

NEW DATA ON DISTRIBUTION OF MEGACHILID BEES
(HYMENOPTERA: MEGACHILIDAE) IN SIBERIA

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Summary. New data on distribution of 48 species of Megachilidae in Siberia and neighboring regions of Kazakhstan are given. Among them, *Anthidium kashgarens* (Cockerell, 1911) is a new to Russia and Kazakhstan and *Coelioxys latefasciatus* Morawitz, 1886 is new to Russia. These two and five more species, namely *Anthidium cingulatum* Latreille, 1809, *Megachile rubrimana* Morawitz, 1894, *M. pyrenaica* Pérez, 1890, *Osmia bicornis* (Linnaeus, 1758), and *O. mustelina* Gerstäcker, 1869, are new to Siberia. Regional faunistic lists have been significantly supplemented: Republic of Tyva – 29 new species, Krasnoyarsk Territory – 24, Republic of Khakassia – 19, Altai Territory and Republic of Buryatia – 4 each, Kurgan, Novosibirsk, and Kemerovo provinces – 3 each, and Tyumen Province – 1. There are 109 species of Megachilidae currently known in Siberia.

Key words: Apoidea, mason bees, leafcutter bees, wool carder bees, new records, fauna, Russia, Kazakhstan.

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Резюме. Приведены новые данные о распространении 48 видов Megachilidae в Сибири и Казахстане. Из них *Anthidium kashgarens* (Cockerell, 1911) – новый вид для России и Казахстана, а *Coelioxys latefasciatus* Morawitz, 1886 – новый для России. Эти два вида и еще пять, а именно *Anthidium cingulatum* Latreille, 1809, *Megachile rubrimana* Morawitz, 1894, *M. pyrenaica* Pérez, 1890, *Osmia bicornis* (Linnaeus, 1758) и *O. mustelina* Gerstäcker, 1869 – новые для Сибири. Существенно дополнены региональные фаунистические списки: Республика Тыва – 29 новых видов, Красноярский край – 24, Республика

Хакасия – 19, Алтайский край и Республика Бурятия – по 4, Курганская, Новосибирская и Кемеровская области – по 3 и Тюменская область – 1. В фауне Сибири известно 109 видов семейства Megachilidae.

INTRODUCTION

There are about 490 species of bees known from Siberia (Lelej *et al.*, 2017). This is expected to be still very far from the true number of species occurring in the region due to an undersampling. In recent years, new species are discovered and new regional faunistic records are frequently revealed (e.g., Sidorov *et al.*, 2020, 2025; Astafurova & Proshchalykin, 2022; Proshchalykin & Kuhlmann, 2023).

Megachilidae is one of the largest families of bees. More than 4000 species are found in a wide variety of habitats on every continent except Antarctica, from lowland tropical rain forests to deserts and alpine meadows (Michener, 2007). In recent years, significant progress has been made in the study of megachilid bees in Russia. Currently, 234 species from 18 genera are known from this country (Proshchalykin *et al.*, 2023; Fateryga & Proshchalykin, 2024; Fateryga *et al.*, 2024) and 102 species from 15 genera are known from Siberia (Byvaltsev *et al.*, 2018; Byvaltsev & Proshchalykin, 2019; Proshchalykin & Müller, 2019; Byvaltsev *et al.*, 2021; Fateryga *et al.*, 2024). Thus, Megachilidae is one of the best studied bee families in Siberia; however, distribution and species composition of these bees in some regions (especially Tyva and Altai republics, as well as Tyumen Province) remain poorly known.

In the present contribution, we report two species new to Russia, five additional species new to Siberia, and new distributional data for other 41 species. The number of megachilid-bee species in the fauna of Russia is increased to 236, with 109 of them known in Siberia. For two species new to Russia, namely *Anthidium kashgarens* (Cockerell, 1911) and *Coelioxys latefasciatus* Morawitz, 1886, we provide diagnostic characters.

MATERIAL AND METHODS

The data for this paper were obtained from a study of over 4000 specimens collected by authors from 2011 to 2021 in various regions of Siberia. Some materials were loaned from various scientific institutions or private collections. Currently, most of the specimens are deposited at the Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far Eastern Branch of the Russian Academy of Sciences (Vladivostok, Russia) and this institution is not specified in the “SPECIMENS EXAMINED” section. Other depositories are indicated: Alexandr Byvaltsev’s research collection (ABRC) and the Zoological Institute, Russian Academy of Sciences (St. Petersburg, Russia, ZISP).

The bees were identified by the first author. Species ranges were summarized by Proshchalykin & Fateryga (2017) and refined for Siberia by Byvaltsev & Proshchalykin (2019). Just three papers with additional data were published later: Byvaltsev *et al.* (2021) – five species new to the Kemerovo Province; Fateryga *et al.* (2024) – one species from the Altai Republic new to Russia; Proshchalykin *et al.* (2023) – a misidentification of one species from the Altai Territory was corrected. Thus, there is no need to repeat the distribution of each species here again, and it is circumscribed for the species recorded for the first time from Russia only. Some records from neighboring regions of Kazakhstan are also given. Acronyms are used for main collectors as follows: AB – Alexandr Byvaltsev; AL – Arkady Lelej; DS – Dmitry Sidorov; MP – Maxim Proshchalykin; SL – Sergey Luzyanin; VL – Valery Loktionov. Geographical coordinates are given at the first reference to each locality. Data on Megachilidae of Altai Republic are not included and will be published in a separate paper.

NEW RECORDS FOR RUSSIA

Anthidium kashgarens (Cockerell, 1911)

Figs 1–4

MATERIAL EXAMINED. **Russia.** *Republic of Tyva:* 12 km SW of Samagaltay, Dyttyg-Khem River [50.51°N 94.88°E], 17.VII 2014, 1♀, 3♂, AL, MP, VL. *Krasnoyarsk Territory:* 10 km NW of Minusinsk, Bystraya Channel [51.13°N 91.56°E], 9.VII 2014, 2♀, AL, MP, VL. **Kazakhstan.** *Ulytau Region:* Koksengir [hill in Kazakh], S Zhanaarka [48.51°N 71.65°E], Karag. [Karaganda], 17.VI 1959, 1♀, 1♂, Ponomareva [ZISP]; *ibid.*, 29.VI 1959, 1♂, Ponomareva [ZISP]; *ibid.*, 8.VII 1959, 1♀, Demyanova [ZISP]. *Aktobe Region:* Ber-Ischegur [Birshoghyr], Mugodjargebg. [Mugalzhar, 48.65°N 58.55°E], 1♀, N. Androsov [ZISP].

REMARKS. The species is very closely related to *Anthidium oblongatum* (Illiger, 1806). Identification of *A. kashgarens* can be carried out according to the combination of characters provided by Niu *et al.* (2020). We have found some additional characters. In both sexes, the yellow spots on tergum 1 extend to the anterior surface facing the propodeum where become reddish in *A. kashgarens* (Figs 1, 2), while they do not extend in *A. oblongatum*. Males are clearly distinguished by the color and shape of the tergum 7 and the medioapical process of the tergum 6: *A. kashgarens* has tergum 7 with large yellow spots, while the process of the tergum 6 is short and having a distinct fossa on its tip (Figs 3, 4); *A. oblongatum* has T7 black or with very small yellow spots, while the process of the tergum 6 is longer and wider, without a fossa on its tip (Fig. 5).

Taking into account the present data and those from Niu *et al.* (2020), the species is distributed in Kazakhstan (Mugalzhar and Kazakh uplands), Russia (Krasnoyarsk Territory and Tyva), and China (Hebei, Inner Mongolia, and Xinjiang).

Coelioxys latefasciatus Morawitz, 1886

Figs 6, 7, 9, 12, 14, 15

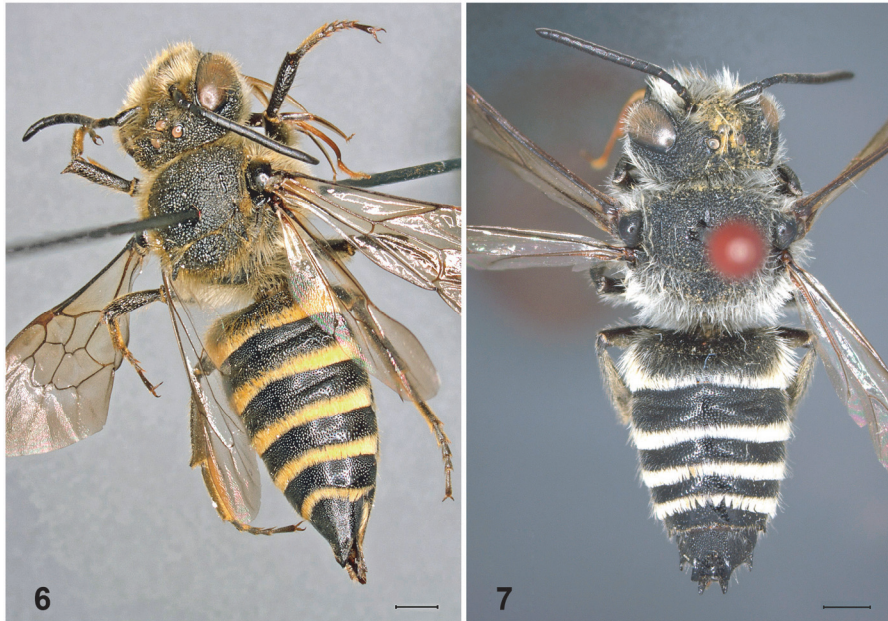
MATERIAL EXAMINED. **Russia.** *Republic of Khakassia:* Kazanovka [53.22°N 90.10°E], 29.VI–1.VII 2014, 14♀, 3♂, K. Ayriyants, AB [ABRC]; *ibid.*, 26.VI 2021, 12♀, 8♂, D. Remeshevskaya [ABRC]; *ibid.*, 26.VI 2021, 6♀, AB [ABRC]; *ibid.*, 27.VI 2021, 1♀, Ponomareva [ABRC]. *Republic of Tyva:* 6 km SE of Bay-Haak, Sosnovka [51.13°N 94.53°E], 20–21.VII 2014, 3♀, AL, MP, VL; 12 km SW of Samagaltay, Dyttyg-Khem River, 8–11.VII 2013, 1♀, MP, VL; *ibid.*, 19.VII 2014, 1♀, AL, MP, VL; Shagonar River valley [51.45°N 92.75°E], 22–26.VI 2017, 1♀, AB [ABRC]. *Republic of Buryatia:* Vitim River below Baysa River [53.15°N 112.40°E], 12–14.VII 1983, 2♀, 2♂, D. Scherbakov; Romanovka [53.21°N 112.75°E], 4–7.VII 1983, 3♀, D. Scherbakov.

REMARKS. The species is very closely related to *Coelioxys rufescens* Lepeletier de Saint-Fargeau et Audinet-Serville, 1825 and it is also somewhat similar to *C. conicus* (Linnaeus, 1758). Females of *C. latefasciatus* are distinguished by the shape of the 5th and 6th metasomal segments. Even specimens with a worn tip of the sternum 6 can be distinguished by a strongly semicircular posterior margin of the tergum 5 (Fig. 6, 9); posterior margin of all metasomal segments is with longer and denser hairs (Figs 9, 12). In addition, punctuation of metasomal terga is significantly sparser in *C. conicus* (Figs 10, 13) than in two other species. Tergum 1 in *C. rufescens* is without or with only very short and sparse hairs in the middle, while two other species have a complete band of hairs. Males of *C. latefasciatus* are easily distinguished from those of *C. conicus* by the presence of lateral teeth on tergum 5 and sublateral pits on tergum 2. From *C. rufescens*, males of the species can be delimited by



Figs 1–5. *Anthidium kashgarens* (1–4) and *A. oblongatum* (5): 1 – habitus of female; 2 – habitus of male; 3 – apical terga of male in dorsal view; 4, 5 – apical terga of male in dorso-laterall view. Scale bars = 1.0 mm.

the following combinations of characters: tergum 1 completely covered with long hairs (Fig. 7); posterior margin of all metasomal segments with longer and denser hairs, so that the central notch on the depressed posterior margin (hyaline rim) of the sternum 4 is hidden (Fig. 14), but well visible in *C. rufescens* (Fig. 16); the notch on the main elevated part of the sternum 4 usually well defined (Fig. 14) but can be shallower as well (Fig. 15); punctation of metasomal segments sparser (especially on sterna); distance between lateral ocelli and the occipital margin (ocelloccipital distance) noticeably less than two diameters of an ocellus (vs. more than two diameters in *C. rufescens*). In addition, *C. latefasciatus* lacks a small tooth between the lower median processes of the tergum 7, while *C. rufescens* usually has such a tooth. Based on the strong morphological similarity with *C. rufescens*, *C. latefasciatus* should be placed in the subgenus *Rozeniana* da Rocha Filho, 2016.

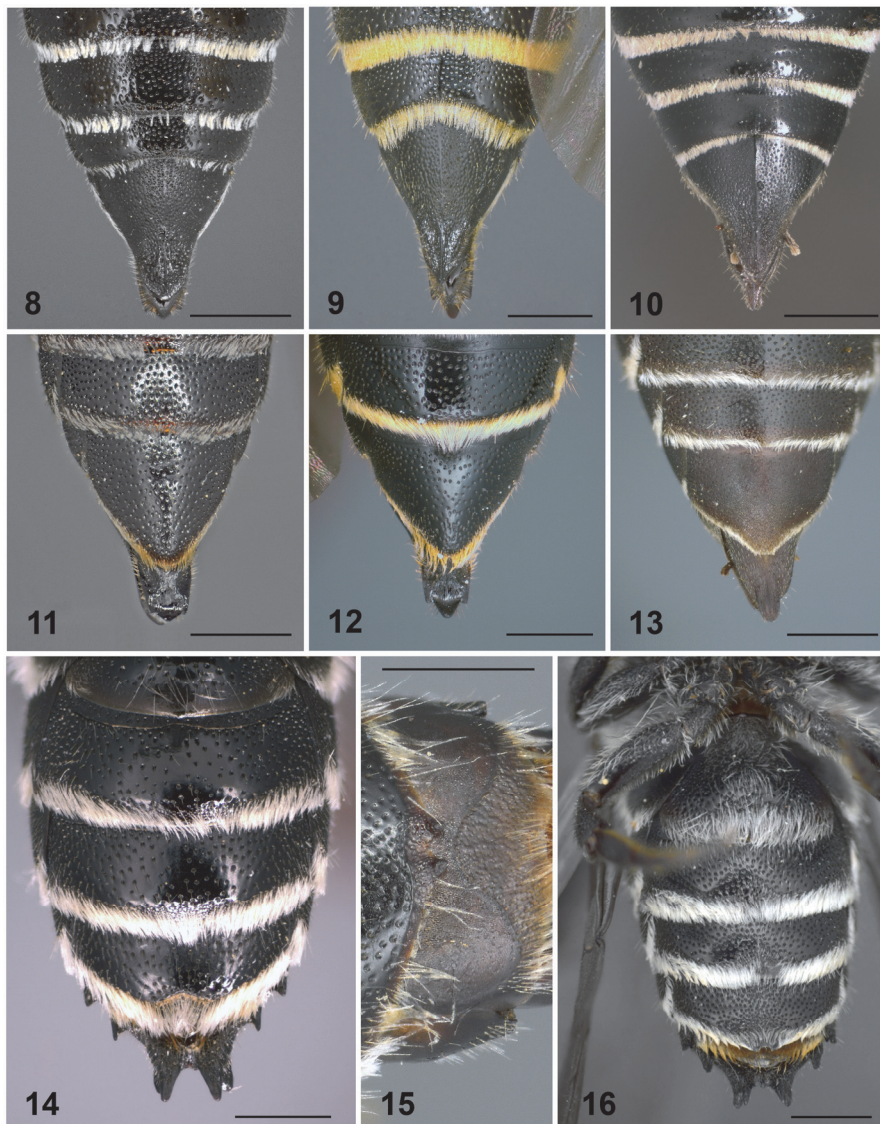


Figs 6–7. *Coelioxys latefasciatus*, habitus: 6 – female; 7 – male. Scale bars = 1.0 mm.

Most specimens from Khakassia were collected at nest entrances of *Anthophora plagiata* (Illiger, 1806) in break slopes of hills and a bluff of a dried river. This may indicate a relationship between these species through a kleptoparasitism, although *C. latefasciatus* might parasitize other bee species inhabiting abandoned nest burrows of *A. plagiata* as well.

Morawitz (1886) described this species from the Russian Range (Kunlun, North of Tibetan Plateau, Xinjiang, China). The lectotype was designated by M. Schwarz (Schwarz & Gusenleitner, 2003) and is stored in ZISP (examined). Frise (1925) described *Coelioxys rufescens* var. *turanica*, currently considered a junior synonym of *C. latefasciatus* (Schwarz & Gusenleitner, 2003), from “Monda und Urga in der Mongolei”. Mondy (Buryat: Moondo) is a settlement in the Tunkinsky district of the Republic of Buryatia, Russia, at the border with Mongolia. Apparently, the specimens were collected from Mongolian territory, and the Russian settlement of Mondy is indicated as the closest well-known landmark. Thus, we consider our records the first for Russia.

The range of the species is Russia (Khakassia, Tyva, and Buryatia), Mongolia (from Ulaanbaatar to the Russian border), and China (Xinjiang).



Figs 8–16. *Coelioxys rufescens* (8, 11, 16), *C. latefasciatus* (9, 12, 14, 15), and *C. conicus* (10, 13): 8–10 – apical terga of female; 11–13 – apical sterna of female; 14, 16 – metasoma of male in ventral view; 15 – sterna 4, 5 of male (hairs on sternum 4 removed). Scale bars = 1.0 mm.

NEW RECORDS FOR SIBERIA

Anthidium cingulatum Latreille, 1809

MATERIAL EXAMINED. **Russia.** *Altai Territory:* Klyuchi district, Severka village [52.10°N 79.31°E], 21.VII 2018, 1♂, Yu. Danilov [ABRC]. **Kazakhstan.** *North Kazakhstan Region:* Imantau Lake [52.96°N 68.35°E], 19.VII 2011, 1♂, A. Proskuryakova [ABRC].

Megachile rubrimana Morawitz, 1894

MATERIAL EXAMINED. **Russia.** *Republic of Tyva:* 27 km SSW of Erzin, Tore-Khol Lake [50.06°N 95.00°E], 30.VI–3.VII 2013, 3♀, 17♂, MP, VL; *ibid.*, 11–12.VII 2014, 2♀, 73♂, AL, MP, VL; Ubsu-Nur Lake [50.38°N 93.02°E], 7.VII 2013, 1♀, MP, VL; Shuurmak, Shuurmak River [50.66°N 95.34°E], 11–12.VII 2013, 1♂, MP, VL; 12 km SW of Samagaltay, Dyttyg-Khem River, 8–11.VII 2013, 1♀, 2♂, MP, VL; *ibid.*, 17.VII 2014, 2♂, AL, MP, VL; 31 km NEE of Erzin, Erzin River [50.35°N 95.55°E], 16–18.VII 2014, 2♂, AL, MP, VL; 12 km SEE of Erzin [50.21°N 95.34°E], 23.VII 2018, 1♂, SL, DS [ABRC]; 5 km E of Handagayty [50.74°N 92.15°E], 29.VII 2018, 1♂, SL, DS [ABRC].

Megachile pyrenaea Pérez, 1890

Megachile versicolor Smith, 1844: Byvaltsev *et al.*, 2021: 93 (part), misidentification.

MATERIAL EXAMINED. **Russia.** *Altai Territory:* 30 km S of Kurya village, Savvushka village [51.36°N 82.17°E], 31.VII–1.VIII 2007, 1♀, S. Belokobylskij. *Kemerovo Province:* Telbes [53.22°N 87.39°E], 3.VII 2003, 1♀, N. Ereemeeva [ABRC]; *ibid.*, 5.VII 2003, 1♀, DS [ABRC]; Tyazhinskii [56.09°N, 88.53°E], 28.VII 2003, 1♀, DS [ABRC]; Chumai [55.69°N 87.82°E], 10.VII 2016, 1♀, DS [ABRC]. *Republic of Tyva:* Tardan [51.70°N 95.33°E], 15.VII 2013, 1♀, MP, VL. *Krasnoyarsk Territory:* Kuragino [53.88°N 92.60°E], south steppe slope, 18.VII 2018, 1♀, SL, DS [ABRC].

Osmia bicornis (Linnaeus, 1758)

MATERIAL EXAMINED. **Russia.** *Novosibirsk Province:* Novosibirsk, Botanical garden [55.06°N 82.88°E], 13.V 2011, 1♀, A.V. Korshunov [ABRC].

Osmia mustelina Gerstäcker, 1869

MATERIAL EXAMINED. **Russia.** *Kemerovo Province:* 4.5 km W of Ust-Kabyrza [52.82°N 88.37°E], 26.V 2021, 1♂, DS [ABRC].

NEW RECORDS FOR REGIONAL FAUNA

Anthidium amurense Radoszkowski, 1876

MATERIAL EXAMINED. **Russia.** *Republic of Tyva:* 31 km NEE of Erzin, Erzin River, 16.VII 2014, 1♀, AL, MP, VL; 13 km NEE of Samagaltay, Kaldak-Khamar Pass [50.63°N 95.18°E], 19.VII 2014, 1♂, AL, MP, VL; Shagonar River valley, 22–26.VI 2017, 6♀, 3♂, AB [ABRC].

***Anthidium florentinum* (Fabricius, 1775)**

MATERIAL EXAMINED. **Russia.** *Krasnoyarsk Territory*: Krasnoyarsk, VII 2006, 1♂, E.V. Borisova [ABRC].

***Anthidium manicatum* (Linnaeus, 1758)**

MATERIAL EXAMINED. **Russia.** *Krasnoyarsk Territory*: 10 km NW of Minusinsk, Bystraya Channel, 9.VII 2014, 4♀, 3♂, AL, MP, VL.

***Chelosofma rapunculi* (Lepeletier de Saint-Fargeau, 1841)**

MATERIAL EXAMINED. **Russia.** *Republic of Khakassia*: Chernoe Ozero, Chernoe Lake [54.66°N 89.40°E], 16–19.VII 2012, 1♀, MP, VL.

***Coelioxys afer* Lepeletier de Saint-Fargeau, 1841**

MATERIAL EXAMINED. **Russia.** *Kurgan Province*: Krutiha [56.18°N 63.12°E], 20.VII 2016, 1♀, AB [ABRC]. *Republic of Khakassia*: W shore of Sosnovoe Lake [53.26°N 90.90°E], 2.VIII 2018, 1♂, SL, DS [ABRC]; *Republic of Tyva*: Shagonar River valley, 22–26.VI 2017, 1♀, AB [ABRC]; 32 km SW of Kyzyl, Elegest River [51.48°N 94.16°E], 22.VII 2014, 1♂, AL, MP, VL; 7 km SE of Buren-Khem [51.62°N 95.09°E], 21.VII 2018, 2♂, SL, DS [ABRC]. *Krasnoyarsk Territory*: 10 km NE of Minusinsk, Malaya Minusa River [53.66°N 91.71°E], 27.VI 2014, 5♀, 1♂, AL, MP, VL; 10 km NW of Minusinsk, Bystraya Channel, 22.VII 2014, 1♂, AL, MP, VL.

***Coelioxys alatus* Förster, 1853**

MATERIAL EXAMINED. **Russia.** *Novosibirsk Province*: Novosibirsk, Akademgorodok [54.83°N 83.09°E], 7.VIII 2018, 1♀, E. Grishko [ABRC]; *ibid.*, 10.VIII 2018, 1♀, E. Grishko [ABRC].

***Coelioxys aurolimbatus* Förster, 1853**

MATERIAL EXAMINED. **Russia.** *Novosibirsk Province*: Novosibirsk, Akademgorodok, 27.VII 2018, 1♂, E. Grishko [ABRC].

***Coelioxys echinatus* Förster, 1853**

MATERIAL EXAMINED. **Russia.** *Krasnoyarsk Territory*: 10 km NW of Minusinsk, Bystraya Channel, 9.VII 2014, 1♂, AL, MP, VL; Minusinsk, Lysuha Mt. [53.70°N 91.66°E], 17.VI 2011, 1♂, E. Akulov [ABRC].

***Coelioxys elongatus* Lepeletier de Saint-Fargeau, 1841**

MATERIAL EXAMINED. **Russia.** *Republic of Tyva*: 31 km NEE of Erzin, Erzin River, 16.VII 2014, 3♀, AL, MP, VL; 23 km E of Samagaltay, Shuurmak River [50.63°N 95.31°E], 19.VII 2014, 1♀, AL, MP, VL; 12 km SW of Samagaltay, Dytyg-Khem River, 19.VII 2014,

1♀, AL, MP, VL; 15 km W of Turan [52.15°N 93.68°E], 2.VIII 2009, 1♀, Belokobylskij; 5 km E of Handagayty, 29.VII 2018, 1♀, SL, DS [ABRC]; 11 km SW Teeli [50.93°N 90.02°E], 1.VIII 2018, 1♀, SL, DS [ABRC].

***Coelioxys emarginatus* Forster, 1853**

MATERIAL EXAMINED. **Russia.** *Kurgan Province:* Krutiha, 20.VII 2016, 1♀, AB [ABRC]. *Krasnoyarsk Territory:* 10 km NE of Minusinsk, Malaya Minusa River, 27.VI 2014, 1♀, 1♂, AL, MP, VL; Kuragino, south steppe slope, 18.VII 2018, 2♀, 3♂, SL, DS [ABRC]. **Kazakhstan.** *North Kazakhstan Region:* Bolshoi Tarangul Lake [54.03°N 68.43°E], 19.VII 2010, 1♂, AB [ABRC].

***Coelioxys inermis* (Kirby, 1802)**

MATERIAL EXAMINED. **Russia.** *Republic of Tyva:* Begerda River [51.99°N 94.29°E], 12.VIII 2018, 2♀, AB [ABRC].

***Coelioxys lanceolatus* Nylander, 1852**

MATERIAL EXAMINED. **Russia.** *Republic of Tyva:* Shuurmak, Shuurmak River, 11–12.VII 2013, 3♀, MP, VL; 6 km SE of Bay-Haak, Sosnovka [51.13°N 94.53°E], 19.VII 2014, 1♀, AL, MP, VL.

***Coelioxys conicus* (Linnaeus, 1758)**

Figs 10, 13

MATERIAL EXAMINED. **Russia.** *Republic of Khakassia:* Belyi Yar, Abakan River [53.60°N 91.36°E], 11–12.VII 2012, 1♀, MP, VL; 50 km NWW of Shira, Chernyi Iyus River [54.60°N 89.20°E], 4.VII 2014, 1♀, AL, MP, VL; 20 km SW of Abakan, Izykhskie Kopi [53.55°N 91.30°E], 7.VII 2014, 2♀, AL, MP, VL; Kazanovka, 27–28.VI 2014, 2♀, K. Belova [ABRC]. *Republic of Tyva:* Turan [52.13°N 93.93°E], 4–7.VI 1975, 1♀, Kasparyan; 27 km SSW of Erzin, Tore-Khol Lake, 30.VI–3.VII 2013, 3♀, MP, VL; *ibid.*, 11–12.VII 2014, 2♀, AL, MP, VL; 25 km SE of Erzin, Tes-Khem River [50.06°N 95.35°E], 5.VII 2013, 1♀, MP, VL; 31 km NEE of Erzin, Erzin River, 16.VII 2014, 4♀, AL, MP, VL; 12 km SW of Samagaltay, Dytytg-Khem River, 17.VII 2014, 2♀, AL, MP, VL; 13 km NEE of Samagaltay, Kaldak-Khamar Pass, 19.VII 2014, 1♀, AL, MP, VL; 6 km SE of Bay-Haak, Sosnovka, 20–21.VII 2014, 19♀, AL, MP, VL; 32 km SW of Kyzyl, Elegest River [51.43°N 94.17°E], 22.VII 2014, 2♀, AL, MP, VL. *Krasnoyarsk Territory:* Minusinsk [53.66°N 91.71°E], 10.VI 2011, 1♂, E. Akulov [ABRC].

REMARKS. *Coelioxys conicus* is the correct name for the species formerly known as *C. quadridentatus* (Linnaeus, 1758) (Ghisbain *et al.*, 2025).

***Coelioxys rufescens* Lepeletier de Saint-Fargeau et Audinet-Serville, 1825**

Figs 8, 11, 16

MATERIAL EXAMINED. **Russia.** *Republic of Tyva:* 7 km SE of Buren-Khem, 21.VII 2018, 1♂, SL, DS [ABRC]; 12 km SSE of Erzin, 23.VII 2018, 1♂, SL, DS [ABRC].

***Hoplitis acuticornis* (Dufour et Perris, 1840)**

MATERIAL EXAMINED. **Russia.** *Republic of Tyva:* Shuurmak, Shuurmak River, 2–4.VII 2013, 2♀, MP, VL.

***Hoplitis robusta* (Nylander, 1848)**

MATERIAL EXAMINED. **Russia.** *Kemerovo Province:* S environs of Ust-Anzas, [53.82°N 88.38°E], 2.VII 2021, 3♀, SL, DS [ABRC]. *Republic of Tyva:* Shuurmak, Shuurmak River, 11, 12.VII 2013, 2♀, MP, VL.

***Hoplitis tridentata* (Dufour et Perris, 1840)**

MATERIAL EXAMINED. **Russia.** *Krasnoyarsk Territory:* Krasnoyarsk environs, Berezo-vyi [55.80°N, 93.29°E], 1.VII 2012, 1♀, MP, VL; 10 km NW of Minusinsk, Bystraya Channel, 9.VII 2014, 1♀, AL, MP, VL.

***Hoplitis tuberculata* (Nylander, 1848)**

MATERIAL EXAMINED. **Russia.** *Krasnoyarsk Territory:* Verhneusinskoe [52.35°N 93.15°E], 19.VII 2018, 1♀, SL, DS [ABRC].

***Megachile analis* Nylander, 1852**

MATERIAL EXAMINED. **Russia.** *Republic of Khakassia:* Kazanovka, 26.VI–1.VII 2013, 6♀, 4♂, AB, Ya. Telegina [ABRC]; *ibid.*, 28.VI–1.VII 2013, 4♀, 4♂, K. Belova [ABRC]; 22 km NW of Shira, Belyi Iyus River [54.61°N 90.00°E], 2.VII 2012, 1♀, 2♂, MP, VL; Zhemchuzhnyi [54.48°N 90.22°E], 21–28.VI 2011, 2♀, 10♂, Tomkovich; *ibid.*, 14–15.VII 2012, 1♀, MP, VL; 37 km NWW of Shira, Reingol Lake [54.57°N 89.41°E], 5.VII 2014, 1♀, 2♂, AL, MP, VL; 40 km NWW of Shira, Chernoe Lake [54.62°N 89.39°E], 16–19.VII 2012, 1♀, MP, VL; *ibid.*, 3–5.VII 2014, 4♂, AL, MP, VL; 50 km NW Shira, Kirovo [54.69°N 89.29°E], 4.VII 2014, 1♀, AL, MP, VL. *Republic of Tyva:* 12 km SW of Samagaltay, Dyttg-Khem River, 8–11.VII 2013, 1♀, MP, VL; 27 km SSW of Erzin, Tore-Khol Lake, 11–12.VII 2014, 5♀, 15♂, AL, MP, VL; 6 km SE of Bay-Haak, Sosnovka, 20–21.VII 2014, 6♀, AL, MP, VL; 25 km SE of Erzin, Tes-Khem River, 14–15.VII 2014, 1♀, AL, MP, VL; 31 km NEE of Erzin, Erzin River, 16–18.VII 2014, 1♀, 1♂, AL, MP, VL. *Krasnoyarsk Territory:* Krasnoyarsk, Turbaza [55.95°N 92.81°E], 3.VII 2012, 3♀, MP, VL; Znamenka [53.53°N 91.91°E], 6.VII 2012, 1♀, MP, VL; Minusinsk [53.63°N 91.64°E], 10.VII 2012, 2♀, 1♂, MP, VL; Magansk [55.86°N 93.26°E], 30.VI 2012, 2♀, MP, VL; Berezo-vyi, 1.VII 2012, 1♀, MP, VL; 10 km NE of Minusinsk, Malaya Minusa River, 27.VI 2014, 2♂, AL, MP, VL; Minusinsk, Tes River [92.16°E 53.85°N], 7.VII 2012, 1♀, MP, VL.

***Megachile bombycina* Radoszkowski, 1874**

MATERIAL EXAMINED. **Russia.** *Republic of Tyva:* 12 km SW of Samagaltay, Dyttg-Khem River, 6–11.VII 2013, 4♀, 3♂, MP, VL; 27 km SSW of Erzin, Tore-Khol Lake, 11–12.VII 2014, 1♀, 4♂, AL, MP, VL; Shagonar River valley, 25.VI 2017, 1♂, AB [ABRC]. *Krasnoyarsk Territory:* Berezo-vyi, 1.VII 2012, 1♀, MP, VL.

***Megachile centuncularis* (Linnaeus, 1758)**

MATERIAL EXAMINED. **Russia. Republic of Khakassia:** 22 km NW of Shira, Belyi Iyus River, 4.VII 2012, 1♀, MP, VL; 50 km NW Shira, Kirovo, 4.VII 2014, 1♀, AL, MP, VL; Kazanovka, 28.VI–1.VII 2013, 2♂, AB [ABRC]; *ibid.*, 23–24.VI 2014, 2♂, K. Belova [ABRC]. **Republic of Tyva:** 20 km N of Chadán, Hemchik River [51.47°N 91.48°E], 9.VIII 2009, 1♀, Belokobylskij; 15 km W of Turan, 2.VIII 2009, 1♀, Belokobylskij; 30 km of Shagonar, Baryk River [51.55°N 93.38°E], 5.VIII 2009, 1♀, Belokobylskij; 30 km W of Yamalyg [50.25°N 94.73°E], 4.VII 2014, 2♀, AL, MP, VL; Shuurmak, Shuurmak River, 11–12.VII 2013, 6♂, MP, VL; 16 km N of Boyarovka [51.68°N 95.38°E], 15.VII 2013, 1♂, MP, VL; 12 km SW of Samagaltay, Dytyg-Khem River, 8–11.VII 2013, 5♀, MP, VL; *ibid.*, 17.VII 2014, 1♀, AL, MP, VL; 23 km E of Samagaltay, Shuurmak River, 19.VII 2014, 1♀, AL, MP, VL; 6 km SE of Bay-Haak, Sosnovka, 20–21.VII 2014, 1♀, 1♂, AL, MP, VL; 13 km NEE of Samagaltay, Kaldak-Khamar Pass, 19.VII 2014, 1♂, AL, MP, VL; 31 km NEE of Erzin, Erzin River, 16–18.VII 2014, 4♀, AL, MP, VL; 27 km SSW of Erzin, Tore-Khol Lake, 30.VI–3.VII 2013, 17♀, MP, VL; 25 km SE of Erzin, Tes-Khem River, 14–15.VII 2014, 3♀, AL, MP, VL; 11 km W of Ust-Elegest [51.55°N 93.99°E], 27.VII 2018, 1♀, SL, DS [ABRC]; 5 km E of Handagayty, 29–30.VII 2018, 2♀, SL, DS [ABRC]; Begerdá River, 12.VIII 2018, 8♀, AB [ABRC]. **Krasnoyarsk Territory:** 10 km NE of Minusinsk, Malaya Minusa River, 7.VII 2012, 2♀, MP, VL.

***Megachile circumcincta* (Kirby, 1802)**

MATERIAL EXAMINED. **Russia. Republic of Khakassia:** Zhemchuzhnyi, 1.VII 2012, 1♀, MP, VL; Borets [54.45°N 90.33°E], 28.VI 2011, 1♀, Tomkovich; *ibid.*, 29–30.VI 2014, 3♂, AL, MP, VL; 37 km NWW of Shira, Reingol Lake, 5.VII 2014, 1♀, 1♂, AL, MP, VL; 40 km NWW of Shira, Chernoe Lake, 16–19.VII 2012, 1♀, MP, VL; 50 km NWW of Shira, Chernyi Iyus River, 4.VII 2014, 1♂, AL, MP, VL; Kazanovka, 1.VII 2013, 1♀, 1♂, AB, Ya. Telegina [ABRC]; *ibid.*, 24.VI–1.VII 2014, 3♀, 6♂, AB, K. Belova [ABRC]. **Republic of Tyva:** Ak-Erik [50.51°N 94.61°E], 8–9.VI 2010, 3♂, Yu. Danilov [ABRC]; 15 km SE of Bert-Dag Mt., East Tanu-Ola, Hyraalag River [50.72°N 94.63°E], 10–11.VI 2010, 2♂, Yu. Danilov [ABRC]; 27 km SSW of Erzin, Tore-Khol Lake, 30.VI–3.VII 2013, 3♂, MP, VL; *ibid.*, 11–12.VII 2014, 1♂, AL, MP, VL; Tardan, 15.VII 2013, 1♂, MP, VL; 31 km NEE of Erzin, Erzin River, 16.VII 2014, 1♂, AL, MP, VL. **Krasnoyarsk Territory:** Minusinsk, 10.VII 2012, 1♂, MP, VL; Turbaza, 3.VII 2012, 1♂, MP, VL.

***Megachile desertorum* Morawitz, 1875**

MATERIAL EXAMINED. **Russia. Altai Territory:** 800 m S of Tigirek [51.13°N 83.01°E], 2.VI 2006, 1♀, Kosova [ABRC]; 11 km W of Malinovoe Ozero [51.67°N 79.60°E], 18.VII 2023, 1♀, Dimakova [ABRC]. **Republic of Khakassia:** Kazanovka, 26.VI–1.VII 2013, 16♀, AB, Ya. Telegina [ABRC]; *ibid.*, 26–30.VI 2014, 38♀, K. Belova, K. Ariyants, AB [ABRC]; *ibid.*, 25.VI 2021, 2♀, D. Remeshevskaya [ABRC]; 27 km E Shira, Borets, 29–30.VI 2014, 1♀, K. Belova [ABRC]; 25 km N of Shira, Tus Lake [54.73°N 89.94°E], 6.VII 2014, 1♀, AL, MP, VL. **Krasnoyarsk Territory:** 10 km NW of Minusinsk, Bystraya Channel, 9.VII 2014, 11♀, AL, MP, VL.

***Megachile fulvicornis* Eversmann, 1852**

MATERIAL EXAMINED. **Russia. Republic of Tyva:** 15 km W of Turan, 31.VII–2.VIII 2009, 1♂, Belokobylskij; Shuurmak, Shuurmak River, 11–12.VII 2013, 1♂, MP, VL; 6 km

SE of Bay-Haak, Sosnovka, 20–21.VII 2014, 3♂, AL, MP, VL; 23 km E of Samagaltay, Shuurmak River, 19.VII 2014, 4♂, AL, MP, VL; 6 km SSW of Erzin, Tes-Khem River [50.20°N 95.13°E], 3.VII 2013, 1♂, MP, VL; 12 km SW of Samagaltay, Dytytg-Khem River, 6–11.VII 2013, 13♂, MP, VL; 17.VII 2014, 28♂, AL, MP, VL; 27 km SSW of Erzin, Tore-Khol Lake, 27–28.VII 2010, 1♂, Belokobyl'skiy; ibid. 30.VI–3.VII 2013, 32♂, MP, VL; 11–12.VII 2014, 98♂, AL, MP, VL; 25 km SE of Erzin, Tes-Khem River, 14–15.VII 2014, 7♂, AL, MP, VL; 31 km NEE of Erzin, Erzin River, 16–18.VII 2014, 55♂, AL, MP, VL; 32 km SW of Kyzyl, Elegest River, 22.VII 2014, 1♂, AL, MP, VL; 34 km W of Balgazyn, Chagytay Lake [51.00°N 94.64°E], 20.VII 2014, 1♂, AL, MP, VL; Tardan, 15.VII 2013, 1♂, MP, VL; Shagonar River valley, 24–26.VI 2017, 4♂, AB [ABRC]; 5 km E of Handagayty, 29–30.VII 2018, 3♂, SL, DS [ABRC].

***Megachile genalis* Morawitz, 1880**

MATERIAL EXAMINED. **Russia.** *Tyumen Province:* Surgut district, Ugut village [60.50°N 74.06°E], 9–14.VIII 2018, 1♀, T. Pereyaslovets [ABRC]. *Republic of Khakassia:* Oshkol Lake [54.74°N 89.32°E], 7.VII 2013, 1♂, Scherbakov.

***Megachile lagopoda* (Linnaeus, 1761)**

MATERIAL EXAMINED. **Russia.** *Republic of Tyva:* Kaa-Khem [51.72°N 94.76°E], 17–21.VII 2009, 3♀, Yu. Danilov [ABRC]; 6 km SSW of Erzin, Tes-Khem River, 3.VII 2013, 1♂, MP, VL; 12 km SW of Samagaltay, Dytytg-Khem River, 8–11.VII 2013, 2♂, MP, VL; ibid., 17.VII 2014, 5♀, 7♂, AL, MP, VL; 27 km SSW of Erzin, Tore-Khol Lake, 11–12.VII 2014, 7♂, AL, MP, VL; 32 km SW of Kyzyl, Elegest River, 22.VII 2014, 4♂, AL, MP, VL; 31 km NEE of Erzin, Erzin River, 16.VII 2014, 2♂, AL, MP, VL; Shagonar River valley, 21–26.VI 2017, 1♀, 9♂, AB [ABRC]; 7 km N of Boyarovka [51.62°N 95.35°E], 11.VIII 2018, 1♀, 2♂, AB [ABRC]; 9 km SW of Shambalyg [51.17°N 95.00°E], 22.VII 2018, 1♂, SL, DS [ABRC]; 12 km SSE of Erzin, 23.VII 2018, 5♀, 1♂, SL, DS [ABRC]; 11 km W of Ust-Elegest, 27.VII 2018, 1♂, SL, DS [ABRC]; 5 km E of Handagayty, 29.VII 2018, 1♀, SL, DS [ABRC]; 11 km SW Teeli [50.93°N 90.02°E], 1.VIII 2018, 2♀, SL, DS [ABRC].

***Megachile lapponica* Thomson, 1872**

MATERIAL EXAMINED. **Russia.** *Republic of Tyva:* Balgazyn [60.62°N 95.17°E], 29.VII 2010, 2♀, Belokobyl'skiy; Kara-Sug Lake [51.31°N 93.66°E], 19.VII 2013, 1♂, Scherbakov; 31 km NEE of Erzin, Erzin River, 16.VII 2014, 1♀, 4♂, AL, MP, VL; 12 km SSE of Erzin, 23.VII 2018, 2♀, SL, DS [ABRC]; 13 km NEE of Samagaltay, Kaldak-Khamar Pass, 19.VII 2014, 1♀, 1♂, AL, MP, VL; Shuurmak, Shuurmak River, 11–12.VII 2013, 6♀, 51♂, MP, VL; 6 km SE of Bay-Haak, Sosnovka, 20–21.VII 2014, 1♀, AL, MP, VL; 16 km N of Boyarovka, 15.VII 2013, 1♀, 7♂, MP, VL; 7 km N of Boyarovka, 10–11.VIII 2018, 28♀, AB [ABRC]; Begerda River, 12.VIII 2018, 3♀, AB [ABRC]. *Krasnoyarsk Territory:* E bank Stolby env. [55.96°N 92.74°E], 18–19.VI 2011, 1♂, Tomkovich; 10 km NE of Minusinsk, Malaya Minusa River, 27.VI 2014, 2♂, AL, MP, VL.

***Megachile leachella* Curtis, 1828**

MATERIAL EXAMINED. **Russia.** *Republic of Khakassia:* Izykhskie Kopi, 13.VII 2012, 3♀, MP, VL; Zhemchuzhnyi, 14–15.VII 2012, 6♀, 2♂, MP, VL; Klimanihovskii [54.50°N 91.20°E], 23.VII 2013, 1♂, Scherbakov. *Republic of Tyva:* 15 km W of Turan, 31.VII–2.VIII

2009, 4♀, 2♂, Belokobylskij; 30 km of Shagonar, Baryk River, 5.VIII 2009, 1♀, 2♂, Belokobylskij; 45 km E of Chadán [55.96°N 92.74°E], 6.VIII 2009, 1♂, Belokobylskij; 18 km E of Kyzyl, Malyi Enisey River [51.7°N 94.68°E], 14.VII 2013, 2♂, MP, VL; 31 km NEE of Erzin, Erzin River, 16–18.VII 2014, 14♀, 44♂, AL, MP, VL; 12 km SW of Samagaltay, Dytyg-Khem River, 8–11.VII 2013, 4♀, 30♂, AL, MP, VL; *ibid.*, 17–19.VII 2014, 1♀, 24♂, AL, MP, VL; 16 km N of Boyarovka, 15.VII 2013, 2♂, MP, VL; 30 km W of Yamalyg, 4.VII 2014, 1♂, AL, MP, VL; 6 km SE of Bay-Haak, Sosnovka, 20–21.VII 2014, 1♀, 2♂, AL, MP, VL; 32 km SW of Kyzyl, Elegest River, 22.VII 2014, 1♀, 4♂, AL, MP, VL; 23 km E of Samagaltay, Shuurmak River, 19.VII 2014, 5♂, AL, MP, VL; 27 km SSW of Erzin, Tore-Khol Lake, 11–12.VII 2014, 1♀, 15♂, AL, MP, VL; Shagonar River valley, 25–26.VI 2017, 2♀, AB [ABRC]; 7 km SE of Buren-Khem [51.62°N 95.09°E], 21.VII 2018, 7♂, SL, DS [ABRC]; 9 km SW of Shambalyg, 22.VII 2018, 1♀, SL, DS [ABRC]; 12 km SSE of Erzin, 23.VII 2018, 4♀, SL, DS [ABRC]; 5 km E of Handagayty, 29–30.VII 2018, 34♂, SL, DS [ABRC]; W shore of Sosnovoe Lake [53.26°N 90.90°E], 2.VIII 2018, 2♂, SL, DS [ABRC]; 6 km NE of Sosnovoe Lake, Burek Sands [53.31°N 91.02°E], 2.VIII 2018, 1♂, SL, DS [ABRC]. *Krasnoyarsk Territory*: 10 km NW of Minusinsk, Bystraya Channel, 9.VII 2014, 3♀, 7♂, AL, MP, VL; 10 km NE of Minusinsk, Malaya Minusa River, 4–9.VII 2012, 2♀, 9♂, MP, VL; *ibid.*, 27.VI–8.VII 2014, 8♀, 12♂, AL, MP, VL; Turbaza, 3–20.VII 2012, 5♀, 2♂, MP, VL; Minusinsk, 10.VII 2012, 1♂, MP, VL; Minusinsk, Tes River, 7.VII 2012, 4♀, 2♂, MP, VL.

***Megachile ligniseca* (Kirby, 1802)**

MATERIAL EXAMINED. **Russia.** *Republic of Khakassia*: Belyi Yar, Abakan River, 11–12.VII 2012, 2♀, MP, VL; 20 km NE of Chernoe Ozero, Belyi Iyus River [54.76°N 89.74°E], 17.VII 2012, 1♀, MP, VL; Kazanovka, 28.VI 2013, 1♀, Ya. Telegina [ABRC]; 7 km N of Boyarovka, 11.VIII 2018, 1♀, AB [ABRC]. *Republic of Tyva*: 27 km SSW of Erzin, Tore-Khol Lake, 11–12.VII 2014, 1♀, 1♂, AL, MP, VL; Shuurmak, Shuurmak River, 11–12.VII 2013, 11 ♀, MP, VL; 13 km NEE of Samagaltay, Kaldak-Khamar Pass, 19.VII 2014, 1♂, AL, MP, VL. *Krasnoyarsk Territory*: Minusinsk, 9.VII 2012, 1♂, MP, VL; 10 km NE of Minusinsk, Malaya Minusa River, 7.VII 2012, 2♀, 1♂, MP, VL; Minusinsk, Nichka River [53.66°N 91.71°E], 6.VII 2012, 1♀, 3♂, MP, VL; Magansk, 30.VI 2012, 6♂, MP, VL. *Republic of Buryatia*: Baysa [53.98°N 113.58°E], 14–27.VII 1983, 5♂, Zherikhin.

***Megachile maritima* (Kirby, 1802)**

MATERIAL EXAMINED. **Russia.** *Republic of Khakassia*: Klimanihovskii, 23.VII 2013, 1♂, Scherbakov. *Republic of Tyva*: 15 km W of Turan 31.VII–2.VIII 2009, 2♀, 2♂, Belokobylskij; 30 km of Shagonar, Baryk River, 5.VIII 2009, 1♀, 2♂, Belokobylskij; Balgazyn, 29.VII 2010, 1♀, Belokobylskij; 12 km SW of Samagaltay, Dytyg-Khem River, 8–11.VII 2013, 4♂, MP, VL; *ibid.*, 17.VII 2014, 1♂, AL, MP, VL; 27 km SSW of Erzin, Tore-Khol Lake, 30.VI–3.VII 2013, 1♂, MP, VL; *ibid.*, 11–12.VII 2014, 8♀, 9♂, AL, MP, VL; 32 km SW of Kyzyl, Elegest River, 22.VII 2014, 7♀, AL, MP, VL; 31 km NEE of Erzin, Erzin River, 16–18.VII 2014, 2♀, 4♂, AL, MP, VL; 6 km SSW of Erzin, Tes-Khem River, 3.VII 2013, 1♀, 1♂, MP, VL; 25 km SE of Erzin, Tes-Khem River, 5.VII 2013, 1♂, MP, VL; Ubsu-Nur Lake, 7.VII 2013, 1♀, MP, VL; Shagonar River valley, 19–26.VI 2017, 9♀, 2♂, AB [ABRC]; 7 km N of Boyarovka, 12.VIII 2018, 1♀, AB [ABRC]. *Krasnoyarsk Territory*: 10 km NE of Minusinsk, Malaya Minusa River, 4–7.VI 2012, 3♀, 3♂, MP, VL; *ibid.*, 27.VI 2014, 1♀, AL, MP, VL; Minusinsk, 9.VII 2012, 1♂, MP, VL; Minusinsk, Nichka River, 6.VII 2012, 1♀, 2♂, MP, VL; Minusinsk, Tes River, 7.VII 2012, 1♀, MP, VL.

***Megachile melanopyga* Costa, 1863**

MATERIAL EXAMINED. **Russia.** *Republic of Khakassia:* Chernoe Ozero, Chernoe Lake, 16–19.VII 2012, 1♂, MP, VL; Zhemchuzhnyi, 21–24.VI 2011, 6♂, Tomkovich. *Republic of Tyva:* 30 km of Shagonar, Baryk River, 5.VIII 2009, 1♀, Belokobylskij; 12 km SW of Samagaltay, Dytyg-Khem River, 17.VII 2014, 2♂, AL, MP, VL; 27 km SSW of Erzin, Tore-Khol Lake, 11–12.VII 2014, 1♀, 9♂, AL, MP, VL; 32 km SW of Kyzyl, Elegest River, 22.VII 2014, 1♀, AL, MP, VL; 31 km NEE of Erzin, Erzin River, 16.VII 2014, 2♀, 6♂, AL, MP, VL; 6 km SSW of Erzin, Tes-Khem River, 13.VII 2013, 1♀, AL, MP, VL; 25 km SE of Erzin, Tes-Khem River, 14–15.VII 2014, 1♀, 2♂, AL, MP, VL. Shagonar River valley, 19.VI 2017, 1♂, AB [ABRC]; 7 km N of Boyarovka, 12.VIII 2018, 1♀, AB [ABRC]; 20 km SSE of Balgazyn [51.08°N 95.15°E], 25.VII 2018, 1♀, SL, DS [ABRC]; 9 km SW of Shambalyg, 22.VII 2018, 1♀, SL, DS [ABRC]. *Krasnoyarsk Territory:* Minusinsk, Nichka River, 6.VII 2012, 1♀, 1♂, MP, VL; Turbaza, 3.VII 2012, 1♂, MP, VL; Berezovyi, 1.VII 2012, 1♂, MP, VL; 10 km NW of Minusinsk, Bystraya Channel, 9.VII 2014, 2♂, AL, MP, VL.

***Megachile nigriventris* Schenck, 1870**

MATERIAL EXAMINED. **Russia.** *Republic of Khakassia:* Zhemchuzhnyi, 25–28.VI 2011, 1♀, Tomkovich; 50 km NWW of Shira, Chernyi Iyus River, 4.VII 2014, 1♂, AL, MP, VL; *Republic of Buryatia:* Baysa, 14–27.VII 1983, 2♀, 2♂, Zherikhin.

REMARKS. The species relationship with *M. maacki* Radoszkowski, 1874 is not clear. Praz (2017) hypothesized that *M. maacki* can be an Eastern Palaearctic, geographic form of *M. nigriventris*. Differences were provided by Scheuchl (2006). According to an opinion of AB, all examined specimens from previous studies and in the new material belong to *M. nigriventris*. Females have apical bands or lateral spots of light hairs on T3–T5, scopa predominantly red-brown or brown (sometimes nearly black on S4–S6), clypeus closely rugoso-punctate without a clear impunctate longitudinal mid line. Anterior tarsi and genitalia of males fit in full the characters of *M. nigriventris*.

***Megachile rotundata* (Fabricius, 1787)**

MATERIAL EXAMINED. **Russia.** *Republic of Khakassia:* Belyi Yar, Abakan River, 11–12.VII 2012, 6♀, 2♂, MP, VL. *Republic of Tyva:* Shagonar River valley, 25.VI 2017, 1♂, AB [ABRC].

***Megachile versicolor* Smith, 1844**

MATERIAL EXAMINED. **Russia.** *Republic of Khakassia:* Klimanihovskii, 23.VII 2013, 1♂, Scherbakov; Kazanovka, 1.VII 2013, 1♂, AB [ABRC]; *ibid.*, 28.VI–1.VII 2014, 1♀, 1♂, K. Belova [ABRC]; Chernoe Ozero, Chernoe Lake, 16–19.VII 2012, 2♀, MP, VL; Belyi Yar, Abakan River, 11–12.VII 2012, 1♀, MP, VL; 37 km NWW of Shira, Reingol Lake, 5.VII 2014, 1♂, AL, MP, VL; 40 km NWW of Shira, Chernoe Lake, 3–5.VII 2014, 1♂, AL, MP, VL; Zhemchuzhnyi, 21–24.VI 2011, 2♂, Tomkovich; Izykhskie Kopi, 7.VII 2014, 1♀, AL, MP, VL. *Republic of Tyva:* 15 km W of Turan, 31.VII–2.VIII 2009, 1♀, Belokobylskij; 31 km NEE of Erzin, Erzin River, 16.VII 2014, 13♂, AL, MP, VL; 25 km SE of Erzin, Tes-Khem River, 14–15.VII 2014, 1♂, AL, MP, VL; 12 km SW of Samagaltay, Dytyg-Khem River, 8–17.VII 2013, 3♀, 7♂, MP, VL; *ibid.*, 17.VII 2014, 1♀, AL, MP, VL; 6 km SSW of Erzin, Tes-Khem

River, 3.VII 2013, 2♀, 1♂, MP, VL; 16 km N of Boyarovka, 15.VII 2013, 2♂, MP, VL; 6 km SE of Bay-Haak, Sosnovka, 20–21.VII 2014, 3♀, AL, MP, VL; 20 km N of Boyarovka [51.73°N 95.43°E], 11.VIII 2018, 1♀, AB [ABRC]; 7 km N of Boyarovka, 12.VIII 2018, 1♀, AB [ABRC]; Begerd River, 12.VIII 2018, 1♀, AB [ABRC]; 20 km SSE of Balgazyn, 25.VII 2018, 1♀, SL, DS [ABRC]; 4.5 km SW of Khovu-Aksy [51.12°N 93.65°E], 28.VII 2018, 4♀, SL, DS [ABRC]; 5 km E of Handagayty, 29.VII 2018, 5♀, 1♂, SL, DS [ABRC]. *Krasnoyarsk Territory*: 10 km NE of Minusinsk, Malaya Minusa River, 27.VI 2014, 1♂, MP, VL; Berezovyi [55.80°N 93.29°E], 1.VII 2012, 1♂, MP, VL; Kuragino, 18.VII 2018, 1♂, SL, DS [ABRC]. *Republic of Buryatia*: Baysa, 27.VII–4.VIII 1983, 4♀, Zherikhin.

***Megachile willughbiella* (Kirby, 1802)**

MATERIAL EXAMINED. **Russia. Republic of Khakassia**: Kazanovka, 1.VII 2013, 2♂, AB [ABRC]. 24.VI–1.VII 2014, 19♀, 4♂, K. Belova [ABRC]; 37 km NWW of Shira, Reingol Lake, 5.VII 2014, 1♀, 2♂, AL, MP, VL; 40 km NWW of Shira, Chernoe Lake, 3–5.VII 2014, 1♀, AL, MP, VL; 38 km SE of Shira, Galdzha [54.40°N 90.49°E], 30.VI 2014, 1♀, AL, MP, VL; 50 km NWW of Shira, Chernyi Iyus River, 4.VII 2014, 1♂, AL, MP, VL. *Republic of Tyva*: Republic of Tyva, Shuurmak, Shuurmak River, 11–12.VII 2013, 4♀, 24♂, MP, VL; 16 km N of Boyarovka, 15.VII 2013, 4♂, MP, VL; 6 km SE of Bay-Haak, Sosnovka, 20–21.VII 2014, 3♀, AL, MP, VL; 13 km NEE of Samagaltay, Kaldak-Khamar Pass, 19.VII 2014, 2♂, AL, MP, VL; 31 km NEE of Erzin, Erzin River, 16–18.VII 2014, 2♂, AL, MP, VL; 34 km W of Balgazyn, Chagytay Lake, 20.VII 2014, 1♂, AL, MP, VL; 12 km SW of Samagaltay, Dytyg-Khem River, 17.VII 2014, 1♂, AL, MP, VL; Tardan, 15.VII 2013, 1♂, MP, VL; Shagonar River valley, 26.VI 2017, 1♂, AB [ABRC]; 12 km SEE of Erzin, 23.VII 2018, 3♂, SL, DS [ABRC]; 5.5 km SSE of Balgazyn [50.95°N 95.17°E], 25.VII 2018, 2♀, SL, DS [ABRC]; 20 km SSE of Balgazyn, 25.VII 2018, 1♀, SL, DS [ABRC]; 5 km E of Handagayty, 29.VII 2018, 1♀, SL, DS [ABRC]; 11 km SW Teeli [50.93°N 90.02°E], 1.VIII 2018, 1♀, SL, DS [ABRC]. *Krasnoyarsk Territory*: Minusinsk, 10.VII 2012, 1♂, MP, VL; 10 km NE of Minusinsk, Malaya Minusa River, 7–10.VII 2012, 1♀, 1♂, MP, VL; *ibid.*, 27.VI 2014, 2♂, MP, VL; *ibid.*, 8.VII 2014, 1♂, AL, MP, VL; Znamenka, 6.VII 2012, 1♀, MP, VL; Minusinsk, Nichka River, 6.VII 2012, 1♀, MP, VL.

***Osmia bicolor* (Schrank, 1781)**

MATERIAL EXAMINED. **Russia. Altai Territory**: Barnaul, near Yuzhnyi [53.25°N 83.71°E], 4.VII 2008, 1♀, Yu. Danilov [ABRC]; *ibid.*, 25.IV 2018, 2♂, Yu. Danilov [ABRC]. *Republic of Khakassia*: Kazanovka, 26.VI 2014, 1♀, K. Belova [ABRC].

***Osmia pilicornis* Smith, 1846**

MATERIAL EXAMINED. **Russia. Krasnoyarsk Territory**: Chibizhek River [54.40°N 93.65°E], 12.VI 2010, 1♂, E.V. Borisova [ABRC].

***Osmia spinulosa* (Kirby, 1802)**

MATERIAL EXAMINED. **Russia. Krasnoyarsk Territory**: Turbaza, 3.VII 2012, 1♂, MP, VL; *ibid.*, 20.VII 2012, 4♀, MP, VL; Kuragino, 18.VII 2018, 1♂, SL, DS [ABRC].

***Stelis minuta* Lepeletier de Saint-Fargeau et Audinet-Serville, 1825**

MATERIAL EXAMINED. **Russia.** *Republic of Tyva:* 27 km SSW of Erzin, Tore-Khol Lake, 11–12.VII 2014, 1 ♀, AL, MP, VL.

***Stelis ornatula* (Klug, 1807)**

MATERIAL EXAMINED. **Russia.** *Republic of Khakassia:* 10 km E of Shira, Itkul Lake [54.48°N 90.10°E], 28–29.VI 2014, 3 ♂, AL, MP, VL. *Republic of Tyva:* Shuurmak, Shuurmak River, 11–12.VII 2013, 1 ♂, MP, VL; 12 km SW of Samagaltay, Dytytg-Khem River, 17.VII 2014, 1 ♀, AL, MP, VL.

***Stelis punctulatissima* (Kirby, 1802)**

MATERIAL EXAMINED. **Russia.** *Kurgan Province:* Krutiha, 20.VII 2016, 1 ♀, AB [ABRC].

CONCLUSION

There are 109 species of Megachilidae revealed in the fauna of Siberia after current additions and corrections. *Anthidium kashgarens* is new to Russia and Kazakhstan, while *Coelioxys latefasciatus* is new to Russia. The latter species is very similar to *Coelioxys rufescens*, so we place it in the subgenus *Rozeniana*. The most probable host of this species is *Anthophora plagiata*.

For some regions, the number of known species is doubled or nearly: Republic of Tyva – 29 new species (55 in total), Krasnoyarsk Territory – 24 (44), Republic of Khakassia – 19 (38). However, in our opinion, our knowledge of the regional fauna is still incomplete. First of all, this is the case of the Republic of Tyva. Taking into account a unique geographic location and habitat diversity, we expect that targeted research will uncover about two dozen other species, including some new to science. Another poorly studied, but undoubtedly rich in bee species, region is the Altai Republic, for which just 22 species are known (Byvaltsev & Proschalykin, 2019; Fateryga *et al.*, 2024).

The regional diversity of megachilids in Siberia still holds much interest, as is indicated by the fact that new data have been obtained for relatively well-studied territories: the Altai Territory and the Republic of Buryatia have four new species each (45 and 52 species in total, respectively), three new species are recorded for the Kurgan, Novosibirsk, and Kemerovo provinces (45, 47, and 57 currently known species, respectively).

The territories of Kazakhstan lying on the West Siberian Plain (11 species) and the Tyumen Province (10) are particularly poorly studied.

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REFERENCES

- Astafurova, Yu.V. & Proshchalykin, M.Yu. 2022. Review of the *Epeolus julliani* species group (Hymenoptera: Apidae, *Epeolus* Latreille, 1802), with the description of two new species. *Journal of Hymenoptera Research*, 94: 191–213. DOI: 10.3897/jhr.94.96429
- Byval'tsev, A.M., Belova, K.A., Danilov, Yu.N., Molodtsov, V.V. & Proshchalykin, M.Yu. 2018. Megachilid bees (Hymenoptera: Megachilidae) of the forest-steppe and steppe zones of the West Siberian Plain to the eastward of Irtysh River. *Far Eastern Entomologist*, 364: 10–28. DOI: 10.25221/fee.364.3
- Byval'tsev, A.M. & Proshchalykin, M.Yu. 2019. Megachilid bees (Hymenoptera: Megachilidae) of Siberia: corrections and additions to the Catalogue of the Hymenoptera of Russia. *A.I. Kurentsov's Annual Memorial Meetings*, 30: 163–171. [In Russian] DOI: 10.25221/kurentzov.30.14
- Byval'tsev, A.M., Sidorov, D.A., Fateryga, A.V. & Proshchalykin, M.Yu. 2021. Megachilid bees (Hymenoptera, Megachilidae) of the Kemerovskaya oblast, Russia. *Euroasian Entomological Journal*, 20(2): 86–96. [In Russian] DOI: 10.15298/euroasentj.20.2.05
- Ghisbain, G., Rosa, P., Bogusch, P., Brau, T., Carion, F., De Manincor, N., Devalez, J., Dorchin, A., Flaminio, S., Greil, H., Hölzler, G., Hopfenmüller, S., Kasperek, M., Kuhlmann, M., Le Divelec, R., Litman, J.R., Maugendre, A., Michez, D., Müller, A., Ortiz-Sánchez, F.J., Praz, C.J., Radchenko, V.G., Rasmont, P., Risch, S., Roberts, S.P.M., Santerre, R., Schmid-Egger, C., Sentil, A., Straka, J., Williams, P.H., Wood, T.J. & Reverté, S. 2025. The new annotated checklist of the wild bees of Europe (Hymenoptera: Anthophila) – version 2025. *Zootaxa*, 5736(1): 1–126. DOI: 10.11646/zootaxa.5736.1.1
- Fateryga, A.V. & Proshchalykin, M.Yu. 2024. 150 years after Ferdinand Morawitz: a survey of megachilid bees (Hymenoptera, Megachilidae) of Dagestan, Russia. *ZooKeys*, 1217: 101–117. DOI: 10.3897/zookeys.1217.134704
- Fateryga, A.V., Proshchalykin, M.Yu. & Abakumov, E.V. 2024. A new species and new records of *Hoplitis* Klug (Hymenoptera, Megachilidae) from Russia. *Journal of Hymenoptera Research*, 97: 1417–1433. DOI: 10.3897/jhr.97.139623
- Friese, H. 1925. Neue Formen von Schmarotzerbienen, besonders aus dem paläarktischen Gebiet. *Konowia*, 4: 27–42.
- Lelej, A.S., Proshchalykin, M.Yu. & Loktionov, V.M. (Eds) 2017. Annotated catalogue of the Hymenoptera of Russia. Vol. I. Symphyta and Apocrita: Aculeata. *Proceedings of the Zoological Institute RAS*, Supplement 6: 1–475. DOI: 10.31610/trudyzin/2017.supl.6.5
- Michener, C.D. 2007. *The Bees of the World*. Second Edition. Johns Hopkins University Press, Baltimore, Maryland, xvi + [i] + 953 pp., 20 pls.
- Morawitz, F. 1886 [“1887”]. Insecta in itinere cl. N. Przewalskii in Asia centrali novissime lecta. 1. Apidae. *Horae Societatis Entomologicae Rossicae*, 20(3–4): 195–229.
- Niu, Z.-Q., Yuan, F., Ascher, J.S., Kasperek, M., Orr, M.C., Griswold, T. & Zhu, C.-D. 2020. Bees of the genus *Anthidium* Fabricius, 1804 (Hymenoptera: Apoidea: Megachilidae: Anthidiini) from China. *Zootaxa*, 4867(1): 1–67. DOI: 10.11646/zootaxa.4867.1.1
- Praz, C.J. 2017. Subgeneric classification and biology of the leafcutter and dauber bees (genus *Megachile* Latreille) of the western Palearctic (Hymenoptera, Apoidea, Megachilidae). *Journal of Hymenoptera Research*, 55: 1–54. DOI: 10.3897/jhr.55.11255
- Proshchalykin, M.Yu. & Fateryga, A.V. 2017. Family Megachilidae. In: Lelej, A.S., Proshchalykin, M.Yu. & Loktionov, V.M. (Eds), *Annotated catalogue of the Hymenoptera of Russia. Vol. I. Symphyta and Apocrita: Aculeata. Proceedings of the Zoological Institute RAS*, Supplement 6: 295–308. DOI: 10.31610/trudyzin/2017.supl.6.5

- Proshchalykin, M.Yu., Fateryga, A.V. & Astafurova, Yu.V. 2023. Corrections and additions to the catalogue of the bees (Hymenoptera, Anthophila) of Russia. *ZooKeys*, 1187: 301–339. DOI: 10.3897/zookeys.1187.113240
- Proshchalykin, M.Yu. & Kuhlmann, M. 2023. New and little-known bees of the genus *Colletes* Latreille, 1802 (Hymenoptera, Colletidae) from Siberia. *Journal of Hymenoptera Research*, 96: 33–43. DOI: 10.3897/jhr.96.101740
- Proshchalykin, M.Yu. & Müller, A. 2019. Additional records of osmiine bees (Hymenoptera: Megachilidae: Osmiini) from Siberia. *Zootaxa*, 4563(1): 163–174. DOI: 10.11646/zootaxa.4563.1.9
- Scheuchl, E. 2006. *Illustrierte Bestimmungstabellen der Wildbienen Deutschlands und Österreichs. Band II: Megachilidae – Melittidae*. Second edition. Apollo Books, Stenstrup, 192 pp.
- Schwarz, M. & Gusenleitner, F. 2003. Ergebnisse der Untersuchung von F. Morawitz beschriebener *Coelioxys*-Arten, so wie weiterer von Eversmann, Friese und Radoszkowski beschriebener Arten, nebst einigen Bemerkungen (Hymenoptera: Apidae: Megachilidae). *Linzer Biologische Beiträge*, 35(2): 1221–1239.
- Sidorov, D.A., Astafurova, Yu.V. & Proshchalykin, M.Yu. 2025. First record of *Andrena genalis* Morawitz, 1880 (Hymenoptera: Andrenidae) from Russia with description of hitherto unknown male. *Far Eastern Entomologist*, 517: 18–24. DOI: 10.25221/fee.517.4
- Sidorov, D.A., Luzyanin, S.L., Aibek, U. & Proshchalykin, M.Yu. 2020. New data on bees of the genus *Andrena* Fabricius (Hymenoptera: Andrenidae) from Tyva Republic, Russia. *Far Eastern Entomologist*, 413: 8–14. DOI: 10.25221/fee.413.2