

## Leaf-beetles (Coleoptera: Chrysomelidae) of the Mongolian Altai: subfamilies Donaciinae, Criocerinae, Eumolpinae and Galerucinae

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### Synopsis

Three species of leaf-beetles, *Donacia dentata* Hoppe, 1795, *D. thalassina* Germar, 1811, and *Luperus xanthopoda* (Schrank, 1781) are newly recorded from Mongolia. *Donacia thalassina intermedia* Jacobson, 1899, *Donacia vulgaris* Zschach, 1788, and *Luperus luperus* (Sulzer, 1776) are new for the Mongolian Altai, and two of these species are also newly recorded for the administrative region Bayan-Ulegei aimak, two are new for Hovd aimak and one is new for Gobi-Altai aimak. A check-list of the subfamilies Donaciinae, Criocerinae, Eumolpinae, Galerucinae is provided. Currently, 38 species belonging to 17 genera of these subfamilies are known from the Mongolian Altai.

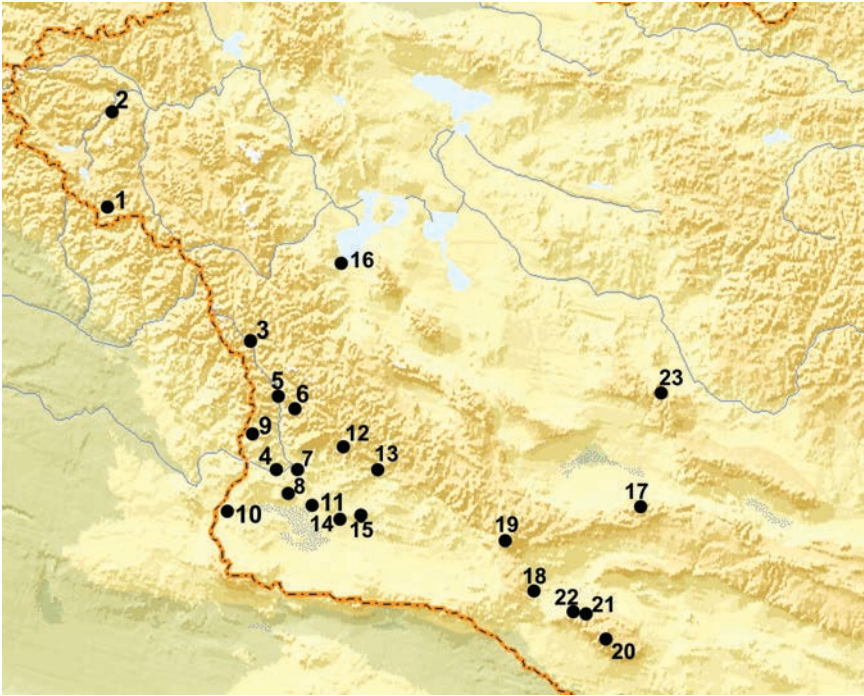
**Key words:** Coleoptera, Chrysomelidae, leaf-beetles, Mongolian Altai.

### Introduction

The first data on the Chrysomelidae of Mongolia appeared in the scientific literature in the 1830s when F. Falderman (1833; 1835) described several species of Coleoptera based on material collected in 1830–1831 by Alexander von Bunge. But it was not until the 1960s that regular studies of the Mongolian entomofauna were begun by Czechoslovak, German and Polish scientists. Huge contributions to the study of the entomofauna were made following the study of material collected during expeditions led by the well-known Hungarian entomologist Z. Kaszab from 1963–1966. The Chrysomelidae material was studied by I. K. Lopatin (1964; 1966; 1967; 1968; 1970; 1971) and part of the Alticinae by L. Kral (1965; 1967), resulting in 130 species being reported for the fauna of Mongolia. Soviet/Mongolian zoological expeditions in Mongolia were undertaken by the Zoological Institute of the Academy of Sciences of USSR and the Institute of Biology of the Academy of Sciences of MPR in 1967–1969. As a result of these expeditions a catalogue of the Mongolian Chrysomelidae (Lopatin, 1975) was published and included 250 species. Further Soviet/Mongolian biological expeditions by the Academy of Sciences of USSR and MPR were done in 1969–1978 and the Chrysomelidae of the territory in question was studied by L. N. Medvedev. His resulting work 'Chrysomelidae of MPR' (Medvedev, 1982) included 378 determined species and about ten whose occurrence in Mongolia is rather probable. Despite the long-term investigations in Mongolia, the Mongolian Altai was the least studied territory of the country from an entomological point of view.

### Materials and methods

Much of the material on which the current paper is based was collected personally by the author who participated in the complex botanical-zoological expeditions organized by the South Siberian Botanical Garden of the Altai State University in 2007, 2009 and 2010. These expeditions were undertaken in all three aimaks that are within the Mongolian Altai, viz. Bayan-Ulegei, Hovd and



**Fig. 1.** Localities where Chrysomelidae were collected during expeditions in the Mongolian Altai undertaken by the South Siberian garden of the Altai State University.



*Photo: D. Ryzhkov*

**Fig. 2.** Bayan-Ulegei aimak, middle stream of Elt-Gol river (Kara-Irtys basin).



*Photo: V. Anikin*

**Fig. 3.** Bayan-Ulegei aimak, middle stream of Elt-Gol river (Kara-Irtys basin).



*Photo: P. Kosachev*

**Fig. 4.** Hovd aimak, 25 km NNW. of Uench village.

Gobi-Altai, and included localities that had never been visited by entomologists before.

Collecting was done using standard methods, viz. manual collection and using a sweep net by day, and at night an ultraviolet light (light source a Philips TL 8W/05 tube, Philips-250 bulbs and a Subaru 750 generator; chloroform was used as a killing agent). Moreover, the author studied further material collected during expeditions undertaken in 2002, 2005, 2011 and 2012. As a consequence, three new species of Chrysomelidae were described: *Labidostomis yakovlevi* Gus'kova, 2006 (Gus'kova, 2006), *Chrysolina shapkini* Mikhailov & Gus'kova, 2013 (Mikhailov & Gus'kova, 2013a) and *Cystocnemis levmedvedevi* Mikhailov & Gus'kova, 2013 (Mikhailov & Gus'kova, 2013b). Furthermore, data on the distribution of some species in Mongolia has been reviewed (Gus'kova, 2006; Gus'kova, 2016). The material was collected in more than 50 localities, although representatives of the subfamilies Donaciinae, Criocerinae, Eumolpinae and Galerucinae have not been found in all of them. The map (Fig. 1) shows all the localities where Chrysomelidae (subfamilies Donaciinae, Criocerinae, Eumolpinae and Galerucinae) were collected in the Mongolian Altai and mentioned in the text. All collected material is deposited in the author's collection.

Material from the following has been examined: coll. Lev N. Medvedev (LMC), Moscow; Zoological Institute of Russian Academy of Sciences (ZIN), St Petersburg; coll. Elena V. Gus'kova (EGC), Barnaul.

#### List of collecting localities (Fig. 1)

BAYAN-ULEGEJ AIMAK: 1) **Elt-Gol** – middle stream of Elt-Gol river (Kara-Irtys basin), 2,100–2,300 m, 48°07' N 89°11' E (Fig. 2); 2) **Tsengel** – Kobdo-gol Valley, 20 km SW Tsengel, 1,900–2,200 m, 48°49' N 88°59' E (Fig. 3); 3) **Bulgan (upper)** – Bulgan-gol Valley, 10 km N. Bulgan (upper), 2,000 m, 47°11' N 90°47' E.

HOVD AIMAK: 4) **Bulgan** – Dzhungarian Gobi desert, 5 km W. of Bulgan somon, 1,100 m, 46°03' N 91°23' E; 5) **Bulgan-Gol Valley** – Bulgan-Gol Valley, 45 km N. of Bulgan, 1,500 m, 46°33' N 91°22' E; 6) **Dod-Naryin-gol** – 40 km N. of Bulgan vill., Bulgan-gol basin, middle stream of Dod-Naryin-gol river, Shara-Nuruu Mts, 1,400–1,700 m, 46°29' N 91°29' E; 7) **10 km E Bulgan** – Dzhungarian Gobi, 10 km E. of Bulgan somon, 1,050 m, 46°02' N 91°42' E; 8) **Barangijn-Shara-Nuruu** – Dzhungarian Gobi desert, Barangijn-Shara-Nuruu Mts, 15 km S. of Bulgan somon, 1,300 m, 45°53' N 91°19' E; 9) **Arshantyn-Nuruu** – Bulgan-gol basin, Arshantyn-Nuruu Mts., Bayan-gol basin, middle stream of Ulyastain-Sala river, 1,700–2,300 m, 46°19' N 91°07' E; 10) **Uvkhod-Ula** – Dzhungarian Gobi, 45 km S. Bulgan somon, Uvkhod-Ula Mt. 1,200 m, 45°48' N 91°06' E; 11) **Uench** – 30 km SE. of Uench vill., 1,100 m, 45°52' N 91°44' E; 12) **Uenchin-Gol** – Uenchin-Gol Valley, 50 km N. of Uench vill., 1,500 m, 46°23' N 92°10' E (Fig. 4); 13) **Hundijn-Gol** – Bodonchijn-Gol basin, Hundijn-Gol river valley, 1,600 m, 46°06' N 92°30' E; 14) **Elkhony-Ekhen-Tal** – 30 km S. Altai somon, Bodonchijn-Gol river valley (under stream), Elkhony-Ekhen-Tal place, 1,200 m, 45°43' N 92°05' E (Fig. 5); 15) **Altai** – 20 km SE Altai, 45°39' N 92°23' E; 16) **Hara-Us-Nur** lake, 47°46' N 92°03' E.

GOBI-ALTAI AIMAK: 17) **Hara-Adzragyn-Nuru** – Hara-Adzragyn-Nuru Mts., Najtvaryn-Sajr river Valley (under stream), 1,700–2,000 m, 45°52' N 95°30' E; 18) **Alag-Nuur** – Dzhungarian Gobi, Alag-Nuur lake (near Ajlyn-Tsagan-Khuduk), 1,300 m, 45°09' N 94°30' E (Fig. 6); 19) **Bidzh-Altai** – Alag-Khairkhan Mt, 20 km ENE. of Bidzh-Altai, 2,220–2,300 m, 45°33' N 94°04' E; 20) **Il-Gol** – Adzh-Bogdo Mt. (S.sl.), Il-Gol Valley, 2,500 m, 44°48' N 95°17' E (Fig. 7); 21) **Khalba-Khairkhan** – Adzh-Bogdo Mts (NE. slope), near Khalba-Khairkhan Mt, 1,700 m, 45°03' N 94°59' E; 22) **Dzalen-Sudzhijn-Bulak** – Adzh-Bogdo Mts (N. slope), Dzalen-Sudzhijn-Bulak spring, 1,200 m, 45°06' N 94°45' E; 23) **Zhargalan** – Khasgt-Khairkhan Mts, 17 km SSW. Zhargalan, 2,500–2,900 m, 46°48' N 95°49' E.

### Physical and geographical characteristics of the study region

The Mongolian Altai, as mentioned above, is the south-eastern part of the Altai mountain region. An orographic scheme is presented in Fig. 8. Relief elements 55–79 and 83 belong to the Mongolian Altai which is a mountain system in Mongolia and China. It extends 1000 km from the north-west to the south-east, its width is 300 km in the north-east and 150 km in the south-east. The maximum altitude of 4,362 m is reached at Munkh-Khairhan-Ula, a mountain that consists of several parallel ridges crossed by transverse valleys. The peaks of the ridges are mostly plateau-like, the crested parts consisting mostly of cirques and cornice glaciers (the largest one is Potanin glacier). The Dzhungarian (south-eastern slope) macro-slope of the Mongolian Altai differs radically from the north-eastern slope by having rich and extremely original biota. The south-western slopes receive more precipitation than the north-eastern ones; as a consequence, these slopes have forest-meadow landscapes (spruce and larch predominate in the forests) that change into steppe at a lower zone but with alpine meadows in the upper zone. The north-eastern slopes consist mostly of steppe and semi-desert, inter-montane troughs. The mountain system of the Mongolian Altai is similar to the high mountains of the Altai Republic (Russia) in the north, while the semi-deserts and deserts of Dzhungaria and Gobi are situated in the west and the south, and all of the north-eastern part of the system adjoins with the semi-deserts of the Great Lakes Depression. The Alag-Noor depression is situated in the northern part of the Mongolian Altai; this depression divides it from the lower Gobian Altai. A biogeographical division of the Mongolian Altai (based on the distribution of Papilionoidea and other groups of Insecta) was first undertaken by the author of the present paper and by R. V. Yakovlev (Gus'kova & Yakovlev, 2011; Yakovlev, 2012).

### An annotated list of the Chrysomelidae (Donaciinae, Criocerinae, Eumolpinae and Galerucinae) fauna of the Mongolian Altai

In the present paper we provide an annotated list of the Chrysomelidae from the Mongolian Altai. When compiling the list we also resorted to published literature data of other research workers. The three species newly recorded from the Mongolian Altai are marked with an asterisk(\*).

**DONACIINAE** Kirby, 1837

**DONACIA** Fabricius, 1775

*Donacia (Donaciella)* Reitter, 1920

*D. (Donaciella) clavipes glabrata* Solsky, 1872

Medvedev, 1978: 190; 1982: 205; Lopatin, Aleksandrovich & Konstantinov, 2004: 18; Kippenberg, 2010: 355.

**Distribution.** E. Siberia, Maritime Prov., Mongolia.

*Donacia (Donaciomima)* L. Medvedev, 1973

*\*D. (Donaciomima) dentata* Hoppe, 1795

**Distribution.** Europe except for the extreme north, Kazakhstan, W. Siberia, Mongolia.

**Material examined.** Bulgan, 9.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC).

**Comment.** Newly recorded for the fauna of Mongolia.

*\*D. (Donaciomima) thalassina thalassina* Germar, 1811

Medvedev, 1978: 190; 1982: 206; Lopatin, Aleksandrovich & Konstantinov, 2004: 20; Kippenberg, 2010: 356.

**Distribution.** Trans-Palaeartic species (Bieńkowski & Orlova-Bieńkowskaja, 2004).



*Photo:* P. Kosachev

**Fig. 5.** Hovd aimak, 30 km S. Altai somon, Bodonchijn-Gol river valley (lower stream), Elkhony-Ekhen-Tal, 1,200 m, 45°43'N 92°05'E.



*Photo:* R. Yakovlev

**Fig. 6.** Gobi-Altai aimak, Dzhungarian Gobi, 15 km N. of Alag-Nuur lake.



Photo: R. Yakovlev

Fig. 7. Gobi-Altai aimak, Adzh-Bogdo Mt.(S. sl.), Il-Gol Valley.

**Material examined.** Bulgan-Gol Valley, 19.vii.2009 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC).

**Comment.** Newly recorded for the fauna of Mongolia.

*D. (Donaciomima) thalassina intermedia* Jacobson, 1899

Lopatin, Aleksandrovich & Konstantinov, 2004: 20; Kippenberg, 2010: 356.

**Distribution.** Siberia, Maritime Prov., Mongolia.

**Material examined.** Bulgan, 9.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC).

**Comment.** Newly recorded from Hovd aimak; previously known from Gobi-Altai aimak.

*D. (Donaciomima) vulgaris* Zschach, 1788

**Distribution.** Throughout the Palaearctic region.

**Material examined.** 10 km E. of Bulgan somon, 7.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Bulgan, 9.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC).

**Comment.** Newly recorded from the Mongolian Altai; previously known from the east of Mongolia.

*D. (Donaciomima) simplex* Fabricius, 1775

Lopatin, Aleksandrovich & Konstantinov, 2004: 20; Kippenberg, 2010: 356.

**Distribution.** West and central Europe, S. Siberia, Transbaikalia, Mongolia.

**Material examined.** 10 km E. of Bulgan, 7.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC).

**CRIOCERINAE** Latreille, 1804

*LILIOCERIS* Reitter, 1913

*L. merdigera* (Linnaeus, 1758)

Lopatin, 1966: 230; 1975: 193; Medvedev & Voronova, 1977a: 320; Medvedev, 1982: 210;

Lopatin, Aleksandrovich & Konstantinov, 2004: 27; Kippenberg, 2010: 356.

**Distribution.** Europe, Kazakhstan, Siberia, N. China, Korea, Japan, N. Mongolia.

**CRIOCERIS** Geoffroy, 1762

**C. duodecimpunctata** (Linnaeus, 1758)

Lopatin, 1975: 153; Medvedev, 1982: 208; Kippenberg, 2010: 360.

**Distribution.** Europe, Kazakhstan, Central Asia, southern parts of W. Siberia, Mongolia.

**C. iliensis** Weise, 1900

Medvedev & Voronova, 1977a: 320; Medvedev, 1982: 209; Lopatin, Aleksandrovich & Konstantinov, 2004: 28.

**Distribution.** Kazakhstan, Turkmenistan, Mongolia.

**C. oschanini** Dohrn, 1884

Kaszab, 1977: 65; Lopatin, 1975: 153; Medvedev, 1982: 209; Lopatin, Aleksandrovich & Konstantinov, 2004: 28.

**Distribution.** Kazakhstan, Central Asia, Mongolia.

**C. quatuordecimpunctata** (Scopoli, 1763)

Medvedev & Voronova, 1977a: 320; Medvedev, 1982: 209; Lopatin, Aleksandrovich & Konstantinov, 2004: 29.

**Distribution.** Europe, Amurland, Khabarovsk Prov., Maritime Prov., NE. China, Korea, Japan, Mongolia.

**OULEMA** des Gozis, 1886

**O. obscura** (Stephens, 1831)

= *O. gallaeciana* (Heyden, 1870)

= *O. lichenis* Voët, 1806

Lopatin, 1964: 365; 1966: 229; 1977: 153; Medvedev & Voronova, 1976: 222; 1977a: 320; 1979: 98; Shurovenkov, 1979: 250; Medvedev, 1982: 211; Lopatin, Aleksandrovich & Konstantinov, 2004: 29; Kippenberg, 2010: 367.

**Distribution.** Europe, Caucasus, West and central Siberia, Altai, Yakutia, Maritime Prov., Kamchatka, Sakhalin, Mongolia.

**Material examined.** Dod-Naryin-gol, 26.vi.2005 (*R. Yakovlev* & *D. Ryzhkov*) (EGC); Dod-Naryin-Gol, 14.vii.2007 (*E. V. Gus'kova* & *R. V. Yakovlev*) (EGC); Barangijn-Shara-Nuruu Mts, 11.vii.2007 (*E. V. Gus'kova* & *R. V. Yakovlev*) (EGC); Bulgan-Gol Valley, 12.vii.2007 (*E. V. Gus'kova* & *R. V. Yakovlev*) (EGC); Arshantyn-Nuruu, 12.vii.2007 (*E. V. Gus'kova* & *R. V. Yakovlev*) (EGC).

**O. melanopus** (Linnaeus, 1758)

Gus'kova, 2006: 304.

**Distribution.** Europe, Caucasus, West and central Siberia, Altai, Yakutia, North Africa, Iran, Afghanistan, Mongolia.

**Material examined.** Dod-Naryin-gol, 26.vi.2005 (*R. Yakovlev* & *D. Ryzhkov*) (EGC); Dod-Naryin-Gol, 14.vii.2007 (*E. V. Gus'kova* & *R. V. Yakovlev*) (EGC); Barangijn-Shara-Nuruu, 11.vii.2007 (*E. V. Gus'kova* & *R. V. Yakovlev*) (EGC); Bulgan-Gol Valley, 12.vii.2007 (*E. V. Gus'kova* & *R. V. Yakovlev*) (EGC); Arshantyn-Nuruu, 12.vii.2007 (*E. V. Gus'kova* & *R. V. Yakovlev*) (EGC); Bulgan (upper), 16.vii.2007 (*E. V. Gus'kova* & *R. V. Yakovlev*) (EGC).

**Comment.** Newly recorded from Bayan-Ulegei aimak.

**LEMA** Fabricius, 1798

**L. decempunctata** Gebler, 1830

Lopatin, 1968: 207; 1970: 249; 1971: 219; 1975: 193; Medvedev & Voronova, 1976: 222; 1977a: 320; 1977b: 218; 1979: 99; Medvedev & Zaitzev, 1977: 354; 1978: 52; Medvedev, 1982: 211; Kippenberg 2010: 362.

**Distribution.** Altai, Maritime Prov., Kazakhstan, N. China, Japan, Mongolia.

**Material examined.** Barangijn-Shara-Nuruu, 11.vii.2007 (*E. V. Gus'kova* & *R. V. Yakovlev*) (EGC); Uvkhod-Ula, 9.vii.2009 (*E. V. Gus'kova* & *R. V. Yakovlev*) (EGC); Hara-Adzragyn-Nuru, 15–16.vii.2010 (*E. V. Gus'kova* & *R. V. Yakovlev*) (EGC).



**EUMOLPINAE** Hope, 1840**CHLOROPTERUS** Morawitz, 1861**Ch. grandis** Weise, 1889

Lopatin, 1966: 233; 1970: 251; 1975: 205; Medvedev & Voronova, 1977a: 330; 1979: 108; Medvedev, 1979: 164; 1982: 235; Lopatin, Aleksandrovich & Konstantinov, 2004: 76; Kippenberg, 2010: 640.

**Distribution.** Kazakhstan, Turkmenistan, Uzbekistan, Tajikistan, Mongolia.

**Material examined.** Barangijn-Shara-Nuruu, 11.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Alag-Nuur, 16.vii.2009 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Alag-Nuur, 1–2.vi.2011 (*R. Yakovlev*) (EGC).

**BROMIUS** Dejean, 1836**B. obscurus** (Linnaeus, 1758)

**Distribution.** Throughout the Palaearctic region.

**Material examined.** Elt-Gol river, 1–8.7.2005 (*R. Yakovlev & D. Ryzhkov*).

**CHRYSOCHUS** (Dejean, 1836)

= *Eumolpus* Illiger, 1798

**Ch. goniostoma** (Weise, 1889)

Lopatin, 1966: 233; 1967: 160; 1968: 211; 1970: 252; 1971: 224; 1975: 206; Mohr, 1966: 368; Medvedev & Voronova, 1976: 226; 1977a: 330; 1977b: 219; 1978: 13; 1979: 109; Medvedev & Pustovoi, 1977: 206; Medvedev, 1979: 164; 1982: 236; Lopatin, Aleksandrovich & Konstantinov, 2004: 78; Kippenberg, 2010: 631.

**Distribution.** Kazakhstan, S. Siberia, N. China, Mongolia.

**Material examined.** Bulgan (upper), 28.vi.2005 (*R. Yakovlev & D. Ryzhkov*) (EGC); Dod-Naryjn-Gol Valley, 14.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC).

**Comment.** Newly recorded from Bayan-Ulegei aimak.

**CHRYSOCHARES** Morawitz, 1861**Ch. punctatus** (Gebler, 1845)

Lopatin, 1970: 252; 1975: 206; Medvedev & Voronova, 1978: 14; Medvedev, 1982: 237; Lopatin, Aleksandrovich & Konstantinov, 2004: 78; Kippenberg, 2010: 631.

**Distribution.** Kazakhstan, Turkmenistan, Uzbekistan, S. and N. Tajikistan, NW. China, Mongolia.

**Material examined.** Barangijn-Shara-Nuruu, 11.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Alag-Nuur, 16.vii.2009 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC).

**Ch. asiaticus** (Pallas, 1771)

Medvedev & Voronova, 1977a: 330; 1978: 14; 1979: 109; Medvedev, 1982: 237.

**Distribution.** Azerbaijan, S. European Russia, Kazakhstan, Uzbekistan, Tajikistan, Mongolia.

**Material examined.** Uench, 14.viii.1976 (*L. N. Medvedev, K. Voronova*) (LMC).

**PACHNEPHORUS** Dejean, 1836**Pachnephorus (Pachnephorus)** Dejean, 1836**P. (Pachnephorus) tessellatus** (Duftschmidt, 1825)

Lopatin, 1968: 211; 1975: 205; 1977: 153; Medvedev, 1978: 192; 1982: 237.

**Distribution.** Europe, Caucasus, Central Asia, Kazakhstan, Altai, W. and central Siberia, Yakutia, Amurland, Maritime Prov., Afghanistan, Mongolia, N. China, Korea.

**GALERUCINAE** Latreille, 1802**GALERUCELLA** Crotch, 1873**Galerucella (Galerucella)** Crotch, 1873**G. (Galerucella) grisescens** (Joannis, 1865)

Lopatin, 1968: 214; 1971: 229; 1975: 220; 1977: 154; Medvedev & Voronova, 1977a: 339; Medvedev, 1982: 262; Kippenberg, 2010: 445.

**Distribution.** Europe, Siberia, Kazakhstan, Sakhalin, Japan, China, Mongolia.

**Material examined.** Hara-Adzragyn-Nuru, 15–16.vii.2010 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC).

**Comment.** Newly recorded from Gobi-Altai aimak; previously known only from Hovd aimak in the Mongolian Altai.

**G. (*Galerucella*) *nymphaeae*** (Linnaeus, 1758)

Lopatin, 1971: 229; 1975: 220; 1977: 154; Medvedev & Dubeshko, 1974: 192; Medvedev & Voronova, 1979: 120; Medvedev, 1982: 262; Kippenberg, 2010: 449.

**Distribution.** Throughout the Palaearctic region.

***Galerucella* (*Neogalerucella*) *Chûjô***, 1962

**G. (*Neogalerucella*) *lineola*** (Fabricius, 1781)

Lopatin, 1968: 214; 1975: 220; 1977: 154; Medvedev & Voronova, 1976: 230; 1977a: 339; 1979: 120; Medvedev, 1982: 261; Kippenberg, 2010: 449.



**Fig. 8.** Orography of Altai Mountain Country (from R. V. Kamelin, 2005 and Yakovlev, 2012). Ridges: 1, Abakanskij; 2, Bijskaya Griva; 3, Altyn-Tau; 4, Sumul'tinkij; 5, Iolgo; 6, Cherginskij; 7, Anujskij; 8, Baschelakskij; 9, Tigirezskij; 9a, Kolyvanskij Kryazh; 10, Korgonskij; 11, Koksujskij; 12, Ubinskij; 13, Ivanovskij; 14, Ul'binskij; 15, Kholzun; 16, Listvyaga; 17, Terektinskij; 18, Seminskij; 19, Ajgulakskij; 20, Karlygan; 21, Dzhebashskij; 22, Saldzhur; 23, Shapshal'skij; 24, Sayanskij; 25, Khemchikskij; 26, Western Tannu-Ola; 27, Tsagan-Shibetu; 28, Kurajskij; 29, Shavlinskij; 30, Northern Tchuya Alps; 31, Southern Tchuya Alps; 32, Katunskij; 33, Sarymsakty (including small Tarbagataj); 34, Narymskij; 35, Kurchumskij; 36, Kalbinskij; 37, Airtau; 38, Southern Altai; 39, Asutau; 40, Kabinskij; 41, Saur; 42, Monrak; 43, Semistaj; 44, Tarbagataj; 45, Okpekty; 46, Zharminsko-Ayaguzskij; 47, Verkhnecharskij; 48, Tabyin-Bogdo-Ula; 49, Sajlyugem; 50, Talduair; 51, Chikhacheva; 52, Mongun-Taiga; 53, Turgen-Ula; 54, Kharkhiraa; 55, Mongolian Altai (general); 56, Bayan-Ula; 57, Kujten-Ula; 58, Tsengel-Ula; 59, Zast-Ula; 60, Munkh-Kairkhan; 61, Chingil'skij; 62, Bulugunskij; 63, Batar-Khairkhan; 64, Sutaj-Ula; 65, Darvijn-Nura; 66, Alag-Khairkhan; 67, Uirten-Khuren-Ula; 68, Burkhan-Budaj-Ula; 69, Gichigenijn-Nuru; 70, Khasagt-Khairkhan; 71, Khan-Tajshiryin-Nuru; 72, Sarkh-Ula; 73, Adzh-Bogdo; 74, Alag-Nuru; 75, Takhijn-Shar-Nuru; 76, Khavatiijn-Nuru; 77, Bajtag-Bogdo; 78, Altan-Khukhijin; 79, Bumbat-Ula; Plateaus, 80, Alashskoe; 81, Chulyshmanskoe; 82, Ukok; 83, Ulgijskoe.

**Distribution.** Europe, North Africa, Kazakhstan, Siberia, Sakhalin, China, Japan, Mongolia.

**G. (*Neogalerucella*) *tenella*** (Linnaeus, 1760)

Ogloblin, 1936: 118; Lopatin, 1968: 214; 1975: 220; 1977: 154; Medvedev & Dubeshko, 1974: 192; Medvedev & Voronova, 1976: 230; 1977a: 339; 1979: 120; Medvedev, 1982: 262; Kippenberg, 2010: 449.

**Distribution.** Europe, Kazakhstan, Siberia, Sakhalin, Japan, China, Mongolia.

**Material examined.** Hundijn-Gol, 21.vi.2005 (*R. Yakovlev & D. Ryzhkov*) (EGC).

**GALERUCA** Geoffroy, 1762

***Galeruca* (*Galeruca*)** Geoffroy, 1762

**G. (*Galeruca*) *daurica*** (Joannis, 1866)

= *Adimonia sedakovi Joannis*, 1866

Medvedev, 1982: 258; Kippenberg, 2010: 446.

**Distribution.** Sayan, Cisbaikalia, Transbaikalia, Yakutia, Far East, Mongolia.

**Material examined.** Bidzh-Altai, 6.viii.1976 (*L. N. Medvedev*) (LMC).

**G. (*Galeruca*) *jucunda*** (Faldermann, 1837)

= *G. interrupta circumdata* (Duftschmidt, 1825)

Ogloblin, 1936: 34; Medvedev & Dubeshko, 1974: 191; Lopatin, 1975: 218; Medvedev & Voronova, 1976: 229; 1977a: 337; 1979: 117; Medvedev, 1982: 258; Kippenberg, 2010: 446.

**Distribution.** Europe, S. Siberia, Tibet, China, Mongolia.

**Material examined.** Arshantyn-Nuruu, 23–25.vi.2005 (*R. Yakovlev & D. Ryzhkov*) (EGC); Elkhony-Ekhen-Tal, 7.vi.2011 (*R. Yakovlev*) (EGC).

**G. (*Galeruca*) *nigrolineata*** Mannerheim, 1825

Medvedev & Voronova, 1977a: 337; 1979: 119; Medvedev, 1982: 258; Kippenberg, 2010: 447.

**Distribution.** S. Altai, E. Kazakhstan, Mongolia.

**Material examined.** Bulgan (upper), 28.vi.2005 (*R. Yakovlev & D. Ryzhkov*) (EGC); Arshantyn-Nuruu, 9–10.vi.2011 (*R. Yakovlev*) (EGC).

**G. (*Galeruca*) *pomona*** (Scopoli, 1763)

Lopatin, 1968: 214; 1975: 218; Medvedev & Dubeshko, 1974: 192; Medvedev & Voronova, 1977a: 337; 1979: 117; Medvedev, 1982: 255; Lopatin, Aleksandrovich & Konstantinov, 2004: 132.

**Distribution.** Europe, Kazakhstan, Siberia, W. and N. Mongolia.

**Material examined.** Altai, 27.vii.1970 (*Kerzhner*) (ZIN).

**G. (*Galeruca*) *tanacetii inciscollis*** (Motschulsky, 1860)

Ogloblin, 1936: 34; Lopatin, 1967: 163; 1968: 214; 1971: 227; 1975: 218; Medvedev & Dubeshko, 1974: 191; Medvedev & Voronova, 1976: 229; 1977a: 337; 1977b: 219; 1979: 117; Medvedev, 1982: 257.

**Distribution.** Siberia, Far East, Mongolia.

**Material examined.** Elt-Gol, 1–8.vii.2005 (*R. Yakovlev & D. Ryzhkov*) (EGC); Uenchin-Gol, 6.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Il-Gol, 15.vii.2009 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Tsengel, 21.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Zhargalan, 19–21.vii.2010 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Tsengel, 25–27.vii.2010 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Khalba-Khairkhan, 3–4.vi.2011 (*R. Yakovlev*) (EGC).

**DIORHABDA** Weise, 1883

***D. elongata*** (Brullé, 1832)

Ogloblin, 1936: 77; Lopatin, 1968: 214; 1970: 254; 1975: 219; 1977: 154; Medvedev & Voronova, 1977a: 339; 1977c: 238; 1979: 119; Medvedev, 1982: 259.

**Distribution.** Mediterranean region, Central Asia, Mongolia.

**Material examined.** Barangjin-Shara-Nuruu, 11.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Arshantyn-Nuruu, 12.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Bulgan (upper), 16.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Alag-Nuur, 16.vii.2009 (*E. V.*

*Gus'kova & R. V. Yakovlev* (EGC); Tsengel, 25–27.vii.2010 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Alag-Nuur, 1–2.vi.2011 (*R. Yakovlev*) (EGC); Dzalen-Sudzhijn-Bulak, 3.vi.2011 (*R. Yakovlev*) (EGC).

**Comment.** Newly recorded from Bayan-Ulegei aimak; previously known only from Hovd aimak and Gobi-Altai aimak in Mongolia.

***D. rybakowi*** Weise, 1890

Ogloblin, 1936: 34; Lopatin, 1970: 254; 1975: 219; Medvedev & Voronova, 1977a: 339; 1977c: 240; 1979: 120; Medvedev & Pustovoi, 1977: 207; Medvedev, 1982: 259; Kippenberg, 2010: 445.

**Distribution.** SE. Kazakhstan, NE. China, Mongolia.

**PALLASIOLA** Jacobson, 1925

***P. absinthii*** (Pallas, 1773)

Ogloblin, 1936: 34; Lopatin, 1970: 254; 1975: 219; Medvedev & Voronova, 1977a: 339; 1977b: 240; 1979: 120; Medvedev & Pustovoi, 1977: 207; Medvedev, 1982: 259; Lopatin, Aleksandrovich & Konstantinov, 2004: 134.

**Distribution.** Kazakhstan, southern parts of Siberia, Far East, N. China, Mongolia.

**Material examined.** Bulgan (upper), 16.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Tsengel, 25–27.vi.2010 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC).

**THEONE** Gistel, 1857

***T. silphoides*** (Dalman, 1823)

Medvedev, 1978: 260; 1982: 260.

**Distribution.** SE. European part of Russia, Dagestan, steppes of Kazakhstan, Mongolia.

**Material examined.** Barangijn-Shara-Nuruu, 11.vi.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Arshantyn-Nuruu, 12.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC).

**Comment.** Newly recorded from Hovd aimak; previously known only from Gobi-Altai aimak in Mongolia.

**AGELASTICA** Dejean, 1836

***A. alni orientalis*** Baly, 1878

Medvedev, 1978: 194; 1982: 264; Kippenberg, 2010: 455.

**Distribution.** Central Asia, SE. Kazakhstan, W. China, Mongolia.

**Material examined.** Bulgan-gol Valley, 15.v.2002 (*R. Yakovlev*) (EGC); Elkhony-Ekhen-Tal, 7.vi.2011 (*R. Yakovlev*) (EGC).

**LUPERUS** Geoffroy, 1762

***L. dmitrii*** Bezdek & Beenen, 2010

= *L. anthracinus* Ogloblin, 1936

Ogloblin, 1936: 289; Lopatin, 1968: 215; 1975: 221; Medvedev & Voronova, 1977a: 340; Medvedev, 1982: 264; Lopatin, Aleksandrovich & Konstantinov, 2004: 140.

**Distribution.** Altai, Mongolia.

**Material examined.** Bulgan (upper), 16.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC); Tsengel, 21.vii.2007 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC).

***L. longicornis*** (Fabricius, 1781)

Lopatin, 1967:163; 1968: 214; 1971: 227; 1975: 218; Medvedev & Dubeshko, 1974: 191; Medvedev & Voronova, 1976: 229; 1977a: 340; 1979: 120; Medvedev, 1982: 265; Kippenberg, 2010: 480.

**Distribution.** Europe, Caucasus, Far East, Mongolia.

**Material examined.** Hara-Us-Nur, 5.viii.1970 (ZIN).

***L. luperus*** (Sulzer, 1776)

**Distribution.** Central and E. Europe, W. Siberia, Mongolia.

**Material examined.** Tsengel, 25–27.vii.2010 (*E. V. Gus'kova & R. V. Yakovlev*) (EGC).

**Comment.** Newly recorded from the Mongolian Altai; previously known only from eastern Khangai Mongolia.

\**L. xanthopoda* (Schrank, 1781)

**Distribution.** Southern parts of Central and E. Europe, Ciscaucasia, Kirghizstan, SE. Kazakhstan, Mongolia.

**Material examined.** Tsengel, 21.vii.2007 (*E. V. Gus'kova* & *R. V. Yakovlev*) (EGC).

**Comment.** Newly recorded from Mongolia.

## Results

Three species of leaf-beetles, *Donacia dentata* Hoppe, 1795, *D. thalassina* Germar, 1811, and *Luperus xanthopoda* (Schrank, 1781), are new records from Mongolia. Three species, *Donacia thalassina intermedia* Jacobson, 1899, *Donacia vulgaris* Zschach, 1788, and *Luperus luperus* (Sulzer, 1776) are newly recorded from the Mongolian Altai, two species are new for Bayan-Ulegei aimak, two species are new for Hovd aimak and one is new for Gobi-Altai aimak. A checklist of species within the subfamilies Donaciinae, Criocerinae, Eumolpinae and Galerucinae is provided. Currently, 38 species representing 17 genera in these subfamilies are known from the Mongolian Altai.

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