On the genus *Lathrobium* Gravenhorst, 1802 of Kyrgyzstan: Two new species and new records (Coleoptera: Staphylinidae: Paederinae)

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1. Introduction
The genus *Lathrobium* Gravenhorst, 1802 currently includes 620 species in two subgenera (Schülke and Smetana, 2015; Assing, 2019) in the Palaearctic region. According to Assing (2019), the vast majority of species are distributed in China, Japan, and the Himalayas. The Staphylinidae of Kyrgyzstan, particularly Paederinae, are still poorly studied. The subfamily is represented by 34 species in Kyrgyzstan, only seven of which are endemic to this country (Schülke and Smetana, 2015). Five species of the genus *Lathrobium* are known from Kyrgyzstan: *L. brunnipes* (Fabricius, 1792); *L. fulvipenne* Gravenhorst, 1806; *L. lackneri* Assing, 2007; *L. marani* Koch, 1939, and *L. semirufulum* Bernhauer, 1902 (Assing, 2007, 2013; Schülke and Smetana, 2015).

In the present study, two new species of the genus *Lathrobium* from Kyrgyzstan are described. In addition, *L. longulum* Gravenhorst, 1802 and *L. elongatum* Linnaeus, 1767 are recorded from Kyrgyzstan for the first time. To date, nine species of the genus are known from Kyrgyzstan. Three of the nine species are endemic to the country; distributions of these species are mapped. A checklist of *Lathrobium* of Kyrgyzstan is provided.

2. Materials and methods
The material was examined under a Stemi 508 microscope (Zeiss Germany). Photographs of the habitus, forebody and aedeagus were obtained using a digital camera (Zeiss Axiocam ERC5s). All photographs were edited with the Helicon Focus v. 6, and Corel Draw v. X5 software. The map (Figure 1) was made using the software Google Earth Pro (2019). All measurements are given in millimeters. Primary and secondary sexual characters of the species are described following the terminology of Coiffait (1982) and Assing (2019). The following measurements are used in this study and abbreviated as follows:

- Length of antenna (AL);
- Maximal width of abdomen (AW);
- Length of elytra from apex of scutellum to posterior margin (EL);
- Combined width of elytra (EW);
- Head length from anterior margin of clypeus to posterior margin of head (HL);
- Head width, including eyes (HW);
- Length of pronotum along median line (PL);
- Maximal width of pronotum (PW);
- Total body length (TL).

Abbreviations used to indicate collections where the studied material is deposited are as follows:
- AZMM – Alaşehir Zoological Museum, Manisa, Turkey (S. Anlaş);
- ZIN – Zoological Institute, Russian Academy of Sciences, St Petersburg, Russia (B. A. Korotyaev);
- ZMUN – Natural History Museum, Oslo, Norway (V. I. Gusarov).

3. Results and discussion
3.1. Faunistic records
$Lathrobium lackneri$ Assing, 2007 (Figure 1; Table)

Material examined KYRGYZSTAN $1^{\circ}$, 03.X.1989, Dzhalal-Abad Reg., Arslanbob, under stones, mostly along creek, leg. Gusarov (ZMUN).

Distribution *L. lackneri* was known only from its type locality in Batken province (Layle-Mazar valley), Southern Kyrgyzstan (Assing, 2007). The above specimen represents...
the first record since the original description. The record is situated 230 km to the northeast of the type locality.

**Lathrobium longulum** Gravenhorst, 1802

Material examined KYRGYZSTAN: 1♂, 2♀, 12–15.V.2012, Osh Region, Myrza-Ake village 10 km E, 40°46’N, 73°32’E, 1600 m (AZMM).

Distribution According to Assing (2009), *L. longulum* has a transpalaearctic distribution. The above specimens represent the first record of *L. longulum* from Kyrgyzstan.

**Lathrobium elongatum** (Linnaeus, 1767) (Table)

Material examined KYRGYZSTAN: 1♂, 1♀, 12–15.V.2012, Jalal-Abad, environs Jay-Terek, 41°17’N, 72°53’E, 1700 m (AZMM).

Distribution *L. elongatum* was known from Europe, Iran, Turkey, Kazakhstan, European part of Russia and Siberia (Schülke & Smetana, 2015). *L. elongatum* is recorded from Kyrgyzstan for the first time here.
3.2. Descriptions of new species

*Lathrobium ovchinnikovi* sp. nov. (Figures 1 and 2a –2h; Table)


**Description** Measurements and ratios: AL: 2.21; HL: 0.76; HW: 0.73; PL: 0.95; PW: 0.68; EL: 0.63; EW: 0.81; AW: 0.88; ML: 0.80; TL: 6.88; HL/HW: 1.04; PW/HW: 0.93; PW/PL: 0.72; EL/PL: 0.66; EW/PW: 1.19; EL/EW: 0.78; AW/EW: 1.09.

Habitus as in Figure 2a. Body length: 6.9 mm. Coloration: forebody uniformly reddish brown, legs somewhat lighter than body, antennae reddish brown. Head weakly oblong (Figures 2a and 2b, HL/HW), widest behind eyes, approximately 1.05× as long as wide; punctuation distinct, coarse, sparser and larger in mediodorsal portion, denser and smaller in lateral area, and interstices without microsculpture; pubescence yellowish and very rare; eyes reduced, slightly protruding from lateral contours of head. Antennae very long, approximately 2.2 mm; antennomere 3 slightly longer than 2; 4–10 oblong; 10 approximately 2.1× as long as wide (Figure 2a).

Pronotum distinctly longer than wide, approximately 0.72× as long as wide and slightly narrower than head, 0.93× as wide as head (Figures 2a and 2b; PW/PL, and PW/HW); punctuation similar to that of head, moderately denser and larger; interstices without microsculpture; pubescence yellowish and sparser than head.

Elytra shorter, approximately 0.80× as long as wide and broader than pronotum, 1.20× as wide as pronotum (Figures 2a and 2b; EL/EW, and EW/PW); punctuation coarser than that of head and pronotum; interstices without distinct microsculpture; pubescence yellowish and sparse. Hind wings completely reduced.

Abdomen slightly wider than elytra (Figure 2a, AW/EW), approximately 1.10× as wide as elytra, widest at segment VII; punctuation fine, well-defined and not very dense; surface with shallow microsculpture composed of transverse meshes; posterior margin of tergite VII without palisade fringe.

**Male** Sternite VII distinctly modified, with median impression and concave posterior margin, median impression bearing short, stout and black setae (Figure 2c), posterior margin of sternite VIII convex, with small triangular incision on apical margin (Figure 2d). Aedeagus length: 0.80 mm; ventral process curved and slender with wide basal part in lateral view (Figures 2e and 2f); ventral process long and straight, symmetric in ventral view (Figure 2g).

**Female** Unknown.

**Etymology** The species is dedicated to the Russian arachnologist Sergey V. Ovchinnikov (1958-2007), the collector of the holotype.

**Differential diagnosis** The new species can be distinguished from other congeners in Middle Asia by the different morphology of the male sexual characteristics. It is additionally separated as follows:

From *L. lackneri* by the smaller body (in *L. lackneri*: body blackish, elytra dark reddish brown), smaller eyes, shorter elytra, less distinct punctuation of the body, and the completely different shape and chaetotaxy of the male sternite VII and VIII (in *L. lackneri*: sternite VII with weakly concave posterior margin and broad shallow median impression with stout black setae directed diagonally mediocaudad; sternite VIII with medioposterior margin shallowly concave). For illustrations of *L. lackneri*, see Assing (2007: figures 1–10).

From *L. longulum* by the different coloration of the body (in *L. longulum*: body uniformly black or blackish brown), less oblong head, shorter elytra, and by the different shape of the male sternite VIII (in *L. longulum*: posterior margin of sternite VIII distinctly convex). For illustrations of *L. longulum*, see Coiffait (1982: Figures 83e and 83f).

From the trans-Palaearctic *L. brunnipes* by the different coloration of the body (in *L. brunnipes*: head, pronotum and abdomen black or blackish brown), smaller body (in *L. brunnipes*: 8–9 mm), less oblong head, shorter elytra, relatively longer antennae and by the different shapes of the male sternite VII and VIII. For illustrations of *L. brunnipes*, see Coiffait (1982: Figures 81g and 81h).

From the trans-Palaearctic *L. fulvipenne* by the smaller body (in *L. fulvipenne*: 8–10 mm), the different coloration of the body (*L. fulvipenne*: body black, with elytra dark reddish brown or reddish yellow), less oblong head, less distinct punctuation of the body, shorter elytra, and by the completely different shape and chaetotaxy of the male sternite VII and VIII (in *L. fulvipenne*: sternite VII with weakly concave posterior margin and without modified black setae; sternite VIII with medioposterior margin relatively large concave). For illustrations of *L. fulvipenne*, see Coiffait (1982: Figures 81a and 81b).

From *L. marani* (Middle Asia) by the different coloration of the body (in *L. marani*: body blackish, with elytra dark reddish brown), smaller body (in *L. marani*: 8–9 mm), less distinct punctuation of the body and by the different shape and chaetotaxy of the male sternite VIII. For illustrations of *L. marani*, see Koch (1939: Figure 11), Coiffait (1982: Figures 78i and 78j) and Anlaş (2013: Figure 14).

From *L. semirufulum* (Kazakhstan, Tajikistan and Kyrgyzstan) by the different coloration of the body (in *L. semirufulum*: forebody reddish, abdomen dark brown...
with reddish apex), slightly larger body (*L. semirufulum*: approximately 5–6 mm), less oblong head and by the different shape and chaetotaxy of the male sternite VIII.

For illustrations of *L. semirufulum*, see Coiffait (1982: Figures 83c and 83d, as *Lobrathium sahlbergi* (Fauvel, 1900) in the paper).
From *L. elongatum* by the different coloration of the body (in *L. elongatum*: forebody blackish, with posterior 2/3 of elytra reddish or reddish brown), smaller body (*L. elongatum*: approximately 8–9 mm), and by the different shape of the male sternite VIII (in *L. elongatum*: posterior margin of sternite VIII with deep triangular incision). For illustrations of *L. elongatum*, see Coiffait (1982: Figures 77a and 77b), Ryvkin (2011: Figures 8 and 11) and Anlaş (2013: Figure 12).

From *L. bucharense* (Uzbekistan) by the smaller body (in *L. bucharense*: 9 mm), the different coloration of the body (in *L. bucharense*: body blackish, with elytra reddish brown), and by the completely different shapes of the male sternite VII and VIII (in *L. bucharense*: posterior margin of sternite VII and VIII broad and not deeply concave; sternite VIII with medioposterior margin shallowly concave). For illustrations of *L. bucharense*, see Koch (1944: Figure 3), Coiffait (1982: Figures 78k and 78l) and Assing (2013: Figures 1–3).

From *L. concolor* (Mongolia, Uzbekistan, Russian Far East, Eastern Siberia) by the smaller body (in *L. concolor*: 8–9 mm), lighter coloration of the apical abdominal segments (in *L. concolor*: brown or dark brown), and by the different shape and chaetotaxy of the male sternite VIII (in *L. concolor*: posterior margin of sternite VIII with deeply concave and without modified setae). For illustrations of *L. concolor* see Coiffait (1982: Figures 80i and 80j) and Ryvkin (1989: Figure 1).

From the trans-Palaearctic *L. geminum* by the smaller body (in *L. geminum*: 8–9 mm), the different coloration of the body (in *L. geminum*: body blackish, with bicoloured elytra), and by the sparser black setae in posterior margin of male sternite VIII. For illustrations of *L. geminum* see Koch (1939: Figure 9), Coiffait (1982: Figures 78c and 78d) and Ryvkin (2011: Figures 5–7).

From *L. kuntzeni* (Iran and Uzbekistan) by the smaller body (in *L. kuntzeni*: 8–8.5 mm), the different coloration of the body (in *L. kuntzeni*: body blackish with reddish yellow elytra and reddish apex of abdomen), less oblong head, smaller eyes, and by the different shape and chaetotaxy of the male sternite VIII (in *L. kuntzeni*: posterior margin of sternite VIII with deeply concave). For illustrations of *L. kuntzeni* see Koch (1939: Figures 32–33) and Coiffait (1982: Figures 79i and 79j).

From *L. vitalyi* (Kazakhstan) by the smaller size (in *L. vitalyi*: 7.5 mm) and by the different coloration of the body (*L. vitalyi* head brown; pronotum and elytra reddish, abdomen blackish-brown with slightly paler apex). For illustrations of *L. vitalyi* see Assing (2008: Figures 55–59).

From *L. kastcheevi* by the smaller size (in *L. kastcheevi*: 8.7 mm), the different coloration (in *L. kastcheevi*: body blackish, elytra reddish, anterior third infuscate), and by the different shape and chaetotaxy of the male sternite VIII (in *L. kastcheevi*: sternite VIII with cluster of black modified setae in posterior median portion). For illustrations of *L. kastcheevi* see Assing (2009: Figures 9–12).

From *L. matalini* (Kazakhstan) by the different coloration of the body (in *L. matalini*: head reddish brown, pronotum reddish, elytra blackish but posterior margin of elytra dark brown, abdomen black), less oblong head, and by the different shape of the male sternite VIII (in *L. matalini*: medioposterior margin of sternite VIII with broadly v-shaped excision). For illustrations of *L. matalini* see Anlaş (2013: Figures 1–10).

3.3. Distribution and Bionomics
The holotype was collected from the southwestern slopes of the Fergana mountain range in Kyrgyzstan (Figures 1 and 2b). Bionomic data are not available.

*Lathrobium klimenkoi* sp. nov. (Figures 1 and 3a–3g; Table)


**Description** Measurements and ratios: AL: 1.93; HL: 0.70; HW: 0.65; PL: 0.79; PW: 0.61; EL: 0.54; EW: 0.69; AW: 0.82; ML: 1.15; TL: 5.48; HL/HW: 1.08; PW/HW: 0.94; PW/PL: 0.77; EL/PL: 0.68; EW/PW: 1.13; EL/EW: 0.78; AW/EW: 1.19.

Habitus as in Figure 3a. Body length: 5.5 mm. Coloration: forebody uniformly reddish brown, legs and antennae reddish brown. In general appearance similar to *L. ovchinnikovi*, but can be distinguished as follows:

Head 1.08× as long as wide (Figures 3a and 3b, see ratio HL/HW), antennae 1.93 mm long. Pronotum longer than wide, approximately 0.77× as long as wide and 0.94× as wide as head (Figures 3a and 3b; see ratios PW/PL and PW/HW). Elytra 0.78× as long as wide and slightly broader than pronotum, 1.13× as wide as pronotum (Figures 3a and 3b; see ratios EL/EW, and EW/PW). Abdomen wider than elytra (Figure 3a; see ratio AW/EW), approximately 1.20× as wide as elytra.

**Male** Medioposterior portion of sternite VII concave, with impression bearing short, stout and black setae (Figure 3c). Sternite VIII of the holotype is damaged. Aedeagus large, 1.15 mm long, ventral process sickle shaped in lateral view (Figures 3d and 3e); ventral process long and straight, symmetric in ventral view (Figure 3f).

**Female** Unknown.
Etymology The species is dedicated to Alexey Klimenko (1970–2017), a Russian collector of beetles. The holotype was in his collection in ZIN.

Differential Diagnosis The new species can be distinguished from all other congeners by the different morphology of the male sexual characters. It differs from...
all its congeners in Middle Asia by the sickle shaped ventral process of the aedeagus in lateral view. Additionally, the new species is separated from other \textit{Lathrobium} of Middle Asia as follows:

From \textit{L. ovchinnikovi} by the smaller body, shorter antennae, wider abdomen, larger aedeagus, and the indistinct and much more setae in medioposterior portion of the male sternite VII.


From \textit{L. longulum}, \textit{L. semirufulum} and \textit{L. matalini} by the different coloration of the body and less oblong head.

**Distribution and Bionomics** The holotype was collected from the northeastern slopes of the Fergana mountain range in Kyrgyzstan (Figures 1 and 3g). Bionomic data are not available.

**Nomenclatural acts**

This work and the nomenclatural acts it contains have been registered in Zoo Bank. The Zoo Bank Life Science Identifier (LSID) for this publication is urn:lsid:zoobank.org:pub:77DAA3CE-1967-4BF4-893B-6DA50269F9C9 and for the new species are urn:lsid:zoobank.org:act:19AEA00F-B02D-4687-A278-7858483A6C7F and urn:lsid:zoobank.org:act:D3C45DBA-04D1-4916-8A27-7E9038CD7E20.

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**References**


