser than that of pronotum; hind wings completely reduced.

Abdomen with rather distinct microsculpture composed predominantly of weakly transverse and isodiametric meshes; puncturation moderately fine and not very dense, interstices distinctly wider than punctures; tergum VII without palisade fringe.

♂: abdominal sternum VII with triangular to semi-circular median impression and with broad concavity posteriorly, impression with short, stout, dark modified setae (Fig. 11); posterior margin of tergum VIII truncate; sternum VIII with distinct triangular emargination posteriorly, along median line without pubescence (Fig. 12); tergum IX dorsally not separated, lateral processes with spine-like extensions apically; tergum X small (Fig. 15); aedeagus of distinctive morphology (Figs. 8 - 10).

♀: posterior margin of abdominal tergum VIII pointed in the middle (Fig. 13); sternum VIII longer than tergum VIII, with convex projection and with fine and dense micropubescence posteriorly (Fig. 14); tergum IX almost completely separated in the middle, lateral processes long, with spine-like extension apically; tergum X much longer and more slender than in X, with dense and fine micropubescence posteriorly (Fig. 16).

**Comparative notes:** The geographically nearest microphthalmous congeners of *L. bodemeyeri* in the Balkans are *L. wunderlei* ASSING & SCHÜLKE and *L. vorasense* ASSING & WUNDERLE. These species are smaller, of lighter coloration, have more reduced eyes, and the primary and secondary sexual characters are of completely different morphology (see figures in ASSING & SCHÜLKE (2000) and in ASSING & WUNDERLE (2001)). For comparison with other Turkish representatives of *Lathrobium*, see the descriptions and the key below.

**Distribution and bionomics:** The species is apparently rather widespread in north-western Anatolia; it is here for the first time recorded from Greece (Map 1). The data on the labels attached to the examined specimens suggest that it occurs at a wide range of altitudes (300 - 1600 m). Most of the material collected by H. Korge was found in holes of earthworms under deeply embedded stones (KORGE, pers. comm.). The vast majority of specimens were found in May, two in July, and one in March. One of the beetles taken in July is teneral.

### *Lathrobium uncinatum* sp.n. (Figs. 17 - 21, Map 1)

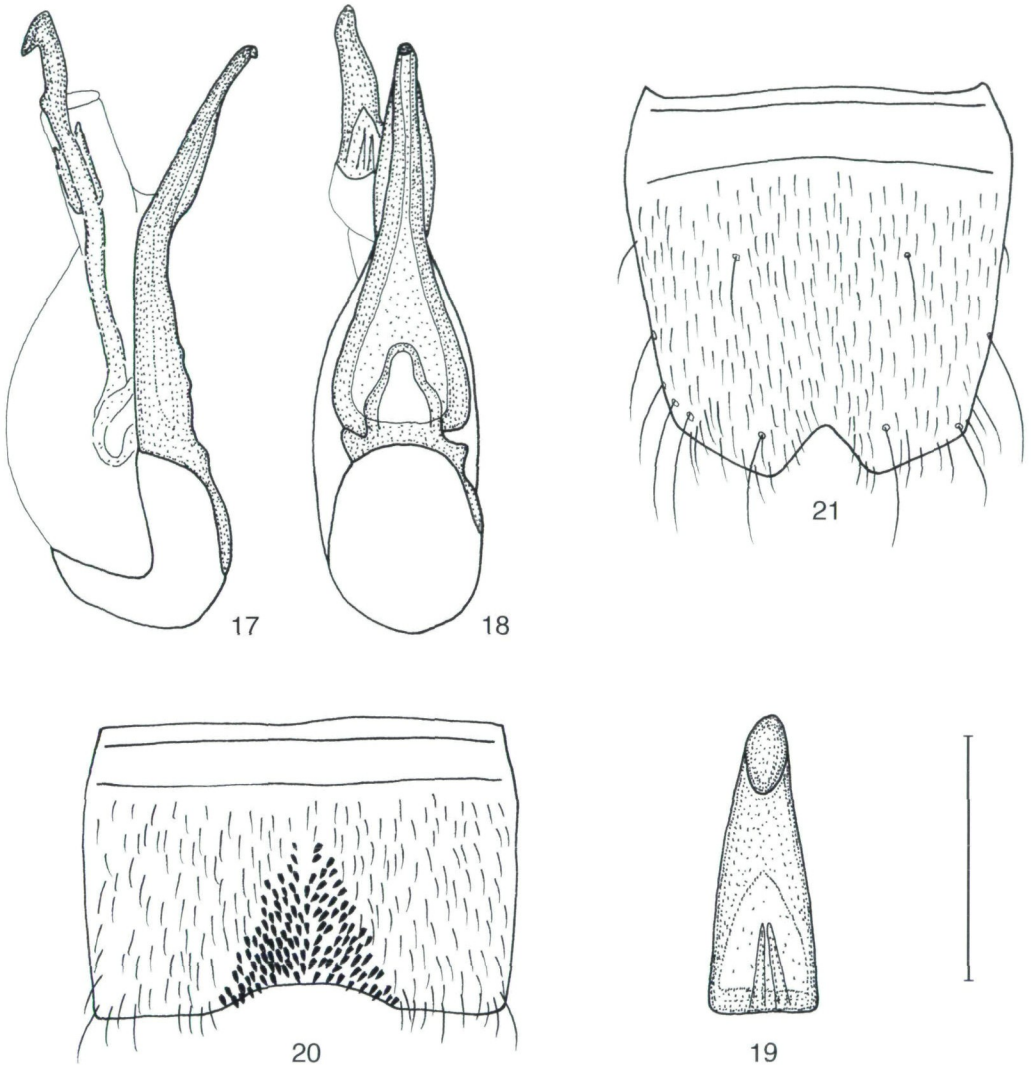
**Holotype** ♂ [legs missing]: "TURQUIE KASTAMONU, Ilgazdağ col à 15 km N. de Tosua, 1600-1700m, 19.V.76, BESUCHET LÖBL / Holotypus ♂ *Lathrobium uncinatum* sp. n. det. V. Assing 2001" (MHNG).

**Description:** Measurements (in mm) and ratios (holotype): HL: 0.77; HW: 0.71; PW: 0.69; PL: 0.92; EL: 0.57; TL: 5.4; HL/HW: 1.09; HW/PW: 1.02; PL/PW: 1.33; EL/PL: 0.62.

External characters as in *L. bodemeyeri*, distinguished only by the male sexual characters.

♂: sternum VII of similar morphology, but area with modified setae extending further anteriad (Fig. 20); sternum VIII with posterior emargination smaller, and with pubescence present also along median line (Fig. 21); aedeagus larger, ventral process longer and in ventral view broader, apical sclerotized structure of internal sac shaped like a barbed hook apically, and basally wider (Figs. 17 - 19).





Figs. 17 - 21: *Lathrobium uncinatum* sp.n.: (17, 18) aedeagus in lateral and in ventral view; (19) apical sclerotized structure of internal sac of aedeagus in dorsal view; (20) ♂ sternum VII; (21) ♂ sternum VIII. Scale: 17 - 18, 20 - 21: 0.5 mm; 19: 0.25 mm.

♀: unknown.

**Derivatio nominis:** The name (Lat., adj.: barbed) refers to the distinctive shape of the apical structure of the internal sac of the aedeagus.

**Comparative notes:** For comparison with other Turkish congeners see the descriptions and the key below.

**Distribution:** The species is known only from the Ilğaz Dağı in northern Anatolia (Map 1), where it was collected at an altitude of 1600 - 1700 m.

***Lathrobium paphlagonicum* sp.n.** (Figs. 22 - 29, Map 1)

**Holotype** ♂: "Anat. b., Cangal Dag, 7.-15.6.60, leg. F. Schubert / Holotypus ♂ *Lathrobium paphlagonicum* sp. n. det. V. Assing 2001" (NHMW). **Paratypes**: 1 ♂, 1 ♀, same data as holotype (NHMW, cAss).

**Description:** Measurements (in mm) and ratios (range; n=3): HL: 0.86 - 0.88; HW: 0.79 - 0.82; PW: 0.76 - 0.79; PL: 1.03 - 1.06; EL: 0.62 - 0.66; AL: 1.13 - 1.43; TL: 5.4 - 6.3; HL/HW: 1.07 - 1.10; HW/PW: 1.02 - 1.06; PL/PW: 1.33 - 1.36; EL/PL: 0.60 - 0.63.

Externally quite similar to *L. bodemeyeri*, but larger (no overlap, see measurements); pronotum in dorsal view with lateral margins weakly concave a short distance before middle (in *L. bodemeyeri* usually straight or weakly convex); abdomen with finer puncturation than in average specimens of *L. bodemeyeri* and distinctly darker than forebody in all three type specimens (in *L. bodemeyeri* often not, or less appreciably infuscate).

♂: shape and chaetotaxy of sternum VII and sternum VIII like those of *L. bodemeyeri* (Fig. 27); posterior margin of tergum VIII indistinctly pointed (Fig. 25); aedeagus larger, ventral process with less pronounced lateral lamellae, dorso-apical plate in lateral view wider apically, and apical sclerotized structure of internal sac more massive (Figs. 22-24).

♀: terminalia as those of *L. bodemeyeri* (Figs. 26, 28, 29).

**Derivatio nominis:** The name (Lat., adj.) is derived from Paphlagonia, the ancient name of the region where the species was discovered.

**Comparative notes:** For comparison with the highly similar *L. bodemeyeri* see description above. *Lathrobium uncinatum* is smaller, the abdomen is more coarsely punctate, and the male primary and secondary sexual characters are of different morphology. The following species is readily distinguished by its markedly reduced eyes alone (see also key).

**Distribution and bionomics:** The species was collected in the Çangallı Dağı, some 60 km SW of Sinop (Map 1). The ovaries of the female contained a mature egg.

***Lathrobium brignolii* BORDONI, 1980** (Figs. 30 - 36, Map 2)

*Lathrobium brignolii* BORDONI, 1980: 79f.

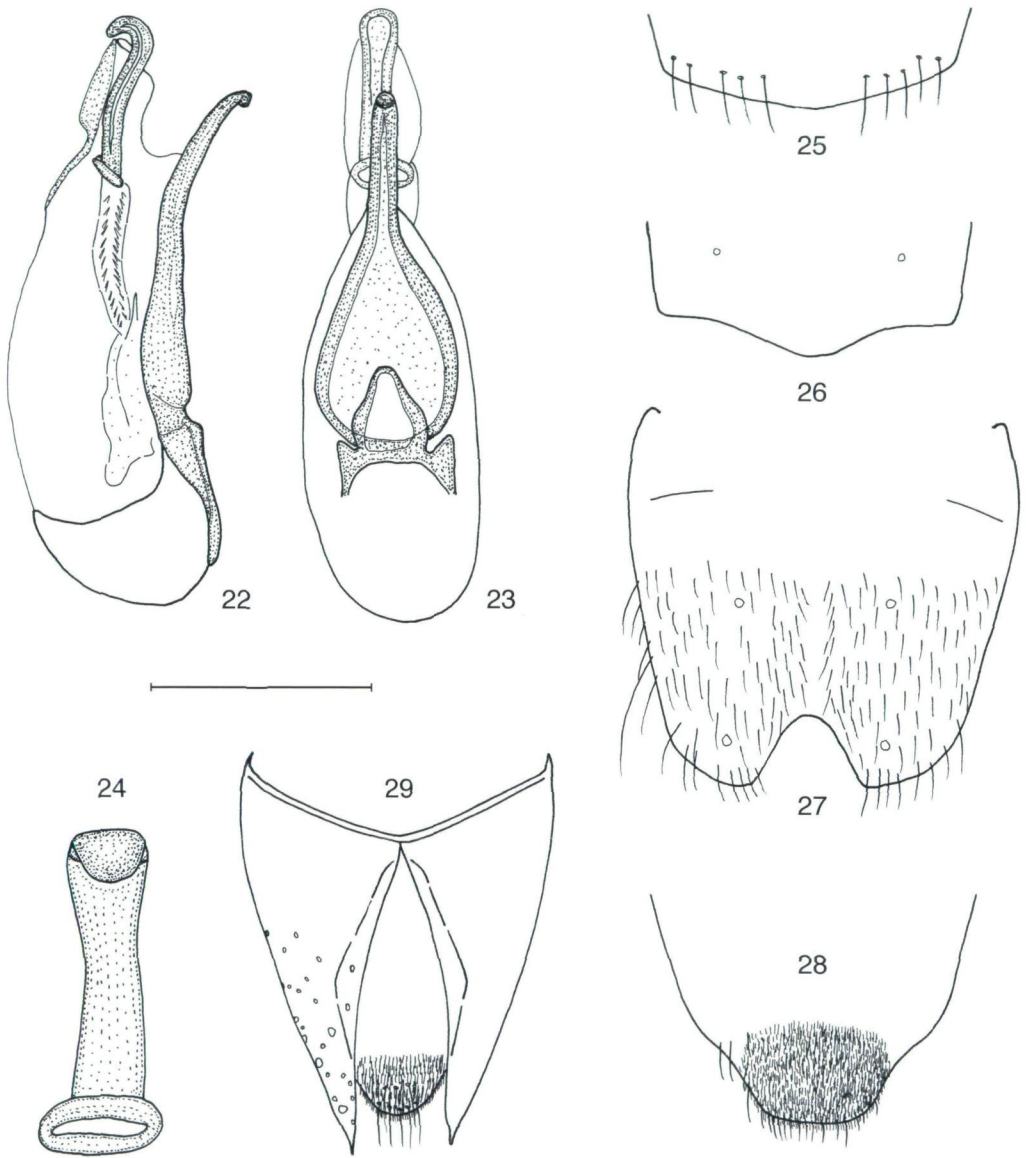
**Type examined:** Paratype ♀: "Gurgentepe gec. Ordu dint. 9VI69 / Turchia, leg. Osella / PARATYPUS / *Lathrobium brignolii* n. sp. Det. A. Bordonì 1979" (cBor).

**Additional material examined:** 1 ♂, 2 ♀♀, Ordu, S Tekkiraz, 18.V.1967, leg. Besuchet (MHNG, cAss); 1 ♂, S Ordu, Ulubey, 5.VII.1977, leg. Korge (cKor); 4 ♀♀ [identification uncertain]: Akkus, S. - 6.VI.1961, leg. Schubert (NHMW, cAss).

**Description:** Measurements (in mm) and ratios (range, arithmetic mean; n = 5; specimens from Akkus not included): HL: 0.57 - 0.60; HW: 0.52 - 0.56; PW: 0.50 - 0.54; PL: 0.67 - 0.71; EL: 0.36 - 0.41; AL: 0.85 - 0.89; TL: 4.1 - 4.9; HL/HW: 1.07 - 1.11; HW/PW: 1.00 - 1.07; PL/PW: 1.28 - 1.36; EL/PL: 0.53 - 0.57.

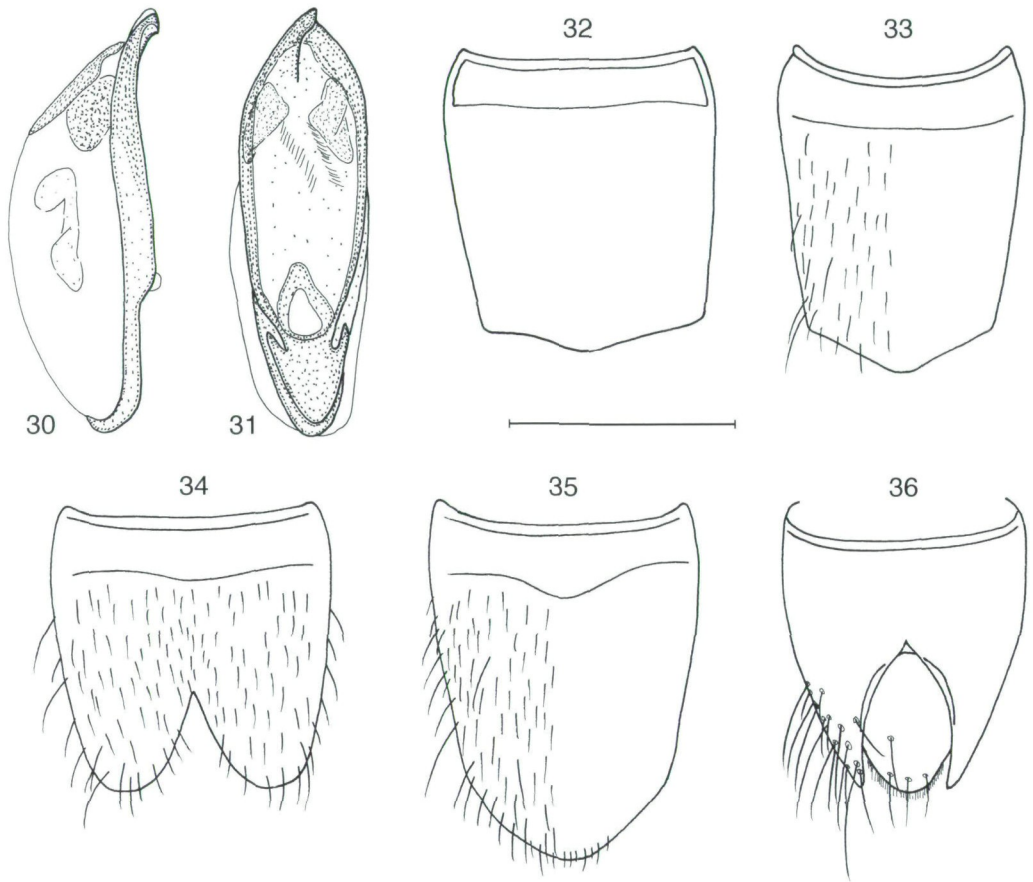
Smaller than *L. bodemeyeri* (no overlap, see measurements). Colour of whole body uniformly ferruginous to castaneous.

Head of similar shape as that of *L. bodemeyeri*, slightly oblong (see ratio HL/HW); puncturation similar to that of *L. bodemeyeri*; integument with distinct microreticulation (more so than in *L. bodemeyeri*); eyes reduced to small rudiments, without ommatidia or pigmentation.



Figs. 22 - 29: *Lathrobium paphlagonicum* sp.n.: (22, 23) aedeagus in lateral and in ventral view; (24) apical sclerotized structure of internal sac of aedeagus in dorsal view; (25) posterior margin of  $\sigma$  tergum VIII; (26) outline of posterior margin of  $\varphi$  tergum VIII; (27)  $\sigma$  sternum VII, long setae and pubescence in anterior area omitted; (28) lateral outline and posterior part of  $\varphi$  sternum VIII; (29)  $\varphi$  terga IX and X, pubescence of tergum IX omitted. Scale: 22 - 23, 25 - 29: 0.5 mm; 24: 0.25 mm.

Pronotum slender, as wide as, or slightly narrower than head (see ratios PL/PW and PW/HW); microsculpture absent or very weak; puncturation as coarse as and slightly denser than that of head.



Figs. 30 - 36: *Lathrobium brignolii* BORDONI: (30, 31) aedeagus in lateral and in ventral view; (32) outline of ♂ tergum VIII; (33) ♀ tergum VIII, pubescence of right half omitted; (34) ♂ sternum VIII; (35) ♀ sternum VIII, pubescence of right half omitted; (36) ♀ terga IX and X, pubescence of right half of tergum IX omitted. Scale: 0.5 mm.

Elytra at suture distinctly shorter than pronotum (see ratio EL/PL); puncturation variable and mostly not very well-defined, composed of a mixture of coarser and finer punctures; integument, apart from some scattered micropunctures, without appreciable microsculpture; hind wings completely reduced.

Abdomen with fine and shallow, predominantly transverse microsculpture, with fine and relatively sparse puncturation.

♂: sternum VII unmodified; posterior margin of tergum VIII weakly pointed (Fig. 32); sternum VIII deeply and rather sharply incised posteriorly, pubescence unmodified (Fig. 34); tergum IX with relatively short lateral processes and without spine-like apical extension; aedeagus bifid apically and with a pair of dark apical structures in internal sac (Figs. 30 - 31).





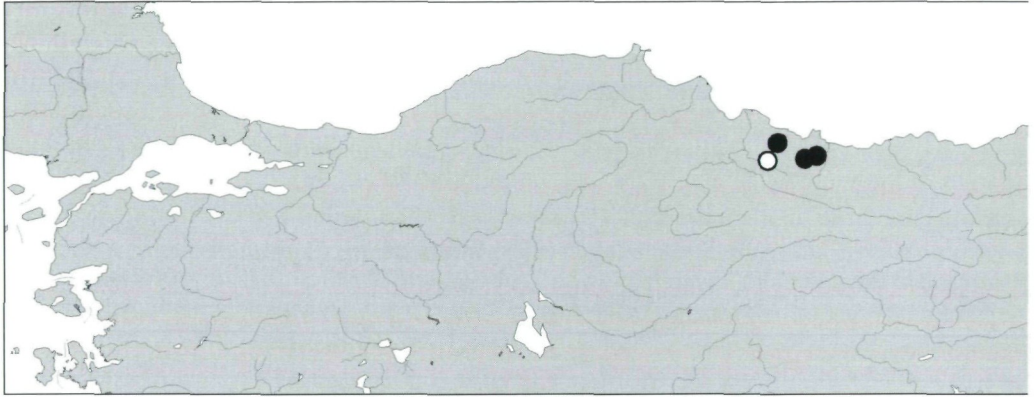
Map 1: Distribution of *Lathrobium bodemeyeri* BERNHAUER (filled circles), *L. uncinatum* sp. n. (open circle), and *L. paphlagonicum* (black square) in Turkey and Greece.

♀: posterior margin of tergum VIII distinctly pointed (Fig. 33); sternum VIII longer than that of male, and distinctly convex posteriorly (Fig. 35); tergum IX not separated anteriorly; tergum X much shorter than that of *L. bodemeyeri* (Fig. 36).

**Comparative notes and comments:** From other Turkish microphthalmous congeners, *L. brignolii* differs especially by the strongly reduced eyes, and by the completely different primary and secondary sexual characters.

The four females from Akkus were assigned to this species only tentatively. No significant differences were observed in the morphology of the female terminalia and many other external characters. On the other hand, the fact that all four specimens share a distinctly microreticulated pronotum, a larger average size, and a relatively shorter and broader head suggests that they may represent a distinct species. This hypothesis, however, can only be confirmed when males become available for examination. For comparison, the measurements are given (n=4): HL: 0.59 - 0.63; HW: 0.55 - 0.60; PW: 0.51 - 0.59; PL: 0.68 - 0.76; EL: 0.41 - 0.42; TL: 4.3 - 4.8; HL/HW: 1.05 - 1.7; HW/PW: 1.03 - 1.07; PL/PW: 1.28 - 1.32; EL/PL: 0.54 - 0.60.

**Distribution and bionomics:** *Lathrobium brignolii* is here recorded from several localities in Ordu, northern Anatolia; it has a more eastern distribution than other species of Anatolian microphthalmous *Lathrobium* (Map 2). The specimens examined were collected during the period from May through July.



Map 2: Distribution of *Lathrobium brignolii* BORDONI in northern Anatolia. Open circle: record based on ♀♀ with distinctly microreticulate pronotum.

### Key to the microphthalmous and subanophthalmous *Lathrobium* species of Turkey

For explanations of the measurements and abbreviations see the material section; the measurements are given in mm.

- 1 Eyes strongly reduced, without ommatidia or pigmentation. Size smaller; HL: <0.65, HW: <0.65, PW: <0.60, PL: <0.80. Abdomen very finely punctate. ♂: sternum VII unmodified; sternum VIII sharply and deeply incised posteriorly (Fig. 34); aedeagus with short, weakly sclerotized, apically bifid ventral process (Figs. 30 - 31). ♀: sternum VIII without extensive micropubescent area posteriorly (Fig. 35); tergum IX dorsally not separated, tergum X short and broad (Fig. 36). NE - Anatolia: Ordu (Map 2) ..... *L. brignolii* BORDONI
- Eyes less reduced, with >30 ommatidia and pigmentation. Body larger; HL: >0.70, HW: >0.65; PW: >0.60, PL: >0.80. Abdomen less finely punctate. ♂: sternum VII impressed and concave posteriorly, impression with modified dark spines (Fig. 11); posterior margin of sternum VIII with less deep incision of triangular shape (Fig. 12); aedeagus with long, distinctly sclerotized, and apically not bifid ventral process. ♀: sternum VIII more strongly projecting posteriorly and with extensive micropubescent area (Fig. 14); tergum IX almost completely separated dorsally, tergum X longer and more slender (Fig. 16). Species with more western distribution (Map 1) ..... 2
- 2 Larger species; HL: >0.85, HW: >0.78, PW: >0.75, PL: >1.00. Lateral outline of pronotum in dorsal view weakly concave a short distance before middle. Abdomen finely punctate. ♂: aedeagus in lateral view with ventral process weakly and smoothly bent; dorso-apical sclerite in lateral view wider (Figs. 22 - 24). N - Anatolia: Sinop (Map 2) ..... *L. paphlagicum* sp.n.
- Smaller species; HL: <0.85, HW: <0.80, PW: <0.77, PL: <1.00. Lateral outline of pronotum in dorsal view mostly straight or weakly convex, rarely concave. Abdomen on average more coarsely punctate. ♂: aedeagus in lateral view with ventral process more distinctly and more abruptly bent; dorso-apical sclerite in lateral view narrow. Distribution different ..... 3

- 3 ♂: area with modified dark setae of sternum VII more extensive and extending further anteriorly (Fig. 20); sternum VIII with pubescence present also along median line, with slightly smaller incision posteriorly (Fig. 21); aedeagus in lateral view with apical sclerotized structure of internal sac barb-shaped (Figs. 17 - 18). N - Anatolia: Kastamonu (İlgaz Dağı) (Map 1) ..... *L. uncinatum* sp.n.
- ♂: area with modified setae of sternum VII confined to posterior half (Fig. 11); sternum VIII without pubescence along median line, with larger emargination posteriorly (Fig. 12); aedeagus in lateral view with apical sclerotized structure of internal sac hook-shaped (Figs. 8 - 10). Widespread from NW - Anatolia to N - Greece (Map 1) ....  
..... *L. bodemeyeri* BERNHAUER

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