

New records of true bugs (Heteroptera) from the Kemerovo Region (West Siberia, Russia). II.

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The paper presents data on 38 species of true bugs from 11 families found in the Kemerovo Region (Western Siberia) on recultivated coal mining sites. Of these, *Spathocera laticornis* (Schilling, 1829) (Coreidae) is a new record for the Asian part of Russia. A total of 36 species have been identified for the fauna of the Kemerovo Region for the first time: *Prostemma kiborti* Jakovlev, 1889, *Nabis americolimbatus* (Carayon, 1961) (Nabidae); *Tetraphleps aterrma* (J. Sahlberg, 1878) (Anthocoridae); *Dicyphus stachydis* J. Sahlberg, 1878, *Deraeocoris punctulatus* (Fallén, 1807), *Mecomma dispar* (Boheman, 1852) (Miridae); *Acalypta marginata* (Wolff, 1804), *Dictyla humuli* (Fabricius, 1794), *Kalama tricornis* (Schrank, 1801), *Oncochila simplex* (Herrich-Schaeffer, 1833) (Tingidae); *Berytinus crassipes* (Herrich-Schaeffer, 1835) (Berytidae); *Drymus brunneus brunneus* (R.F. Sahlberg, 1848), *D. ryeii* Douglas & Scott, 1865, *Ischnocoris punctulatus* Fieber, 1861, *Lamproplax membranosa* Distant, 1883, *Scolopostethus affinis* (Schilling, 1829), *S. pilosus pilosus* Reuter, 1875, *S. thomsoni* Reuter, 1875, *Emblethis brachynotus* Horváth, 1897, *E. denticollis* Horváth, 1878, *E. filicornis* Linnavuori, 1954, *Trapezonotus anorus* (Flor, 1860), *Megalonotus antennatus* (Schilling, 1829), *M. hirsutus* Fieber, 1861, *M. sabulicola* (Thomson, 1870), *Plinthisus pusillus* (Scholtz, 1847), *Graptopeltus lynceus* (Fabricius, 1775), *Peritrechus convivus* (Stål, 1858) (Lygaeidae); *Dicranocephalus agilis* (Scopoli, 1763), *D. medius* (Mulsant & Rey, 1870) (Stenocephalidae); *Bathysolen nubilus* (Fallén, 1807), *Coriomeris denticulatus* (Scopoli, 1763), *Nemocoris fallenii* R.F. Sahlberg, 1848 (Coreidae); *Ochetostethus opacus* (Scholtz, 1847) (Cydnidae); *Odontoscelis fuliginosa* (Linnaeus, 1761) (Scutelleridae); *Sciocoris distinctus* Fieber, 1851 (Pentatomidae). The ranges of some poorly studied species known from isolated records in Siberia have been specified. A rare female macroptera form of *Himacerus apterus* (Fabricius, 1798) (Nabidae) has been identified. According to the latest data, 244 species of true bugs from 28 families have been recorded in the Kemerovo Region.

Acta Biologica Sibirica 10: 1053–1073 (2024)

doi: 10.5281/zenodo.13859425

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Academic editor: R. Yakovlev | Received 25 August 2024 | Accepted 14 September 2024 | Published 2 October 2024

<http://zoobank.org/85BED56D-C01F-46B2-ABE3-66232F85C554>

Citation: Rudoi VV, Vinokurov NN, Luzyanin SL (2024) New records of true bugs (Heteroptera)

from the Kemerovo Region (West Siberia, Russia). II. Acta Biologica Sibirica 10: 1053–1073.
<https://doi.org/10.5281/zenodo.13859425>

Keywords

Biodiversity, true bugs, forma macroptera, new records, Kemerovo Region, Western Siberia

Introduction

Despite two centuries of research into true bugs of Western Siberia, which commenced with the works by F.A. Gebl (1817, 1830), many regions of the Asian part of Russia have not yet been explored sufficiently, except for the Altai Republic, Altai Krai, and the Tyumen Region (Vinokurov et al. 2010). Poorly studied territories include the Kemerovo Region, where a significant part of the densely populated Kuznetsk Basin is subject to strong anthropogenic impact, including plowing and other transformations caused by mining. Comprehensive ecological and faunal studies of true bugs in the region were conducted only in the city of Kemerovo (Eremeeva 2002, 2003; Zolotarev 2001a, 2001b, 2002a, 2002b, 2002c, 2003a, 2003b, 2003c, 2003d, 2003e, 2003f, 2005a, 2005b). Previous studies (Rudoj et al. 2022) have only addressed the region in a limited manner. This paper aimed to examine true bugs collected on the recultivated sites of open-pit coal mines.

Materials and methods

The studies were conducted between 2013 and 2019 on the Krasnobrodsk and Kedrovsk recultivated dumps of open-pit coal mines of different age. The first open-pit coal mine is situated in the forest-steppe zone of the central part of the Kuznetsk basin, and the second one is located in the forest zone on the northern border of the forest-steppe in the Kuznetsk basin and the northwestern part of the subtaiga in the Kuznetsk Alatau (Fig. 1). These areas were subjected to technical and biological reclamation. More detailed characteristics of the study areas are provided in Luzyanin (2023) and Luzyanin et al. (2023a, 2023b).

The material was collected by S.L. Luzyanin between May and August using plastic 250 ml cups as soil traps. A 4% solution of acetic acid (CH₃COOH) was used as a fixative. The traps were installed along a linear transect in groups of 10 and were checked every 7–10 days.

The following survey plots were identified at each of the open-pit coal mines:

Coal mine	Plot	Recultivation time, height asl.	Coordinates
Kedrovsk (Kedr)	1	7 years, H = 203 m	55°30'38.56"N, 86°04'00.44"E
	2	25 years, H = 201 m	55°30'31.46"N, 86°04'12.43"E
	3	at the foot of the 25-year dump, H = 164 m	55°30'29.70"N, 86°04'52.64"E
	4	control, H = 264 m	55°33'26.17"N, 86°10'02.75"E
Krasnobrodsk (Krb)	1	2 years, H = 260 m	54°08'40.88"N, 86°27'27.04"E
	2	7 years, H = 302m	54°09'06.84"N, 86°31'19.09"E
	3	25 years, H = 289 m	54°09'16.99"N, 86°31'40.73"E
	4	at the foot of the 25-year dump, H = 266 m	54°09'19.2"N, 86°32'18.1"E
	5	control, H = 293 m	54°12'10.76"N, 86°31'41.34"E

Table 1.

The distribution of species in the administrative territories adjacent to the Kemerovo Region is presented in accordance with the Catalogue of Heteroptera of the Asian Part of Russia (Vinokurov et al. 2010) and subsequent data published thereafter (Babichev and Vinokurov 2011; Vinokurov and Golub 2016; Babichev and Kuzhuget 2019; Kuzhuget 2019; Vinokurov 2019; Golub et al. 2021). If species have not been recorded within the territories adjacent to the Kemerovo Region, the closest findings are indicated.

Results

Family Nabidae A. Costa, 1853

Genus *Prostemma* Laporte, 1832

Prostemma kiborti Jakovlev, 1889

Material examined. Kedr: plot 1, 21–31.07.2013, 1♀, 15.08.2013, 1♀, 8.08.2016, 1♀; Krb: plot 2, 27.05.2014, 1♀, 15–25.06.2014, 3♀, 23.07.2015, 1♀ larvae, 7.08.2016, 1♂.

Distribution. East Palaearctic. Western Siberia: Novosibirsk Region (Kiritshenko 1910), Altai Krai (Kerzhner 1981), Altai Republic (Kiritshenko 1910); Eastern Siberia: southern part of the Krasnoyarsk Krai (Jakovlev 1889; Kerzhner 1981), Republic of Khakassia (Babichev and Vinokurov 2011).

Genus *Himacerus* Wolff, 1811

Himacerus apterus (Fabricius, 1798)

Fig. 2

Material examined. Kedr: plot 3, 29.07.2016, 1 macroptera ♀.

Distribution. Trans-Eurasian. – Canada (introduced). Recorded from the Kemerovo Region: Teba River (Kerzhner 1981).

Genus *Nabis* Latreille, 1802

Nabis americolimbatus (Carayon, 1961)

Material examined. Kedr: plot 4, 4–24.07.2014, 1♀; Krb: plot 5, 18.07.16, 1♂.

Distribution. Holarctic. Western Siberia: Altai Republic (Golub et al. 2021); Eastern Siberia: southern part of the Krasnoyarsk Krai (Lindberg 1921).

Family Anthocoridae Fieber, 1836

Genus *Tetraphleps* Fieber, 1860

Tetraphleps aterrima (J. Sahlberg, 1878)

Material examined. Kedr: plot 4, 4–24.07.2014, 1♀.

Distribution. Trans-Eurasian. Western Siberia: Altai Krai (Rudoj et al. 2023); Eastern Siberia: southern part of the Krasnoyarsk Krai (Reuter 1891).

Note. This genus is new to the fauna of the Kemerovo Region.

Family Miridae Hahn, 1833

Genus *Dicyphus* Fieber, 1858

***Dicyphus stachydis* J. Sahlberg, 1878**

Fig. 3

Material examined. Kedr: plot 4, 28.06.16, 1♀.

Distribution. Euro-Yeniseyan. Eastern Siberia: southern part of the Krasnoyarsk Krai (Sahlberg 1878). Other records – Western Siberia: Tyumen Region (Vinokurov and Golub 2009; Buhkalo et al. 2014; Konstantinov and Neimorovets 2021).

Genus *Deraeocoris* Kirschbaum, 1856

***Deraeocoris punctulatus* (Fallén, 1807)**

Material examined. Krb: plot 1, 28.06.2016, 1♂.

Distribution. Holarctic. Western Siberia: Novosibirsk (Vinokurov and Golub 2007) and Tomsk Regions (Kiritshenko 1910), Altai Krai (Vinokurov and Golub 2007; Rudoï et al. 2023), Altai Republic (Kiritshenko 1910; Vinokurov and Golub 2007); Eastern Siberia: southern part of the Krasnoyarsk Krai (Sahlberg 1878; Reuter 1891; Lindberg 1921; Babichev and Kuzhuget 2019), Republic of Khakassia (Reuter 1891).



Figure 1. Collection points of true bugs in the Kemerovo Region. Circle – Kedrovsk coal mine; Star – Krasnobrodsk coal mine. 1* – Western Siberia; 2* – Eastern Siberia.

Genus *Mecomma* Fieber, 1858

***Mecomma dispar* (Boheman, 1852)**

Material examined. Kedr: plot 2, 3–13.08.2014, 1 ♀; plot 3, 9.07.2016, 1 ♀.

Distribution. Trans-Eurasian. Eastern Siberia: Republic of Khakassia (Babichev and Vinokurov 2011). Other records – Western Siberia: Tyumen Region (Vinokurov and Golub 2007).

Note. This genus is new to the fauna of the Kemerovo Region.

Family Tingidae Laporte, 1832

Genus *Acalypta* Westwood, 1840

***Acalypta marginata* (Wolff, 1804)**

Material examined. Kedr: plot 1, 21.06.2015, 1 ♂.

Distribution. Trans-Eurasian. Western Siberia: Novosibirsk Region (Petrova 1974, 1978), Altai Krai (Golub 1982; Vinokurov and Kanyukova 1995a, 1995b; Rudoï et al. 2023).

Genus *Dictyla* Stål, 1874

***Dictyla humuli* (Fabricius, 1794)**

Material examined. Kedr: plot 3, 9.07.2016, 1 ♀.

Distribution. Trans-Eurasian. Western Siberia: Novosibirsk Region (Petrova 1974, 1978), Altai Krai (Petrova 1978; Rudoï et al. 2023), Altai Republic (Petrova 1978); Eastern Siberia: southern part of the Krasnoyarsk Krai (Sahlberg 1878), Republic of Khakassia (Reuter 1891).

Genus *Kalama* Puton, 1876

***Kalama tricornis* (Schrank, 1801)**

Material examined. Kedr: plot 1, 15.08.2013, 1 ♂.

Distribution. Holarctic. Western Siberia: Altai Republic (Petrova 1978); Eastern Siberia: southern part of the Krasnoyarsk Krai (Babichev and Kuzhuget 2019), Republic of Khakassia (Kuzhuget 2019).

Note. This genus is new to the fauna of the Kemerovo Region.

Genus *Oncochila* Stål, 1873

***Oncochila simplex* (Herrich-Schaeffer, 1833)**

Material examined. Krb: plot 3, 2–16.06.2013, 1 ♂; plot 4, 5–25.07.2014, 1 ♂, 30.05.2015, 1 ♀.

Distribution. Trans-Eurasian. Western Siberia: Altai Republic (Petrova 1978); Eastern Siberia: southern part of the Krasnoyarsk Krai (Sahlberg 1878; Putshkov 1974).

Note. This genus is new to the fauna of the Kemerovo Region.

Family Berytidae Fieber, 1851

Genus *Berytinus* Kirkaldy, 1900

***Berytinus crassipes* (Herrich-Schaeffer, 1835)**

Material examined. Kedr: plot 2, 9.07.2016, 1♂.

Distribution. Euro-Siberian. Western Siberia: Altai Krai (Rudoï et al. 2023), Altai Republic (Kanyukova and Vinokurov 2009); Eastern Siberia: Republic of Khakassia (Kuzhuget 2019).

Family Lygaeidae Schilling, 1829**Genus *Drymus* Fieber, 1860*****Drymus brunneus brunneus* (R.F. Sahlberg, 1848)**

Material examined. Kedr: plot 3, 14.06–13.08.2014, 2♂, 6♀, 1.06–30.07.2015, 7♂, 2♀, 19.07–8.08.2016, 16♂, 16♀; Krb: plot 4, 5–25.07.2014, 1♂, 4–15.08.2014, 4♂, 5♀, 8–19.08.2014, 1♀, 18.07.2016, 1♂, 1♀, 13.07.2015, 1♀; plot 4, 5–15.07.2014, 1♀.

Distribution. Holarctic. Western Siberia: Altai Krai (Rudoï et al. 2023), Altai Republic (Golub et al. 2021), Tomsk Region (Vinokurov 2007a); Eastern Siberia: southern part of the Krasnoyarsk Krai (Kulik 1967).

***Drymus ryeii* Douglas Scott, 1865**

Material examined. Kedr: plot 3, 28.06.2015, 1♂; Krb: plot 3, 8.06.2016, 1♂.

Distribution. Euro-Siberian. Western Siberia: Novosibirsk Region (Vinokurov 2007a).

Genus *Ischnocoris* Fieber, 1860***Ischnocoris punctulatus* Fieber, 1861**

Fig. 4

Material examined. Kedr: plot 1, 19.07.2016, 1♂.

Distribution. Trans-Eurasian. Eastern Siberia: southern part of the Krasnoyarsk Krai (Sahlberg 1878; Putshkov 1969). Other records - Western Siberia: Tyumen Region (Kanyukova and Vinokurov 2010; Buhkalo et al. 2014); southern part without precise indication of the administrative division (Vinokurov and Kanyukova 1995a; Pericart 2001).

Notes. The distribution of *I. punctulatus* Fieb. is specified for the southern part of Western Siberia. This genus is new to the fauna of the Kemerovo Region.

Genus *Lamproplax* Douglas Scott, 1868***Lamproplax membranea* Distant, 1883**

Material examined. Kedr: plot 3, 30.07.2015, 1♂, 1♀; plot 4, 4–15.08.2014, 1♂, 28.07.2016, 2♀; Krb: plot 3, 7.08.2016, 1♂, 1♀; plot 5, 28.07–7.08.2016, 2♂, 2♀.

Distribution. Siberian-Far Eastern. Western Siberia: Altai Krai (Rudoï et al. 2023), Altai Republic (Vinokurov and Golub 2016; Golub et al. 2021).

Note. This genus is new to the fauna of the Kemerovo Region.



Figure 2. Figures 2-4. New and rare species of Heteroptera for the Kemerovo Region. 2 - *Himacerus apterus* (Fabricius, 1798) (Nabidae); 3 - *Dicyphus stachydis* J. Sahlberg, 1878 (Miridae); 4 - *Ischnocoris punctulatus* Fieber, 1861 (Lygaeidae). 2-4 - dorsal view. Vertical line: 1 mm.

Genus *Scolopostethus* Fieber, 1860

***Scolopostethus affinis* (Schilling, 1829)**

Material examined. Kedr: plot 1, 21.06.2015, 2♀.

Distribution. Euro-Yeniseyan and Central Asian Mountains. Western Siberia: Tomsk Region (Vinokurov 2007a); Eastern Siberia: southern part of the Krasnoyarsk Krai (Sahlberg 1878), Republic of Khakassia (Vinokurov 2007a).

Note. This genus is new to the fauna of the Kemerovo Region.

***Scolopostethus pilosus pilosus* Reuter, 1875**

Material examined. Kedr: plot 3, 11.06.2015, 1♂; Krb: plot 3, 2-16.06.2013, 1♂, 1♀, 19.06.2015, 1♂, 13.07.2015, 1♂; plot 4, 30.05.2015, 1♂, 26.06.2015, 1♂, 13.07.2015, 1♂.

Distribution. West-Central Palaeartic. Western Siberia: Altai Krai (Vinokurov and Rudoi 2022), Tomsk Region (Kulik 1967); Eastern Siberia: southern part of the Krasnoyarsk Krai (Sahlberg 1878).

***Scolopostethus thomsoni* Reuter, 1875**

Material examined. Kedr: plot 1, 19.07.2016, 1♂; plot 2, 20.06.2016, 1♀; plot 3, 20.06-19.07.2016, 3♂, 3♀; plot 5, 30.05-28.06.2016, 3♀; Krb: plot 3, 19.07.2015, 2♂, 2♀.

7.08.2016, 1♀; plot 4, 8.07.2016, 2♂.

Distribution. Holarctic. Western Siberia: Tomsk Region (Vinokurov 2007a), Altai Republic (Golub et al. 2021).

Genus *Emblethis* Fieber, 1860

***Emblethis brachynotus* Horváth, 1897**

Material examined. Krb: plot 1, 18.06.2016, 3♂, 1♀; plot 2, 15–25.07.2014, 4♂, 1♀, 30.05–23.07.2015, 12♂, 9♀, 18.06–8.07.2016, 4♂, 2♀.

Distribution. Trans-Eurasian. Western Siberia: Novosibirsk Region (Vinokurov 2007a), Altai Krai (Vinokurov 2007a), Altai Republic (Vinokurov 2007a); Eastern Siberia: southern part of the Krasnoyarsk Krai (Horváth 1901; Kulik 1967; Babichev and Kuzhuget 2019), Republic of Khakassia (Kulik 1967).

***Emblethis denticollis* Horváth, 1878**

Material examined. Krb: plot 1, 8.06–28.07.2016, 3♂, 9♀; plot 5, 9.06.2015, 1♂.

Distribution. West-Central Palaearctic. Western Siberia: Novosibirsk Region (Vinokurov 2007a), Altai Krai (Vinokurov 2007a; Rudoi et al. 2023), Altai Republic (Kiritshenko 1910; Vinokurov 2007a); Eastern Siberia: southern part of the Krasnoyarsk Krai (Vinokurov 2007a), Republic of Khakassia (Babichev and Vinokurov 2011).

***Emblethis filicornis* Linnavuori, 1954**

Fig. 5

Material examined. Krb: plot 1, 28.06–8.07.2016, 2♀.

Distribution. Altai and Sayan Mountains. Western Siberia: Altai Republic (Vinokurov and Kanyukova 1995a). Other records – Eastern Siberia: Republic of Tuva (Linnavuori 1954).

Notes. First record of *E. filicornis* Linn. for Salair Ridge, second record for Western Siberia and third record for Siberia.

Genus *Trapezonotus* Fieber, 1860

***Trapezonotus anorus* (Flor, 1860)**

Material examined. Kedr: plot 1, 29.07.2016, 1♂; plot 2, 3–13.08.2014, 1♂; Krb: plot 3, 14.09.2019, 1♀; plot 4, 27.05.2014, 1♀; 9–26.06.2015, 5♀; 29.05.2016, 10♂, 7♀; 8–28.06.2016, 5♂, 16♀; 18.07.2016, 1♂.

Distribution. Trans-Eurasian. Western Siberia: Novosibirsk (Vinokurov 2007a) and Tomsk Regions (Kiritshenko 1910), Altai Krai (Rudoi et al. 2023), Altai Republic (Kiritshenko 1910; Vinokurov 1990); Eastern Siberia: southern part of the Krasnoyarsk Krai (Sahlberg 1878).

Genus *Megalonotus* Fieber, 1860

***Megalonotus antennatus* (Schilling, 1829)**

Fig. 6

Material examined. Kedr: plot 1, 14–24.06.2014, 4♀, 4–24.07.2014, 3♂, 4♀, 3–15.08.2014, 1♀, 11–28.06.2015, 6♂, 21♀, 11–21.07.2015, 1♂, 3♀, 30.05–29.06.2016, 9♂, 26♀; plot 2, 4–24.07.2014, 1♂, 1♀, 3–13.08.2014, 1♂, 2♀, 21.06.2015, 2♀, 30.05–9.07.2016, 3♂, 10♀; plot 3, 30.05.2016, 1♀, 9.07.2016, 1♀; plot 4, 4–24.07.2014, 1♀, 28.06.2015, 1♂, 30.05.2016, 1♂, 3♀; Krb: plot 2, 13.07.2013, 9♂, 7♀; plot 3, 2–16.06.2013, 5♂, 6♀, 3–14.08.2013, 4♀, 6–22.06.2014, 1♀, 8.07.2016, 2♀, 6.07.2019, 1♂; plot 4, 30.05.2015, 1♀, 25.06.2013, 1♂; plot 5, 2–25.06.2013, 1♂.

Distribution. Trans-Eurasian. Eastern Siberia: southern part of the Krasnoyarsk Krai (Vinokurov 2019). Other records – Western Siberia: Tyumen Region (Galich and Ivanov 2012; Buhkalo et al. 2014); southern part without precise indication of the administrative division (Vinokurov and Kanyukova 1995a; Pericart 2001).

Note. The distribution of *M. antennatus* Schill. is specified for the southern part of Western Siberia.

***Megalonotus hirsutus* Fieber, 1861**

Material examined. Krb: plot 2, 8.06.2016, 1♀; plot 3, 13.07.2015, 2♂; plot 5, 2–25.06.2013, 5♂, 2♀.

Distribution. Euro-Siberian. Western Siberia: Novosibirsk Region (Vinokurov 2007a), Altai Republic (Kiritschenko 1910).

***Megalonotus sabulicola* (Thomson, 1870)**

Fig. 7

Material examined. Krb: plot 2, 2–16.06.2013, 1♀, 13.07.2015, 3♀, 1.06.2015, 3♀.

Distribution. Holarctic. The nearest records in Siberia – Western Siberia: Tyumen Region (Galich and Ivanov 2012; Buhkalo et al. 2014); southern part without precise indication of the administrative division (Vinokurov and Kanyukova 1995a; Pericart 2001).

Note. The distribution of *M. sabulicola* Thomson is specified for the southern part of Western Siberia.

Genus *Plinthisus* Stephens, 1829

***Plinthisus pusillus* (Scholtz, 1847)**

Fig. 8

Material examined. Krb: plot 3, 19.06.2015, 1♂.

Distribution. Trans-Eurasian. The nearest records in Siberia – Western Siberia: Tyumen Region (Kanyukova and Vinokurov 2010; Buhkalo et al. 2014); southern part without precise indication of the administrative division (Vinokurov and Kanyukova 1995a; Pericart 2001).

Notes. The distribution of *P. pusillus* Scholtz is specified for the southern part of Western Siberia. This genus is new to the fauna of the Kemerovo Region.

Genus *Graptopeltus* Stål, 1872

***Graptopeltus lynceus* (Fabricius, 1775)**

Fig. 9

Material examined. Kedr: plot 3, 29.06.2016, 1♀; Krb: plot 1, 2–25.06.2013, 3♀; plot 2, 18–28.06.2016, 2♂; plot 3, 6.07.2019, 1♀.

Distribution. West-Central Palaearctic. The nearest records in Siberia – Western Siberia: Tyumen Region (Vinokurov 2007a, 2009; Buhkalo et al. 2014).

Notes. Second record of *G. lynceus* F. for Western Siberia. The eastern boundary range is specified. This genus is new to the fauna of the Kemerovo Region.

Genus *Peritrechus* Fieber, 1860

***Peritrechus convivus* (Stål, 1858)**

Material examined. Krb: plot 1, 18.06–18.07.2016, 2♂, 14♀.

Distribution. Holarctic. Western Siberia: Altai Krai (Vinokurov 2007a; Rudoï et al. 2023), Tomsk Region (Sahlberg 1878), Altai Republic (Vinokurov 2007a); Eastern Siberia: Republic of Khakassia (Kuzhuget 2019).

Family Stenocephalidae Dallas, 1852

Genus *Dicranocephalus* Hahn, 1826

***Dicranocephalus agilis* (Scopoli, 1763)**

Material examined. Krb: plot 2, 28.06.2016, 1♀.

Distribution. West-Central Palaearctic. – Neotropics. Western Siberia: Altai Krai (Kanyukova and Vinokurov 2009; Rudoï et al. 2023).

Notes. This family, genus, and both species are new to the fauna of the Kemerovo Region.

***Dicranocephalus medius* (Mulsant Rey, 1870)**

Material examined. Krb: plot 2, 15–25.06.2014, 1♀, 13–23.07.2015, 2♀; plot 3, 6–16.06.2013, 2♂, 1♀, 30.05.2015, 1♀, 7.08.2016, 1♀; plot 4, 13.07.2013, 1♀, 6–25.06.2014, 1♀, 5–25.07.2014, 1♀, 28.06.2016, 1♀.

Distribution. Trans-Eurasian. Western Siberia: Altai Republic (Kanyukova and Vinokurov 2009); Eastern Siberia: southern part of the Krasnoyarsk Krai (Sahlberg 1878; Jakovlev 1889), Republic of Khakassia (Kanyukova and Vinokurov 2009).

Family Coreidae Leach, 1815

Genus *Bathysolen* Fieber, 1860

***Bathysolen nubilus* (Fallén, 1807)**

Material examined. Kedr: plot 1, 21–31.07.2013, 8♂; Krb: plot 1, 2–25.06.2013, 1♂, 3♀, 3–14.08.2013, 2♀; plot 2, 13.07.2013, 1♂, 3.08.2013, 2♂, 23.07.2015, 3♂, 29.05.2016, 1♂; plot 3, 2–16.06.2013, 6♂, 4♀, 9.06.2015, 1♂; plot 4, 25.06.2013, 1♂, 13.07.2013, 1♂.

Distribution. Euro-Siberian and Middle Asian. Western Siberia: Altai Krai (Kanyukova and

Vinokurov 2009); Eastern Siberia: southern part of the Krasnoyarsk Krai (Kulik 1973; Babichev and Kuzhuget 2019), Republic of Khakassia (Babichev and Vinokurov 2011).

Note. This genus is new to the fauna of the Kemerovo Region.

Genus *Coriomeris* Westwood, 1842

***Coriomeris denticulatus* (Scopoli, 1763)**

Material examined. Kedr: plot 1, 9.06.2016, 1♀; Krb: plot 4, 25.06.2013, 1♂.

Distribution. Euro-Central Asian. Western Siberia: Altai Krai (Vinokurov 2007b), Altai Republic (Vinokurov and Golub 2016).

Note. This genus is new to the fauna of the Kemerovo Region.

Genus *Nemocoris* R.F. Sahlberg, 1848

***Nemocoris fallenii* R.F. Sahlberg, 1848**

Material examined. Kedr: plot 2, 14–24.06.2014, 1♀; Krb: plot 4, 9.06.2015, 1♂.

Distribution. Trans-Eurasian. Western Siberia: Altai Krai (Kanyukova and Vinokurov 2009).

Note. This genus is new to the fauna of the Kemerovo Region.

Genus *Spathocera* Stein, 1860

***Spathocera laticornis* (Schilling, 1829)**

Fig. 10

Material examined. Krb: plot 1, 2–25.06.2013, 1♀.

Distribution. Euro-Yeniseyan. The nearest records – Republic of Kazakhstan: East Kazakhstan Region (Vinokurov et al. 2022); European part of Russia: middle and southern parts (Kiritshenko 1951; Kerzhner and Jaczewskii 1964).

Note. This species is new to the fauna of the Asian part of Russia.

Family Cydnidae Billberg, 1820

Genus *Ochetostethus* Fieber, 1860

***Ochetostethus opacus* (Scholtz, 1847)**

Material examined. Krb: plot 1, 8–17.07.2016, 3♀.

Distribution. Euro-Siberian. Western Siberia: Altai Krai (Petrova 1975), Novosibirsk Region (Petrova 1975); Eastern Siberia: southern part of the Krasnoyarsk Krai (Lindberg 1921).

Family Scutelleridae Leach, 1815

Genus *Odontoscelis* Laporte, 1833

***Odontoscelis fuliginosa* (Linnaeus, 1761)**

Material examined. Krb: plot 3, 2-16.06.2013, 1♂; plot 5, 2-25.06.2013, 1♂.

Distribution. Trans-Palaeartic. The nearest records in Siberia – Western Siberia: Tyumen Region (Galich and Ivanov 2012); Eastern Siberia: Republic of Tuva (Kuzhuget 2017; Kuzhuget and Vinokurov 2018).

Note. This genus is new to the fauna of the Kemerovo Region.

Family Pentatomidae Leach, 1815**Genus *Sciocoris* Fallén, 1829*****Sciocoris distinctus* Fieber, 1851**

Material examined. Kedr: plot 1, 19.07.2016, 1♀; plot 2, 3-13.08.2014, 1♀, 30.05.2016, 1♀.

Distribution. Trans-Palaeartic. Western Siberia: Novosibirsk Region (Petrova 1975), Altai Krai (Kiritshenko 1910; Petrova 1975; Rudoi et al. 2023), Altai Republic (Petrova 1966, 1975); Eastern Siberia: southern part of the Krasnoyarsk Krai (Sahlberg 1878; Reuter 1891; Kulik 1965; Petrova 1975; Babichev and Kuzhuget 2019), Republic of Khakassia (Babichev and Vinokurov 2011).

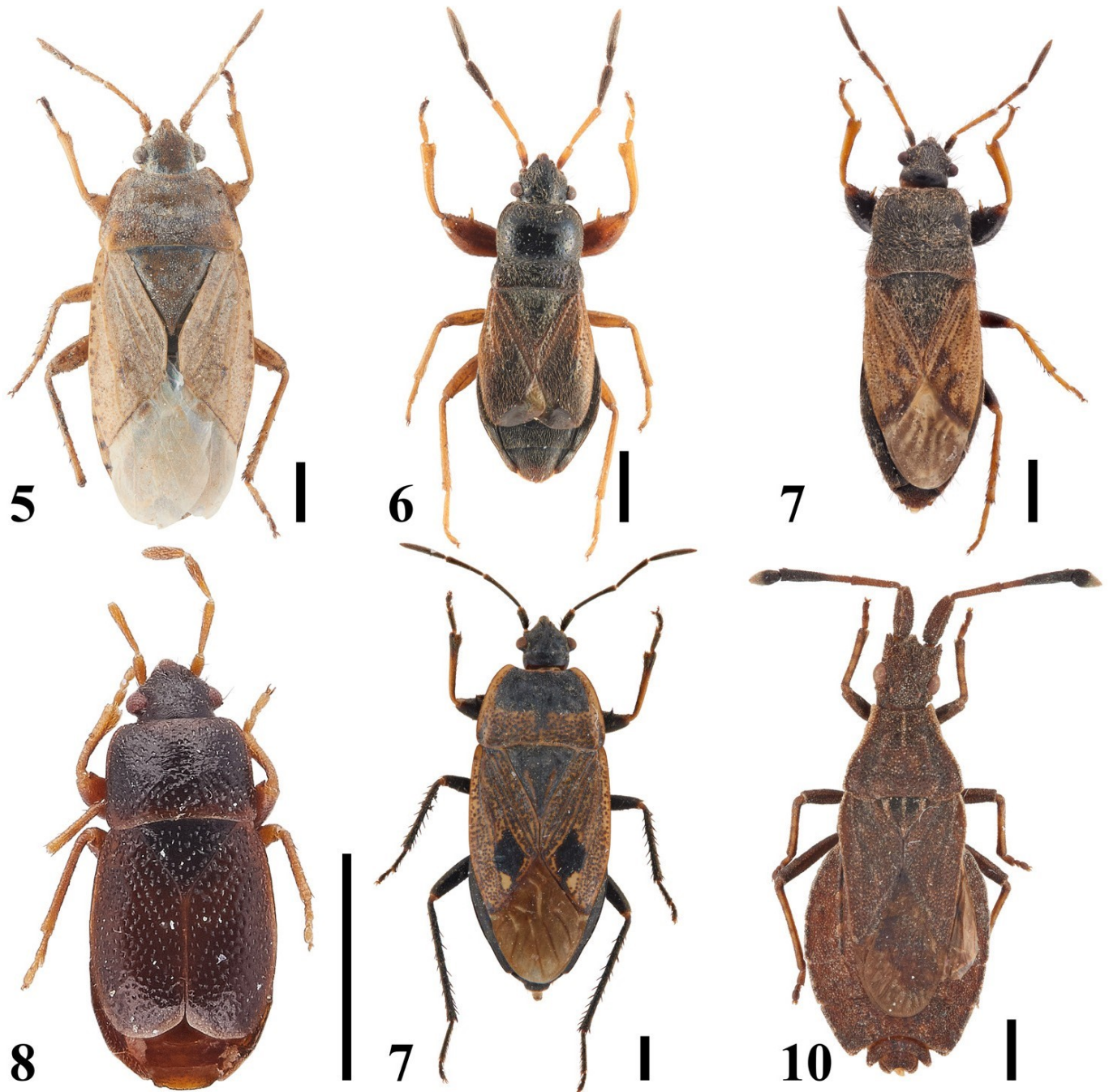


Figure 3. Figures 5-10. New species of Heteroptera for the Kemerovo Region. 5 - *Emblethis filicornis* Linnavuori, 1954; 6 - *Megalonotus hirsutus* Fieber, 1861, 7 - *Megalonotus sabulicola* (Thomson, 1870); 8 - *Plinthisus pusillus* (Scholtz, 1847), 9 - *Graptopeltus lynceus* (Fabricius, 1775) (Lygaeidae); 10 - *Spathocera laticornis* (Schilling, 1829) (Coreidae). 5-10 - dorsal view. Vertical line: 1 mm.

Discussion

As previously stated, the data available for the Heteroptera fauna of the Kemerovo Region are insufficient in comparison to those known for some adjacent territories. Studies of successional restoration processes of the invertebrate population on reclaimed dumps of different age have provided new data that significantly complement the existing knowledge on the Heteroptera fauna of this region. Consequently, the taxonomic composition of the fauna at the family level in the Kemerovo Region is augmented by the family Stenocephalidae Dallas, 1852 with the genus *Dicranocephalus* Hahn, 1826, and two species - *D. agilis* (Scopoli, 1763) and *D. medius* (Mulsant &

Rey, 1870). Furthermore, the fauna of the region is augmented by 16 genera belonging to eight families: *Prostemma* Laporte, 1832 (Nabidae); *Tetraphleps* Fieber, 1860 (Anthocoridae); *Mecomma* Fieber, 1858 (Miridae); *Kalama* Puton, 1876 and *Oncochila* Stål, 1873 (Tingidae); *Ischnocoris* Fieber, 1860, *Lamproplax* Douglas & Scott, 1868, *Scolopostethus* Fieber, 1860, *Plinthisus* Stephens, 1829 and *Graptopeltus* Stål, 1872 (Lygaeidae); *Bathysolen* Fieber, 1860, *Coriomeris* Westwood, 1842, *Nemocoris* R.F. Sahlberg, 1848 and *Spathocera* Stein, 1860 (Coreidae); *Ochetostethus* Fieber, 1860 (Cydnidae); *Odontoscelis* Laporte, 1833 (Scutelleridae).

For the first time, *Spathocera laticornis* (Schilling, 1829) (Coreidae) has been reported for the Asian part of Russia; previously, it was reported from the East Kazakhstan Region of the Republic of Kazakhstan (Vinokurov et al. 2022). This record significantly expands the range of the species to the east.

A total of 36 species new to the region were identified: *Prostemma kiborti* Jakovlev, 1889 and *Nabis americolimbatus* (Carayon, 1961) (Nabidae); *Tetraphleps aterrima* (J. Sahlberg, 1878) (Anthocoridae); *Dicyphus stachydis* J. Sahlberg, 1878, *Deraeocoris punctulatus* (Fallén, 1807) and *Mecomma dispar* (Fallén, 1807) (Miridae); *Acalypta marginata* (Wolff, 1804); *Dictyla humuli* (Fabricius, 1794), *Kalama tricornis* (Schrank, 1801) and *Oncochila simplex* (Herrich-Schaeffer, 1833) (Tingidae); *Berytinus crassipes* (Herrich-Schaeffer, 1835) (Berytidae); *Drymus brunneus brunneus* (R.F. Sahlberg, 1848), *D. ryeii* Douglas & Scott, 1865, *Ischnocoris punctulatus* Fieber, 1861, *Lamproplax membranea* Distant, 1883, *Scolopostethus affinis* (Schilling, 1829), *S. pilosus pilosus* Reuter, 1875, *S. thomsoni* Reuter, 1875, *Emblethis brachynotus* Horváth, 1897, *E. denticollis* Horváth, 1878, *E. filicornis* Linnavuori, 1954, *Trapezonotus anorus* (Flor, 1860), *Megalonotus antennatus* (Schilling, 1829), *M. hirsutus* Fieber, 1861, *M. sabulicola* (Thomson, 1870), *Plinthisus pusillus* (Scholtz, 1847), *Graptopeltus lynceus* (Fabricius, 1775) and *Peritrechus convivus* (Stål, 1858) (Lygaeidae); *Dicranocephalus agilis* (Scopoli, 1763) and *D. medius* (Mulsant & Rey, 1870) (Stenocephalidae); *Bathysolen nubilus* (Fallén, 1807), *Coriomeris denticulatus* (Scopoli, 1763) and *Nemocoris fallenii* R.F. Sahlberg, 1848 (Coreidae); *Ochetostethus opacus* (Scholtz, 1847) (Cydnidae); *Odontoscelis fuliginosa* (Linnaeus, 1761) (Scutelleridae); *Sciocoris distinctus* Fieber, 1851 (Pentatomidae).

The obtained faunal data allowed a number of updates for the Asian ranges of several Heteroptera species little known in Siberia. It was found that in the southern part of Western Siberia, the Kuznetsk Alatau Mountain range represents the eastern boundary for *Graptopeltus lynceus* F. (Lygaeidae), a species previously known from the valley of the Irtysh River. *Dicyphus stachydis* J. Sahlb. (Miridae) in the Western Siberia was reported only from the Tyumen Region (Vinokurov and Golub 2009; Buhkalo et al. 2014; Konstantinov and Neimorovets 2021), in the Eastern Siberia from southern part of the Krasnoyarsk Krai (Sahlberg 1878); in the European part of Russia, it was reported from the middle part, the North Caucasus (Konstantinov and Neimorovets 2021), and the Middle Urals (Ukhova et al. 2022). For the first time, the locations of *Ischnocoris punctulatus* Fieb., *Megalonotus antennatus* Schill., *M. sabulicola* Thoms., and *Plinthisus pusillus* Scholtz (Lygaeidae) have been specified for the southern part of Western Siberia. It is assumed that Pericart (2001) recorded these species from Western Siberia in the Catalogue of Heteroptera of the Palaearctic Region based on unpublished collection materials.

The Altai and Sayan endemic *Emblethis filicornis* Linn. (Lygaeidae) was previously known from the Republics of Tuva and Altai, as well as Western Mongolia (Vinokurov and Kanyukova 1995a). A new record of this mountain species in the study area adjacent to the Salair Ridge extends the northern boundary of the range to 54° N.

One female macropteran form of *Himacerus apterus* F. was found on the dumps of the Kedrovsk surface coal mine (Fig. 2). This record is notable, since macropterous true bugs are extremely rare in both sexes of this species. For example, the collection of the Zoological Institute of the Russian Academy of Sciences (ZIN), which includes over 500 specimens of this species, reports only 12 females and 1 male of macropterous forms (Kerzhner 1981).

Conclusions

The conducted research has extended the taxonomic list of true bugs from the Kemerovo region that currently includes 244 species from 28 families, which is assumed to be slightly more than half of the fauna diversity of this region. Currently, data on true bugs are collected during environmental studies of anthropogenic disturbed lands, such as urban agglomerations, coal mine dumps, etc. The natural biotopes of standing and flowing reservoirs, meadows, swamps, steppes, deciduous and coniferous forests remain virtually unstudied. This indicates the need for comprehensive faunal studies of various ecosystems as an integral part of the study of the biodiversity of Western Siberia. This is the only way to gain a clear understanding of the animal species composition in the region and assess its conservation and resilience to external effects.

Acknowledgement

We are grateful to Yu.V. Dyachkov (Barnaul, Russia) for providing critical comments and to Maria Iuzhakova (Tomsk) for the help in translation of the paper. The research by V.V. Rudoi was funded by the state assignment of the Ministry of Science and Higher Education of the Russian Federation (project FZMW-2023-0006 'Endemic, local and invasive arthropods (Arthropoda) of the mountains of South Siberia and Central Asia: a unique gene pool of a biodiversity hotspot'). The research by N.N. Vinokurov was supported by the state assignment of the Ministry of Science and Higher Education of the Russian Federation (#121020500194-9). The research by S.L. Luzyanin was funded by a grant from the Russian Science Foundation (RSF) (grant #22-24-20014) and a grant from the Kemerovo region - Kuzbass (agreement #07 dated 23 March 2022).

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