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## Megachilid-bees (Hymenoptera: Megachilidae) of the Crimean Peninsula

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### Abstract

The review of 120 species in 16 genera is given based on 8,907 examined collection specimens of megachilid-bees. Main literature reports from Crimea, examined material, and description of general distribution are given for each species. *Coelioxys elsei* SCHWARZ, 2001 is reported for Crimea for the first time. *Pseudoanthidium nanum* (MOCSÁRY, 1881), *Pseudoanthidium* sp. aff. *nanum* (MOCSÁRY, 1881), and *P. tenellum* (MOCSÁRY, 1881) are recognized within *P. "lituratum"*-complex which was not carefully studied in Crimea previously. *Osmia mustelina* GERSTÄCKER, 1869 and *Megachile semicircularis* auct. nec VAN DER ZANDEN, 1996 are reported instead of *O. emarginata* LEPELETIER, 1841 and *M. flabellipes* PÉREZ, 1895 incorrectly reported in previous publications. *Trachusa byssina* (PANZER, 1798), *Chelostoma foveolatum* (MORAWITZ, 1868), *Hoplitis adunca* (PANZER, 1798), *Osmia ligurica* MORAWITZ, 1868, *O. nana* MORAWITZ, 1874, *O. prasina* MORAWITZ, 1875, *Megachile fulvimana* EVERSMAHN, 1852, *M. maackii* RADOSZKOWSKI, 1874, and *M. nigriventris* SCHENCK, 1870 are excluded from the fauna of Crimea.

**K e y w o r d s :** leaf cutter bees, mason bees, wool carder bees, fauna, Crimea, Russia, Eastern Europe.

### Zusammenfassung

Basierend auf der Untersuchung von 8.907 Sammlungsexemplaren umfasst die Fauna der Bauchsammlerbienen (Megachilidae) der Krim 120 Arten aus 16 Gattungen. Für jede Art werden die relevanten Literaturangaben zum Vorkommen auf der Krim, das untersuchte Material und eine Beschreibung der Gesamtverbreitung angegeben. *Coelioxys elsei* SCHWARZ, 2001 wird erstmals für die Krim nachgewiesen. Innerhalb des *P. lituratum*"-Komplexes, der bisher auf der Krim nicht differenziert untersucht wurde, treten drei Arten auf, nämlich *Pseudoanthidium nanum* (MOCSÁRY, 1881), *Pseudoanthidium* sp. aff. *nanum* (MOCSÁRY, 1881) und *P. tenellum* (MOCSÁRY, 1881). *Osmia mustelina* GERSTÄCKER, 1869 und *Megachile semicircularis* auct. nec VAN DER ZANDEN, 1996 kommen anstelle von *O. emarginata* LEPELETIER, 1841 und *M. flabellipes* PÉREZ, 1895 vor, die in früheren Publikationen in Folge von Fehlbestimmungen fälschlicher Weise für die Krim gemeldet wurden. *Trachusa byssina* (PANZER, 1798),

*Chelostoma foveolatum* (MORAWITZ, 1868), *Hoplitis adunca* (PANZER, 1798), *Osmia ligurica* MORAWITZ, 1868, *O. nana* MORAWITZ, 1874, *O. prasina* MORAWITZ, 1875, *Megachile fulvimana* EVERSMAAN, 1852, *M. maackii* RADOSZKOWSKI, 1874 und *M. nigriventris* SCHENCK, 1870 sind nicht Bestandteil der Fauna der Krim.

## Резюме

На основании 8 907 изученных коллекционных экземпляров дан обзор 120 видов из 16 родов семейства Megachilidae. Для каждого вида приводятся основные указания из Крыма в литературе, изученный материал и информация об общем распространении. *Coelioxys elsei* SCHWARZ, 2001 впервые указывается для Крыма. *Pseudoanthidium nanum* (MOCSÁRY, 1881), *Pseudoanthidium* sp. aff. *nanum* (MOCSÁRY, 1881) и *P. tenellum* (MOCSÁRY, 1881) выделены в комплексе видов *P. "litturatum"*, который ранее подробно не изучался в Крыму. *Osmia mustelina* GERSTÄCKER, 1869 и *Megachile semicircularis* auct. nec VAN DER ZANDEN, 1996 приведены взамен *O. emarginata* LEPELETIER, 1841 и *M. flabellipes* PÉREZ, 1895, ошибочно указанных в предыдущих работах. *Trachusa byssina* (PANZER, 1798), *Chelostoma foveolatum* (MORAWITZ, 1868), *Hoplitis adunca* (PANZER, 1798), *Osmia ligurica* MORAWITZ, 1868, *O. nana* MORAWITZ, 1874, *O. prasina* MORAWITZ, 1875, *Megachile fulvimana* EVERSMAAN, 1852, *M. maackii* RADOSZKOWSKI, 1874 и *M. nigriventris* SCHENCK, 1870 исключены из фауны Крыма.

## Introduction

The Crimean Peninsula is situated between 44°23' and 46°19' of northern latitude and 32°30' and 36°40' of eastern longitude. The distance from the most northern point of the peninsula to the most southern one is 207 km; that from east to west is 324 km. The area of Crimea is about 26,900 km<sup>2</sup>; the length of the coastline is about 750 km. The peninsula is divided to two main orographical parts: a large flat part in the north and a mountain part in the south, with the highest summit Mt. Romankosh (1,545 m above sea level). Seven major habitat zones can be recognized in Crimea: semi-desert steppes and saline lands, true steppes (mainly tilled), premontane forest steppes, forests of the northern mountain slopes, mountain meadows and yayla steppes, forests of the southern mountain slopes, and submediterranean vegetation of the south coast (BIODIVERSITY SUPPORT PROGRAM 1999). The Crimean Peninsula includes two administrative regions of Russia: Republic of Crimea and Sevastopol. Arabat Spit northwards 45°45'N is the part of Genichesk district of Kherson Province of Ukraine.

The history of the studying of megachilid-bees in Crimea has lasted for more than 150 years; the first collected specimens with date on labels are dated 1864 (WIDHALM). First data on several species of megachilids from Crimea were published in the second part of 19<sup>th</sup> century. In that time 18 species were reported in several papers by RADOSZKOWSKI (1867, 1874, 1887) and MORAWITZ (1870, 1871, 1872); six of them were described by these authors as new species (two are accepted today and four are synonyms). Further data on megachilid-bees of Crimea were added in 20<sup>th</sup> century by POPOV (1933, 1958, 1961) who reported 27 species, one of them was a new one (accepted today). At the turn

of the 20<sup>th</sup> century ROMASENKO (1980, 1984, 1995) reported 69 species of megachilids from Crimea. Then, after several papers dedicated to separate, mainly protected territories in Crimea (IVANOV et al. 2005a; FILATOV 2003, 2006; FILATOV et al. 2006), a checklist of 125 species of megachilid-bees was published by the authors of the present investigation (IVANOV et al. 2007). Unfortunately, it did not contain the data on voucher material and several species were misidentified. After that checklist some additional papers were published on megachilids of protected areas in Crimea (IVANOV & FATERYGA 2007, 2011; IVANOV et al. 2009b; FATERYGA et al. 2014). The purpose of the present investigation is a critical review of megachilid-bees of the Crimean Peninsula with reference to collection material and literature reports.

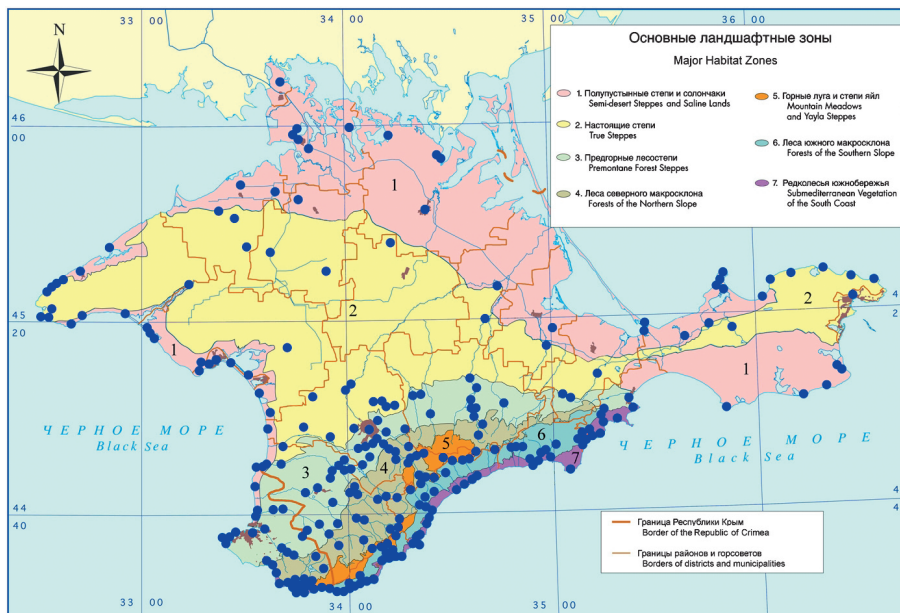
## Material and methods

Megachilid specimens collected in Crimea were examined in the collections of the Taurida Academy of the V.I. VERNADSKY Crimean Federal University, Simferopol, Russia [CFUS] (former V.I. VERNADSKY Taurida National University), Zoological Institute of the Russian Academy of Sciences, Saint Petersburg, Russia [ZIN], Zoological Museum of the M.V. LOMONOSOV Moscow State University, Moscow, Russia [ZMMU], I.I. SCHMALHAUSEN Institute of Zoology of the National Academy of Sciences of Ukraine, Kiev, Ukraine [IZAN], and Kharkov Entomological Society, Kharkov, Ukraine [KHEO]. The total number of examined specimens of megachilid-bees collected in Crimea was 8,907; the bees were collected in all habitat zones of the Crimean Peninsula (Fig. 1).

Bees were identified using the keys published in several literature sources (POPOV 1933; TKALCÛ 1975; OSYTSNIIUK et al. 1978; BANASZAK & ROMASENKO 2001; SCHEUCHL 1996; AGUIB et al. 2010; MÜLLER 2016a). Identification of several species was checked by comparing the studied material with relevant specimens identified by G. VAN DER ZANDEN in ZMMU; specimens of some megachilid-bees were compared with the type material of the relevant species in ZIN. Identification of some taxa was kindly confirmed by M. SCHWARZ (Ansfelden, Austria), C. PRAZ (Neuchâtel, Switzerland), and A. MÜLLER (Zurich, Switzerland). Two species, *Coelioxys elsei* SCHWARZ, 2001 and *Megachile semicircularis* auct. nec VAN DER ZANDEN, 1996, were identified by M. SCHWARZ and C. PRAZ, respectively.

Classification of the family Megachilidae in the present investigation generally follows MICHENER (2007) with some exceptions according to PRAZ et al. (2008). The description of each species has three sections: literature reports of this species from Crimea (including descriptions as new taxa) in main faunistic papers (omitting identification keys and most papers on bionomics of separate species), examined material, and description of general distribution; some remarks are also added as fourth section in several species. Complete label data (with information on dates and collectors) are given only for the rarest species in the Crimean fauna due to the large amount of the studied material; only localities and total number of collected specimens are given for most species. The general distribution of species is given according mainly to BANASZAK & ROMASENKO (2001), KUHLMANN et al. (2015), KASPAREK (2015), ASCHER & PICKERING (2016), and MÜLLER (2016b) with some additions according to PROSHCHALYKIN (2007, 2012, 2013a,b) and MAHARRAMOV et al. (2014).

The abbreviations of the collectors are as follows: AF, A. FATERYGA; AO, A. OSYTSHNJUK; GK, G. KOSTYLEV; LS, L. STULOVA; MF, M. FILATOV; SI, S. IVANOV; VP, V. PLIGINSKIY; VZ, V. ZHIDKOV. The abbreviations of the regions of Russia (in distribution sections) are as follows: EP, European part (without North Caucasus and Crimea); NC, North Caucasus; CR, Crimea; UR, Ural; WS, Western Siberia; ES, Eastern Siberia; FE, Far East.



**Fig. 1.** Points where examined specimens of megachilid-bees were collected in Crimea. (The background map was modified from: BIODIVERSITY SUPPORT PROGRAM 1999).

## List of the species of Megachilidae from the Crimean Peninsula

### Tribe Lithurgini

#### *Lithurgus (Lithurgus) chrysurus* FONSCOLOMBE, 1834

*Lithurgus cornutus* (FABRICIUS): ROMASENKO 1984: 235 (Simferopol, Alushta); ROMASENKO 1995: 67 (Crimean Reserve, other territories); IVANOV et al. 2005a: 88 (Krasnolesye). These records belong to *L. chrysurus*.

*Lithurgus chrysurus* FONSCOLOMBE: FILATOV 2003: 84 (Karadag); FILATOV 2006: 112 (Opuk Reserve); IVANOV et al. 2007: 4 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 209 (Karadag, Otuzy valley); IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** 15♀, 31♂ [CFUS], 1♀, 2♂ [ZMMU], 2♀, 1♂ [IZAN], 7♀, 3♂ [KHEO]. Republic of Crimea: Chernomorskoye distr.: Bol. Kastel; Bakhchisaray distr.: Peschanoye – Uglovoye, Shelkovichnoye; Simferopol; Simferopol distr.: Fontany, Urozhaynoye, Krasnolesye; Yalta: Zori Ukrainy (currently Zori Rossii), Mt. Aypetri, Massandra,

Mys Martyan Reserve; Alushta; Sudak: Veseloye; Feodosiya: Kiziltash valley, Otuzy (currently Shchebetovka), Karadag, Barakol Lake; Lenino distr.: Novootradnoye, Zolotoye, Opuk Reserve; Kerch. Sevastopol: Cape Lukull, Cape Sarych.

**Distribution:** Russia (EP, CR, UR), W, E and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Syria, Israel, Iran, ?Central Asia, N America (introduced).

***Lithurgus (Lithurgus) cornutus* (FABRICIUS, 1787)**

*Lithurgus cornutus fuscipennis* LEPELETIER: VAN DER ZANDEN 1986: 55 (Karadag).

*Lithurgus fuscipennis* LEPELETIER: ROMASENKO 1984: 236 (Generalskoye, Mt. Karabi); ROMASENKO 1995: 67 (Crimean Reserve, other territories); IVANOV et al. 2005a: 93 (Crimean Foothills).

*Lithurgus cornutus* (FABRICIUS): IVANOV et al. 2005b: 210 (Crimea); IVANOV et al. 2007: 4 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve).

**Material examined:** 11♀, 16♂ [CFUS], 1♀ [ZIN], 1♀, 1♂ [IZAN]. Republic of Crimea: Crimea (without details); Bakhchisaray distr.: Kuybyshevo; Simferopol; Simferopol distr.: Fontany, Gvardeyskoye, Urozhaynoye, Urozhaynoye – Molochnoye, Krasnolesye; Belogorsk distr.: Belogorsk, riv. Karasu; Yalta: Artek; Alushta: Alushta, Generalskoye.

**Distribution:** Russia (EP, NC, CR, UR, WS, ES), W, E and S Europe, N Africa, Georgia, Armenia, Azerbaijan, Turkey, Israel, Iran, Uzbekistan, Kyrgyzstan, Kazakhstan, N America (introduced).

**Tribe Anthidiini**

***Anthidiellum (Anthidiellum) strigatum* (PANZER, 1805)**

*Anthidiellum strigatum luteum* FRIESE: POPOV 1958: 111 (Crimean Mountains).

*Anthidiellum strigatum* LATREILLE: ROMASENKO 1980: 72 (Crimean Reserve); ROMASENKO 1984: 248 (Magarach, Crimean Reserve, Rybachye, Karadag, Laspi Bay); ROMASENKO 1995: 67 (Crimean Reserve, other territories).

*Anthidiellum strigatum* (PANZER): FILATOV 2003: 84 (Karadag); IVANOV et al. 2005a: 88 (Krasnolesye); IVANOV et al. 2007: 5 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 209 (Karadag, Otuzy valley, Lisy Bay); IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** 24♀, 57♂ [CFUS], 1♂ [ZIN], 1♂ [ZMMU], 4♀, 15♂ [IZAN], 7♀, 7♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Bol. Kastel, Belyaus; Yevpatoriya: Mirnyy; Bakhchisaray distr.: Priyatnoye Svidaniye, Kuybyshevo; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Lozovoye, Opushki, Ayan, Krasnolesye, Mt. Pakhalkaya; Belogorsk distr.: Belaya Skala, Mezghorye; South Coast (without details); Yalta: Simeiz, Katsiveli, Alupka, Mt. Aypetri, Cape Aytdor, Yalta, Uchkosh Canyon, Massandra, Magarach, Mys Martyan Reserve, Artek; Alushta: Crimean Reserve, cordon Dubrava, Alushta, Luchistoye, Rybachye; Sudak: Mt. Karauloba, Veseloye; Feodosiya: Mt. Echkidag – Shchebetovka, Shchebetovka, Lisy Bay, Kurutnoye, Karadag; Lenino distr.: 3.5 km SE Zavetnoye, Opuk Reserve. Sevastopol: Lyubimovka, Cape Ayya, Laspi Bay, Batiliman, Morozovka, 5 km W Verkhnesadovoye.

**Distribution:** Russia (EP, NC, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Cyprus, Syria, Lebanon, Israel, Iraq, Turkmenistan, Tajikistan, Uzbekistan, Kazakhstan, Korea.

### ***Anthidium (Anthidium) cingulatum* LATREILLE, 1809**

*Anthidium cingulatum* LATREILLE: ROMASENKO 1980: 72 (Crimean Reserve); ROMASENKO 1984: 241 (Mt. Aypetri, Crimean Reserve, Mt. Demerdzhi, Mt. Karabi, Rybachye, Karadag, Zavetnoye, Baydarskaya Yayla); ROMASENKO 1995: 67 (Crimean Reserve, other territories); FILATOV 2003: 84 (Karadag); IVANOV et al. 2005a: 90 (Krasnolesye); FILATOV 2006: 113 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV et al. 2007: 5 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 209 (Karadag, Otuzy valley, Lysa Bay); IVANOV & FATERYGA 2011: 86 (Yalta Reserve); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** 45♀♀, 58♂♂ [CFUS], 1♂ [ZIN], 4♀♀, 7♂♂ [ZMMU], 9♀♀, 7♂♂ [IZAN], 19♀♀, 14♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Bol. Kastel; Krasnoperekopsk distr.: Krasnoarmeyskoye; Armyansk: Perekop; Yenisala (currently unknown, there were four "Yenisala" in Crimea); Bakhchisaray distr.: cordon Zelenyy Gay; Simferopol: Simferopol, Ma'ino, Chumakarka; Simferopol distr.: Pionerskoye, Krasnolesye; Yalta: Mt. Aypetri, Yalta, Mt. Lapata, Uchkosh Canyon; Alushta: Mt. Chatyrdag, Mt. Kastel, Alushta, Kutuzovka, riv. Demerdzhi, Mt. Demerdzhi, Mt. Karabi; Sudak: Gromovka, Veseloye, Sudak, Cape Meganom; Feodosiya: Otuzy (currently Shchebetovka), Otuzy valley, Lysa Bay, Karadag, Tikhaya Bay; Lenino distr.: Kamenskoye – Solyanoye, Cape Kazantip, Zolotoye, Kurortnoye, Bulganak Steppe, Opuk Reserve. Sevastopol: Cape Ayya, Laspi Bay, Baydarskaya Yayla, Peredovoye, Uzundzha Canyon, riv. Chernaya, Adym-Chokrak valley.

**Distribution:** Russia (EP, CR, UR), W, E and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Cyprus, Iran, Uzbekistan, Kyrgyzstan, Kazakhstan, China, India.

### ***Anthidium (Anthidium) diadema* LATREILLE, 1809**

*Anthidium diadema* LATREILLE: ROMASENKO 1995: 67 (Crimean Mountains); FILATOV 2003: 84 (Karadag); IVANOV et al. 2005a: 93 (Crimean Foothills); FILATOV 2006: 113 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV et al. 2007: 5 (Crimea); IVANOV et al. 2009b: 209 (Karadag, Otuzy valley, Lysa Bay).

**Material examined:** 4♀♀, 6♂♂ [CFUS], 1♀ [ZIN], 2♂♂ [IZAN], 22♀♀, 18♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Krasnoperekopsk distr.: Krasnoarmeyskoye; Yevpatoriya: Moynaki Lake; Simferopol; South Coast: from Karakau (currently unknown) to Yayla; Feodosiya: Lysa Bay, Kurortnoye, Karadag; Lenino distr.: Cape Kazantip, Lenino, Opuk Reserve.

**Distribution:** Russia (NC, CR), W, E and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Cyprus, Israel, Iran, Turkmenistan, Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan.

### ***Anthidium (Anthidium) florentinum* (FABRICIUS, 1775)**

*Anthidium florentinum* (FABRICIUS): POPOV 1958: 111 (Crimean Mountains); ROMASENKO 1984: 243 (Kutuzovka, Sudak highway); ROMASENKO 1995: 67 (Crimean Reserve, other territories); FILATOV 2003: 84 (Karadag); IVANOV et al. 2005a: 90 (Krasnolesye); IVANOV et al. 2005b: 210 (Crimea); FILATOV 2006: 113 (Opuk Reserve); IVANOV et al. 2007: 5 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 209 (Karadag); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** 25♀♀, 39♂♂ [CFUS], 1♀, 4♂♂ [ZIN], 2♀♀, 1♂ [IZAN], 1♀, 1♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Tarkhankut, Donuzlav Lake; Saki distr.: Popovka – Shtormovoye, Shtormovoye, Mityayevo; Yevpatoriya: Mirnyy, Yevpatoriya; Simferopol; Simferopol distr.: Fontany; Yalta: Gruzport; Alushta: Mt. Demerdzhi, Rybachye; Sudak; Feodosiya: Karadag; Lenino distr.: Kurortnoye, Opuk Reserve. Sevastopol: Sevastopol, Kacha, Kazachya Bay.

**Distribution:** Russia (EP, NC, CR, WS, ES, FE), W, E and S Europe, N Africa, Georgia, Armenia, Azerbaijan, Turkey, Cyprus, Syria, Lebanon, Israel, Iran, Afghanistan, Pakistan, Turkmenistan, Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan, China.

***Anthidium (Anthidium) loti* PERRIS, 1852**

*Anthidium variegatum* FABRICIUS: POPOV 1958: 111 (Crimean Mountains); ROMASENKO 1984: 246 (Karadag).

*Anthidium loti* PERRIS: IVANOV et al. 2007: 5 (Crimea); IVANOV et al. 2009a: 43 (Simferopol); IVANOV et al. 2009b: 209 (Karadag, Lysa Bay); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** 10♀♀, 25♂♂ [CFUS], 3♀♀, 3♂♂ [ZIN], 1♀ [ZMMU], 2♀♀, 2♂♂ [IZAN], 3♀♀, 3♂♂ [KHEO]. Republic of Crimea: Chalmekli (currently unknown); Chernomorskoye distr.: Kipchak; Simferopol; Simferopol distr.: Gvardeyskoye, Gvardeyskoye – Kurgannoye; Alushta: Mt. Kastel, Rybachye; Sudak: Veseloye, Sudak, Cape Meganom; Feodosiya: Kiziltash valley, Shchebetovka, Lysa Bay, Karadag. Sevastopol: riv. Chernaya, Belbek (currently Verkhnesadovye).

**Distribution:** Russia (CR, UR), W, E and S Europe, Azerbaijan, Turkey, Cyprus, Syria, Lebanon, Israel, Iran, Turkmenistan, Kazakhstan.

***Anthidium (Anthidium) manicatum* (LINNAEUS, 1758)**

*Anthidium manicatum* (LINNAEUS): POPOV 1958: 111 (Crimean Mountains); ROMASENKO 1984: 244 (Kutuzovka, Karadag, Feodosiya); ROMASENKO 1995: 67 (Crimean Reserve, other territories); FILATOV 2003: 84 (Karadag); IVANOV et al. 2005a: 90 (Krasnolesye); IVANOV et al. 2005b: 210 (Crimea); FILATOV 2006: 113 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV et al. 2007: 5 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 209 (Karadag); IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** 79♀♀, 101♂♂ [CFUS], 5♀♀, 8♂♂ [ZIN], 3♀♀, 1♂ [ZMMU], 10♀♀, 7♂♂ [IZAN], 8♀♀, 12♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Saki distr.: Shtormovoye, Mityayevo; Yevpatoriya; Yenisala (currently unknown, there were four "Yenisala" in Crimea); Bakhchisaray distr.: Kuybyshevo; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Fontany, Urozhaynoye, Gvardeyskoye, Ayan, Krasnolesye, Mt. Pakhalkaya; Belogorsk distr.: Krinichnoye; Kirovskoye distr.: Staryy Krym; Yalta: Parkovoye, Zori Ukrainy (currently Zori Rossii), Alupka, 1.5 km NW Alupka, Mt. Aypetri, Koreiz, Yaltinskaya Yayla, Yalta, Mt. Lapata, Uchkosh Canyon, Gruzport, Mys Martyan Reserve, Artek; Alushta: Mt. Chatyrdag, cordon Sadovyy, Alushta, Mt. Kastel, Mt. Demerdzhi, General'skoye, Rybachye; Sudak: riv. Voron, Gromovka, Veseloye, Sudak; Feodosiya: Mt. Echkidag – Shchebetovka, Lysa Bay, Karadag, Feodosiya; Lenino distr.: Cape Kazantip, Zolotoye, Osoviny, Bulganak Steppe, Opuk Reserve; Kerch. Sevastopol: Sevastopol, Laspi Bay, Cape Ayia, riv. Chernaya, riv. Urkusta.

**Distribution:** Russia (EP, NC, CR, UR, WS, ES), W, E, N and S Europe, N Africa, Georgia, Armenia, Azerbaijan, Turkey, Lebanon, Israel, Iran, Tajikistan, Kyrgyzstan, Kazakhstan, China, N and S America (introduced), New Zealand (introduced).

***Anthidium (Anthidium) montanum* MORAWITZ, 1865**

*Anthidium montanum* MORAWITZ: IVANOV et al. 2007: 5 (Crimea).

**Material examined:** Sevastopol: Khersones, 4.VIII 1968, 2♂♂, MF [IZAN, KHEO].

**Distribution:** Russia (CR), W, E and S Europe, Tajikistan, Kyrgyzstan, China.

***Anthidium (Anthidium) septemspinosum* LEPELETIER, 1841**

*Anthidium septemspinosum* LEPELETIER: IVANOV et al. 2007: 5 (Crimea).

**Material examined:** Republic of Crimea: Crimea (without details), 17.VII 1927, 1♂ [KHEO].

**Distribution:** Russia (EP, CR, UR, WS, ES, FE), W, E and S Europe, Turkey, Afghanistan, Kazakhstan, Mongolia, China, Korea, Japan.

***Anthidium (Proanthidium) oblongatum* (ILLIGER, 1806)**

*Anthidium oblongatum* (ILLIGER): FILATOV 2003: 84 (Karadag); IVANOV et al. 2005a: 91 (Krasnolesye); IVANOV et al. 2005b: 210 (Crimea); IVANOV et al. 2007: 5 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 209 (Karadag, Otuzi valley, Lysa Bay); IVANOV & FATERYGA 2011: 86 (Yalta Reserve); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** 41♀♀, 45♂♂ [CFUS], 1♀, 1♂ [ZIN], 1♀, 4♂♂ [ZMMU], 2♀♀, 6♂♂ [IZAN], 2♀♀ [KHEO]. Republic of Crimea: Chernomorskoye distr.: Kipchak; Bakhchisaray distr.: Glubokiy Yar; Simferopol: Simferopol, Mar'ino, Chumakarka; Simferopol distr.: Fontany, Urozhaynoye, Pionerskoye, Dobroye, Kizilkoba, Ayan, Krasnolesye; South Coast (without details); Yalta: Zori Ukrainy (currently Zori Rossii), Yalta, Gruzport, Nikita; Alushta: Mt. Chatyrdag, Crimean Reserve, Alushta, Mt. Demerdzhi, Rybachye, Kanaka valley; Feodosiya: Otuzi (currently Shchebetovka), Lysa Bay, Karadag. Sevastopol: Sevastopol, Balaklava, Cape Ayya, Laspi Bay.

**Distribution:** Russia (EP, NC, CR, UR, ES), W, E and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Iran, Turkmenistan, Tajikistan, Kyrgyzstan, Kazakhstan, China, N America (introduced).

***Icteranthidium grohmanni* (SPINOLA, 1838)**

*Anthidium grohmanni* SPINOLA: WARNCKE 1980: 171 (Yenishary Bay).

*Icteranthidium grohmanni* (SPINOLA): IVANOV et al. 2007: 5 (Crimea); IVANOV et al. 2009b: 209 (Karadag).

**Material examined:** Republic of Crimea: South Coast: from Karakau (currently unknown) to Yayla, 1♀, WIDHALM [ZIN]; Yalta: vicinity of Yalta, 15-25.VIII 1925, 1♂, KARAVAIEV [IZAN], Gruzport, 11.VII 2005, 1♀, 2♂♂, AF [CFUS]; Sudak: Mt. Karauloba, 24.VII, 25.VII 1990, 2♀♀, 6♂♂, SI [CFUS, KHEO]; Feodosiya: Lysa Bay, 7.VIII 2013, 7.VII, 5.VIII 2014, 3♂♂, AF [CFUS], Karadag, 31.VII, 10.VIII, 12.VIII 1936, 3♀♀, GK [ZMMU], Barakol Lake, 17.VIII 2016, 1♂, AF [CFUS].

**Distribution:** Russia (CR), W, E and S Europe, N Africa, Armenia, Turkey, Cyprus, Syria, Lebanon, Israel, Iran, Kyrgyzstan.

***Icteranthidium laterale* (LATREILLE, 1809)**

*Icteranthidium laterale* (LATREILLE): IVANOV et al. 2007: 5 (Crimea).

**Material examined:** Republic of Crimea: Crimea (without details), 1♀ [ZIN], 25.VII, 22.VIII, 25.VIII, 3♂♂ [CFUS]; "Crimea? Odessa?", 1♂, WIDHALM [ZIN]; Simferopol distr.: Gvardeyskoye – Kurgannoye, 5.VIII 2009, 1♂, SI; Lenino distr.: Kamenskoye – Solyanoye, 12.VII 2016, 1♀, 3♂♂, AF [CFUS].

**Distribution:** Russia (EP, CR, UR, WS, ES), W, E and S Europe, N Africa, Caucasus, Turkey, Iran, Turkmenistan, Kyrgyzstan, Kazakhstan, China.



***Pseudoanthidium (Pseudoanthidium) nanum* (MOCSÁRY, 1881)**

*Paranthidiellum lithuratum* (PANZER): ROMASENKO 1984: 239 (Shelkovichnoye, Pionerskoye, Alushta); ROMASENKO 1995: 67 (Crimean Reserve, other territories).

*Pseudoanthidium lithuratum* (PANZER): IVANOV et al. 2005a: 91 (Krasnolesye); IVANOV et al. 2005b: 210 (Crimea); IVANOV et al. 2007: 5 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 209 (Karadag). These records partially belong to *P. nanum* and partially to *P. sp. aff. nanum* or *P. tenellum*.

*Pseudoanthidium scapulare* (LATREILLE): FILATOV 2003: 84 (Karadag). This record partially belongs to *P. nanum* and partially to *P. sp. aff. nanum*.

**Material examined:** 26♀♀, 20♂♂ [CFUS], 3♀♀ [ZIN]. Republic of Crimea: Crimea (without details); Dzhankoy distr.: Solenoye Ozero; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Druzhnoye, Ayan, Krasnolesye; Belogorsk distr.: Belaya Skala; Yalta: Nikita; Sudak; Feodosiya: Kiziltash valley, Karadag. Sevastopol: Sevastopol, 5 km W Verkhnesadovoye.

**Distribution:** Russia (EP, CR, UR), W, E and S Europe, Caucasus, Turkey, Israel, Iran, Pakistan, N America (introduced).

**Remarks:** *Pseudoanthidium "lituratum"* is an unclear complex of different species. The status of seven species rank names of ten ones which were synonymized under *P. lituratum* by WARNCKE (1980) is uncertain and needs further exploration (KUHLMANN et al. 2015). The next unidentified species (below) obviously belongs to one of them.

***Pseudoanthidium (Pseudoanthidium) sp. aff. nanum* (MOCSÁRY, 1881)**

*Pseudoanthidium lithuratum* (PANZER): IVANOV et al. 2005b: 210 (Crimea); IVANOV et al. 2007: 5 (Crimea); IVANOV et al. 2009b: 209 (Karadag, Lisy Bay); FATERYGA et al. 2014: 84 (Tarkhankut). These records partially belong to *P. sp. aff. nanum* and partially to *P. nanum* or *P. tenellum*.

*Pseudoanthidium scapulare* (LATREILLE): FILATOV 2003: 84 (Karadag); FILATOV 2006: 113 (Opuk Reserve). These records partially belong to *P. sp. aff. nanum* and partially to *P. nanum*.

**Material examined:** 21♀♀, 13♂♂ [CFUS], 1♂ [ZIN]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Kipchak, Bol. Kastel; Razdolnoye distr.: Volochayevka; Krasnoperekopsk distr.: Krasnoarmeyskoye; Yevpatoriya: Mirnyy; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Fontany, Gvardeyskoye; Yalta; Feodosiya: Lisy Bay, Karadag; Lenino distr.: Kamenskoye – Solyanoye, Brannoye Pole, Yakovenkovo, Opuk Reserve. Sevastopol: Cape Lukull.

**Distribution:** Russia (CR).

**Remarks:** General distribution of the species is unclear due to its uncompleted identification. This species is closely related to *P. nanum* but differs from it by coarser sculpture of cuticle (especially on metasomal terga) and by several details in the structure of male genitalia and metasomal sterna. Females of *P. sp. aff. nanum* are also quite similar to *P. tenellum* but their males strongly differ from the last species by their genitalia and some other structures of metasoma. Some specimens of *P. sp. aff. nanum* from Crimea were kindly studied by M. SCHWARZ, and according to his opinion (in litt.) it is impossible to name this species validly without studying the types of numerous species described within *P. "lituratum"*-complex.

***Pseudoanthidium (Pseudoanthidium) tenellum* (MOCSÁRY, 1881)**

*Pseudoanthidium lithuratum* (PANZER): IVANOV et al. 2005b: 210 (Crimea); IVANOV et al. 2007: 5 (Crimea). These records partially belong to *P. tenellum* and partially to *P. nanum* or *P. sp. aff. nanum*.

**Material examined:** Republic of Crimea: Krasnoperekopsk distr.: Sovkhoznoye, 15.VII 1972, 1♂, SI; Saki distr.: Novofedorovka, 24.VII 2012, 2♀♀, SI; Simferopol distr.: Urozhaynoye, 9.VIII 1999, 1♀, SI; Feodosiya: Barakol Lake, 16.VIII 2016, 1♂, AF; Lenino distr.: Kamenskoye – Solyanoye, 6.VIII 2016, 1♀, AF, Kurortnoye, 1.VIII 2004, 1♂, AF, Opuk Reserve, 6.VIII 2010, 1♀, AF, 29.VII 2012, 1♂, SI [CFUS].

**Distribution:** Russia (CR), W and E Europe, N Africa.

**Remarks:** Specimens of *P. "lithuratum"*-complex deposited in the collections of ZMMU – 1♀, 2♂♂, IZAN – 7♀♀, 8♂♂, and KHEO – 10♀♀, 5♂♂ (Yevpatoriya; Nizhnegorskiy distr.: Kostochkovka; Bakhchisaray distr.: Shelkovichnoye; Simferopol distr.: Pionerskoye; Alushta: Mt. Chatyrdag, Mt. Kastel, Alushta, Krasnyy Ray, Mt. Demerdzhi, Generalskoye; Feodosiya: Karadag; Lenino distr.: Cape Kazantip, Zolotoye, Opuk Reserve) had been studied before the key to identification of the species of this complex was published by AGUIB et al. (2010). Thus, it is impossible to attribute correctly that material to any of the three species recorded in Crimea.

***Pseudoanthidium (Royanthidium) reticulatum* (MOCSÁRY, 1884)**

*Anthidiellum clypeare* (MORAWITZ): FILATOV 2003: 84 (Karadag). This record belongs to *P. reticulatum* according to IVANOV et al. (2007).

*Pseudoanthidium reticulatum* (MOCSÁRY): IVANOV et al. 2007: 5 (Crimea); IVANOV et al. 2009b: 209 (Karadag, Otuzy valley).

**Material examined:** Republic of Crimea: Belogorsk distr.: Karasevka, 14.VII 1981, 1♀, LS [CFUS]; Yalta: Limenez (currently Goluboy Zaliv), 22.VI 1902, 1♀, N. KUZNETSOV [ZIN], vicinity of Yalta, 27.VII 1979, 1♀, P. STEMBERG [ZMMU], Mys Martyan Reserve, 2.VIII 2001, 1♀, AF [CFUS]; Alushta: Alushta, 10.VII 1963, 1♀, AO, Luchistoye, 30.VI 1963, 1♂, AO [IZAN]; Sudak: Veseloye, 25.VII 1992, 1999, 25.VII 2003, 5♂♂, SI [CFUS, IZAN]; Feodosiya: Mt. Echkidag, 8.VII 2002, 1♂, SI [CFUS], Otuzy (currently Shchebetovka), 8.VII 1928, 1♀, GK, Karadag, 22.VII 1936, 1♀, GK [ZMMU], 10.VIII, 15.VIII 2001, 3♀♀, 1♂, MF [IZAN, KHEO], 3.VII 2002, 23.VI 2003, 2♀♀, SI [CFUS, IZAN]. Sevastopol: Cape Ayya, 8.VII 2004, 1♀, AF, riv. Chernaya, 17.VII 1989, 1♀, SI, riv. Urkusta, 18-19.VII 1989, 1♂, SI [CFUS].

**Distribution:** Russia (CR), W, E and S Europe, N Africa, Azerbaijan, Turkey, Lebanon, Israel, Iran.

***Stelis (Heterostelis) annulata* (LEPELETIER, 1841)**

*Stelis annulata* (LEPELETIER): IVANOV et al. 2007: 5 (Crimea); RADCHENKO et al. 2009: 171 (8 km NE Zolotoye).

**Material examined:** Republic of Crimea: Crimea (without details), 1♂; Simferopol: Marino, 14.VII 2015, 1♂, AF [CFUS]; Lenino distr.: 8 km NE Zolotoye, 07-12.VII 2008, 1♂, MF [KHEO].

**Distribution:** Russia (CR), W, E and S Europe, N Africa, Turkey, Lebanon.

***Stelis (Protostelis) signata flavescens* FRIESE, 1925**

*Stelis signata* var. *flavescens* FRIESE: POPOV 1933: 387 (Yalta).

*Protostelis signata flavescens* (FRIESE): POPOV 1958: 111 (Crimean Mountains).

*Stelis signata flavescens* FRIESE: IVANOV et al. 2007: 5 (Crimea); IVANOV & FATERYGA 2009: 31 (Simferopol); IVANOV et al. 2009b: 210 (Karadag, Otuzy valley, Lysya Bay); IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** 7♀♀, 8♂♂ [CFUS], 1♂ [ZIN], 1♂ [ZMMU], 2♀♀, 4♂♂ [IZAN], 3♀♀, 4♂♂ [KHEO]. Republic of Crimea: Simferopol: Mar'ino; Yalta: Zori Ukrainy (currently Zori Rossii), Yalta, Mys Martyan Reserve; Alushta: Rybachye, Kanaka valley; Sudak: Mt. Karauloba; Feodosiya: Lysya Bay, Kurortnoye, Karadag. Sevastopol: Cape Sarych, Morozovka.

**Distribution:** Russia (EP, CR, UR), W, E and S Europe, N Africa, Armenia, Azerbaijan, Turkey, Cyprus, Syria, Lebanon, Israel, Iraq, Iran, Kazakhstan.

### ***Stelis (Stelidomorpha) nasuta* (LATREILLE, 1809)**

*Stelis nasuta* (LATREILLE): POPOV 1933: 386 (Yalta, Khersones); IVANOV et al. 2007: 5 (Crimea); IVANOV et al. 2009b: 210 (Lysya Bay); FATERYGA et al. 2014: 84 (Tarkhankut).

*Stelidomorpha nasuta* (LATREILLE): POPOV 1958: 111 (Crimean Mountains).

**Material examined:** 29♀♀, 8♂♂ [CFUS], 4♀♀ [ZIN], 1♂ [IZAN], 1♀ [KHEO]. Republic of Crimea: Chernomorskoye distr.: Kipchak; Simferopol; Simferopol distr.: Urozhaynoye; Yalta; Feodosiya: Lysya Bay; Lenino distr.: Cape Kazantip. Sevastopol: Khersones, Cape Ayya.

**Distribution:** Russia (EP, CR), W, E and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Syria, Lebanon, Israel, Iran, Tajikistan, Uzbekistan.

### ***Stelis (Stelis) aculeata* MORAWITZ, 1880**

*Stelis aculeata* MORAWITZ: FATERYGA et al. 2013: 63 (Donuzlav Lake).

**Material examined:** Republic of Crimea: Yevpatoriya: Mirnyy, 1.VI 2013, 2♀♀, 1♂, AF, 1♀, 2♂♂, SI, 7.VI 2013, 5♂♂, SI [CFUS], 5♂♂, MF [KHEO], 13.VI 2013, 1♀, 1♂, SI, 5.VI, 8.VI 2016, 3♀♀, 1♂, AF [CFUS].

**Distribution:** Russia (CR, ES), Turkey, Uzbekistan, Kyrgyzstan, Kazakhstan, Mongolia, China.

### ***Stelis (Stelis) breviscula* (NYLANDER, 1848)**

*Stelis pusilla* (SPINOLA): MORAWITZ 1871: 321 (Crimea). This record belongs to *S. breviscula* according to POPOV (1933); see WARNCKE (1992) for comments on the use of this name.

*Stelis breviscula* (NYLANDER): POPOV 1933: 397 (South Coast, Mukhalatka, Yalta, Sudak, Otuzy, Sevastopol); POPOV 1958: 111 (Crimean Mountains); ROMASENKO 1995: 68 (Crimean Reserve, other territories); IVANOV et al. 2007: 5 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Otuzy valley); IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** 12♀♀, 20♂♂ [CFUS], 3♀♀, 1♂ [ZIN], 5♀♀ [ZMMU], 1♀ [IZAN], 1♀ [KHEO]. Republic of Crimea: Bakhchisaray distr.: Kuybyshevo, 1.5 km E Sokolinoye; Simferopol; Kirovskoye distr.: Staryy Krym; Yalta: Mukhalatka (currently Oliva), Katsiveli, Zori Ukrainy (currently Zori Rossii), Yalta; Alushta: Crimean Reserve, 20 km E Alushta, Solnechnogorskoye, Kanaka valley; Sudak; Feodosiya: Otuzy (currently Shchebetovka), Karadag; Lenino distr.: Opuk Reserve.

**Distribution:** Russia (EP, NC, CR, UR), W, E, N and S Europe, N Africa, Georgia, Armenia, Azerbaijan, Turkey, Turkmenistan, China.

### ***Stelis (Stelis) odontopyga* NOSKIEWICZ, 1925**

*Stelis odontopyga* NOSKIEWICZ: POPOV 1933: 398 (Kiziltash valley); POPOV 1958: 111 (Crimean Mountains); IVANOV et al. 2005a: 93 (Crimean Foothills); IVANOV et al. 2007: 5 (Crimea).

**Material examined:** Republic of Crimea: Bakhchisaray distr.: Peschanoye – Uglovoye, 7.VII 2015, 1♂, VZ; Simferopol distr.: Urozhaynoye, 9.VIII 1999, 7.VIII 2012, 1♀, 1♂, SI, Gvardeyskoye, 20.VII 2012, 1♀, SI [CFUS]; Kirovskoye distr.: Staryy Krym, 18.VII 1904, 1♀, D. GLAZUNOV [ZIN]; Alushta: Mt. Chatyrdag, 22.VII 2004, 1♂, D. PUZANOV [CFUS], Angarskiy Pass, 25.VI 1964, 1♂, AO [IZAN]; Feodosiya: Kiziltash valley, 26.VII 1908, 1♀, VP [ZIN]. Sevastopol: Khersones, 11.VIII 1913, 1♂, VP [ZIN], riv. Urkusta, 18-19.VII 1989, 1♂, SI [CFUS].

**Distribution:** Russia (CR), W, E and S Europe, Azerbaijan, Turkey.

### ***Stelis (Stelis) ornatula* (KLUG, 1807)**

*Stelis ornatula* (KLUG): ROMASENKO 1995: 68 (Crimean Reserve, other territories); IVANOV et al. 2007: 5 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve).

**Material examined:** Republic of Crimea: Simferopol, 8.VI 1928, 1♀ [KHEO]; Simferopol distr.: Dobroye, 8.VI 2003, 1♂, SI [CFUS].

**Distribution:** Russia (EP, NC, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Turkey, Iran, Turkmenistan, Tajikistan, Uzbekistan, Kazakhstan.

### ***Stelis (Stelis) phaeoptera* (KIRBY, 1802)**

*Stelis phaeoptera* (KIRBY): POPOV 1933: 399 (Yevpatoriya); IVANOV et al. 2007: 5 (Crimea); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** 31♀♀, 35♂♂ [CFUS], 1♀, 2♂♂ [ZIN], 1♂ [IZAN]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Kipchak; Bakhchisaray distr.: Samokhvalovo; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Gvardeyskoye; Belogorsk distr.: Vishennoye; Yalta; Feodosiya: Karadag; Lenino distr.: Zavetnoye. Sevastopol: Sevastopol.

**Distribution:** Russia (EP, NC, CR, UR), W, E, N and S Europe, N Africa, Georgia, Armenia, Azerbaijan, Turkey, Cyprus, Israel, Iran, Uzbekistan, Kyrgyzstan, Kazakhstan.

### ***Stelis (Stelis) punctulatissima* (KIRBY, 1802)**

*Stelis aterrima* (PANZER): POPOV 1933: 405 (near Yayla).

*Stelis punctulatissima* (KIRBY): ROMASENKO 1995: 68 (Crimean Reserve, other territories); IVANOV et al. 2007: 5 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** Republic of Crimea: Chernomorskoye distr.: Kipchak, 25.VI 2007, 3♀♀, AF; Simferopol: Simferopol, 28.VIII 1984, 1♀, LS, 29.VII 2001, 18.VII 2014, 2♀♀, SI, 21.VII 2004, 1♀, D. PUZANOV, Mar'ino, 13.VI 2008, 8.VI, 9.VI 2009, 1♀, 3♂♂, AF; Simferopol distr.: Urozhaynoye, 9.VIII 1999, 1♀, SI; Alushta: Angarskiy Pass, 25.VI 2011, 1♀, AF; Feodosiya: Barakol Lake, 27.VI 2004, 2♂♂, AF [CFUS]. Sevastopol: Lyubimovka, 29.VII 2002, 1♀ [KHEO].

**Distribution:** Russia (EP, NC, CR, UR, WS), W, E, N and S Europe, N Africa, Georgia, Turkey, Syria, Kazakhstan.

***Stelis (Stelis) simillima* MORAWITZ, 1876**

*Stelis simillima* MORAWITZ: ROMASENKO 1995: 68 (Crimean Mountains); IVANOV et al. 2007: 5 (Crimea).

**Material examined:** Republic of Crimea: Simferopol distr.: Gvardeyskoye, 1.VII 2012, 1 ♀, SI [CFUS].

**Distribution:** Russia (CR, UR, WS), W, E and S Europe, N Africa, Armenia, Azerbaijan, Turkey, Syria, Israel, Iran, Turkmenistan.

***Trachusa (Archianthidium) pubescens* (MORAWITZ, 1872)**

*Anthidium pubescens* MORAWITZ: WARNCKE 1980: 151 (Crimea).

*Archianthidium pubescens* (MORAWITZ): ROMASENKO 1984: 238 (Karadag).

*Trachusa pubescens* (MORAWITZ): FILATOV 2003: 84 (Karadag); IVANOV et al. 2007: 5 (Crimea); IVANOV et al. 2009a: 44 (Simferopol); IVANOV et al. 2009b: 210 (Karadag, Otuzy valley, Lisy Bay); RADCHENKO et al. 2009: 167-168 (numerous localities); IVANOV et al. 2015: 303-304 (Mt. Echkidag, Lisy Bay, Karadag, Tikhaya Bay); FATERYGA & IVANOV 2016: 243 (Sevastopol, Cape Lukull).

**Material examined:** 9 ♀ ♀, 20 ♂ ♂ [CFUS], 1 ♀, 1 ♂ [ZIN], 3 ♀ ♀, 2 ♂ ♂ [ZMMU], 1 ♀, 7 ♂ ♂ [IZAN], 2 ♀ ♀, 2 ♂ ♂ [KHEO]. Republic of Crimea: Crimea (without details); Bakhchisaray distr.: Peschanoye – Uglovoye; Simferopol: Simferopol, Chumakarka; Alushta: Kanaka valley; Sudak: Cape Meganom; Feodosiya: Mt. Echkidag, Otuzy (currently Shchebetovka), Lisy Bay, Karadag, Koktebel, Tikhaya Bay. Sevastopol: Sevastopol.

**Distribution:** Russia (NC, CR), E and S Europe, N Africa, Georgia, Turkey, Syria, Lebanon, Israel, Iran, Turkmenistan.

***Trachusa (Paraanthidium) interrupta* (FABRICIUS, 1781)**

*Paraanthidium interruptum* (FABRICIUS): ROMASENKO 1984: 238 (Cape Kazantip).

*Trachusa interrupta* (FABRICIUS): FILATOV 2003: 84 (Karadag); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV et al. 2007: 5 (Crimea); IVANOV & FATERYGA 2009: 31 (Simferopol); IVANOV et al. 2009b: 210 (Karadag, Lisy Bay); FATERYGA & IVANOV 2016: 243 (Kazachya Bay, Belbek, Verkhnesadovoye, Cape Lukull).

**Material examined:** 31 ♀ ♀, 23 ♂ ♂ [CFUS], 6 ♂ ♂ [ZIN], 2 ♀ ♀, 2 ♂ ♂ [IZAN], 10 ♀ ♀, 1 ♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Bol. Kastel, Mal. Kastel; Bakhchisaray distr.: Peschanoye – Uglovoye; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Fontany, Urozhaynoye, Urozhaynoye – Molochnoye, Gvardeyskoye; Feodosiya: Mt. Echkidag, Lisy Bay, Karadag, Tikhaya Bay, Barakol Lake; Lenino distr.: Cape Kazantip, Zolotoye, Kururtnoye, Opuk Reserve. Sevastopol: Kazachya Bay, Cape Lukull, Belbek (currently Verkhnesadovoye).

**Distribution:** Russia (EP, NC, CR), W, E and S Europe, N Africa, Azerbaijan, Turkey, Syria.

**Tribe Dioxyini**

***Aglaoapis tridentata* (NYLANDER, 1848)**

*Dioxyis tridentata* (NYLANDER): WARNCKE 1977: 272 (Karadag).

*Dioxoides tridentatus* (NYLANDER): ROMASENKO 1995: 67 (Crimean Reserve, other territories).

*Aglaoapis tridentata* (NYLANDER): IVANOV et al. 2007: 6 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV & FATERYGA 2009: 31 (Simferopol); IVANOV et al. 2009b: 210 (Karadag).

**Material examined:** Republic of Crimea: Chernomorskoye distr.: Donuzlav Lake, 16.VI 2011, 1♀, VZ; Yevpatoriya, 8.IX 1928, 1♂; Simferopol: Mar'ino, 31.VII 2007, 9.VI 2010, 3♂♂, AF, Chumakarka, 21.VIII 1929, 1♀; Yalta: Gruzport, 1.VI 2010, 1♂, AF; Feodosiya: Lisya Bay, 13.VI, 14.VI 2010, 2♀♀, AF; Lenino distr.: Yakovenkovo, 5.VIII 2010, 1♀, MF, Opuk Reserve, 3.VIII 2010, 1♂, SI [CFUS].

**Distribution:** Russia (EP, CR, WS, ES, FE), W, E, N and S Europe, Azerbaijan, Turkey, Cyprus, Kyrgyzstan, Kazakhstan.

### ***Dioxys cinctus* (JURINE, 1807)**

*Dioxys cincta* (JURINE): IVANOV et al. 2005a: 93 (Crimean Foothills); IVANOV et al. 2007: 6 (Crimea); IVANOV et al. 2009b: 210 (Karadag, Lisya Bay); IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** 15♀♀, 11♂♂ [CFUS]. Republic of Crimea: Chernomorskoye distr.: Tarkhankut, Kipchak; Yevpatoriya; Simferopol: Simferopol, Mar'ino; Yalta: Sovetskoye; Alushta: Mt. Demerdzhi; Feodosiya: Lisya Bay, Karadag; Lenino distr.: Opuk Reserve.

**Distribution:** Russia (CR), W, E and S Europe, N Africa, Caucasus, Turkey, Israel.

## **Tribe Osmiini**

### ***Chelostoma (Chelostoma) florisomne* (LINNAEUS, 1758)**

*Chelostoma maxillosum* (LINNAEUS): ROMASENKO 1980: 72 (Crimean Reserve); ROMASENKO 1984: 253 (Crimean Reserve); ROMASENKO 1995: 68 (Crimean Reserve, other territories).

*Chelostoma florisomne* (LINNAEUS): IVANOV et al. 2005a: 91 (Krasnolesye); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag); IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** 72♀♀, 22♂♂ [CFUS], 3♂♂ [ZMMU], 26♀♀, 4♂♂ [IZAN], 1♀ [KHEO]. Republic of Crimea: Crimea (without details); Bakhchisaray distr.: Mt. Selbukhra, Schastlivoye, cordon Zelenyy Gay; Simferopol distr.: Pionerskoye, Ayan, Perevalnoye, Krasnolesye, Sosnovka (Privolnoye); Kirovskoye distr.: Staryy Krym; Yalta: Mt. Aypetri, Mt. Lapata; Alushta: Mt. Ayudag, Mt. Chatyrdag, Crimean Reserve, cordon Dubrava, Alushta, Isobilnoye, Angarskiy Pass, Generalskoye; Feodosiya: Karadag. Sevastopol: Tylovoye, Uzunzhya Canyon, Orlinoe, Baydarskaya Yayla.

**Distribution:** Russia (EP, NC, CR, UR), W, E, N and S Europe, Georgia, Armenia, Turkey.

### ***Chelostoma (Chelostoma) mocsaryi* SCHLETTERER, 1889**

*Chelostoma mocsaryi* SCHLETTERER: ROMASENKO 1995: 68 (Crimean Reserve, other territories); IVANOV et al. 2005a: 91 (Krasnolesye); IVANOV et al. 2005b: 210 (Rechnoye, Karadag); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Lisya Bay); IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** 21♀♀, 63♂♂ [CFUS], 2♀♀, 2♂♂ [ZIN], 2♂♂ [ZMMU], 35♀♀, 31♂♂ [IZAN], 1♀, 5♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Bakhchisaray distr.: riv. Alma, Rechnoye; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Urozhaynoye, Gvardeyskoye, Dobroye, Ayan, Perevalnoye, Krasnolesye, Mt. Pakhkalkaya; Yalta: Katsiveli, Zori Ukrainy (currently Zori Rossii), Simeiz, Mt. Aypetri, Yalta, Sovetskoye, Mys Martyan Reserve; Alushta: Alushta, Mt. Kastel, Angarskiy Pass, Generalskoye, Rybachye; Feodosiya: Lisya Bay, Karadag, Karadag – Mt. Echkidag; Lenino distr.: Cape Kazantip. Sevastopol: Orlinoe, Peredovoye, Uzundzha Canyon, riv. Chernaya, Baydarskaya Yayla, Belbek (currently Verkhnesadovoye).

**Distribution:** Russia (CR), W, E and S Europe, Azerbaijan, Turkey, Lebanon, Israel.

### ***Chelostoma (Foveosmia) campanularum* (KIRBY, 1802)**

*Chelostoma florissomne* (LINNAEUS): NAZAROV & IVANOV 1990: 535 (Krasnolesye). This record belongs to *Ch. campanularum*.

*Chelostoma campanularum* (KIRBY): ROMASENKO 1995: 68 (Crimean Reserve, other territories); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag); IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** 89♀♀, 36♂♂ [CFUS], 2♀♀ [ZMMU], 1♂ [IZAN]. Republic of Crimea: Crimea (without details); Bakhchisaray distr.: Kuybyshevo; Simferopol; Simferopol distr.: Fontany, Urozhaynoye, Perevalnoye, Ayan, Krasnolesye, Mt. Pakhkalkaya; Yalta: Yalta, Mt. Lapata; Alushta: Crimean Reserve, cordon Dubrava, Mt. Chatyrdag, Angarskiy Pass, Mt. Karabi; Feodosiya: Karadag. Sevastopol: riv. Chernaya, riv. Urkusta.

**Distribution:** Russia (EP, CR, UR), W, E, N and S Europe, N Africa, Georgia, Turkey, N America (introduced).

### ***Chelostoma (Foveosmia) distinctum* (STOECKHERT, 1929)**

*Chelostoma distinctum* (STOECKHERT): NAZAROV & IVANOV 1990: 535 (Krasnolesye); ROMASENKO 1995: 68 (Crimean Reserve, other territories); IVANOV et al. 2005a: 93 (Crimean Foothills); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** Republic of Crimea: Simferopol distr.: Krasnolesye, 29.VII, 1.VIII 2007, 6♀♀, AF, Mt. Pakhkalkaya, 17.VII 2007, 1♀, 1♂, SI; Yalta: Mt. Lapata, 9.VII 2011, 1♀, AF; Alushta: Mt. Karabi, 13.VII 2015, 1♂, SI [CFUS].

**Distribution:** Russia (EP, CR, UR), W, E, N and S Europe, Azerbaijan, Turkey, Israel, Iran.

### ***Chelostoma (Gyrodromella) rapunculi* (LEPELETIER, 1841)**

*Chelostoma fuliginosum* (PANZER): ROMASENKO 1980: 72 (Crimean Reserve); ROMASENKO 1984: 251-252 (Crimean Reserve, Karadag); NAZAROV & IVANOV 1990: 535 (Krasnolesye).

*Chelostoma rapunculi* (LEPELETIER): ROMASENKO 1995: 68 (Crimean Reserve, other territories); IVANOV et al. 2005a: 91 (Krasnolesye); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag); IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** 8♀♀, 20♂♂ [CFUS], 2♀♀, 2♂♂ [IZAN]. Republic of Crimea: Bakhchisaray distr.: Kuybyshevo; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Krasnolesye, Mt. Pakhkalkaya; Belogorsk distr.: Karasevka; Yalta: Simeiz, Mt. Aypetri, Mt. Lapata, Sovetskoye; Alushta: Crimean Reserve, Mt. Chatyrdag, Generalskoye; Sudak: Cape Meganom; Feodosiya: Karadag. Sevastopol: Peredovoye.

**Distribution:** Russia (EP, NC, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Syria, Jordan, Israel, Iran, Turkmenistan, Uzbekistan, Kyrgyzstan, Kazakhstan, Mongolia, China, N America (introduced).

***Heriades (Heriades) crenulata* NYLANDER, 1856**

*Heriades crenulatus* NYLANDER: ROMASENKO 1980: 74 (Crimean Reserve); ROMASENKO 1984: 254 (Simferopol, Cape Aytodor, Crimean Reserve, Generalskoye, Solnechnogorskoye); ROMASENKO 1995: 68 (Crimean Reserve, other territories); FILATOV 2003: 85 (Karadag); IVANOV et al. 2005a: 91 (Krasnolesye); IVANOV et al. 2005b: 210 (Crimea); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Otuzy valley, Lysya Bay); IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** 36♀♀, 69♂♂ [CFUS], 4♀♀, 10♂♂ [ZIN], 28♀♀, 10♂♂ [ZMMU], 6♀♀, 9♂♂ [IZAN], 6♀♀, 4♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Saki distr.: Novofedorovka; Bakhchisaray distr.: Peschanoye – Uglovoye, Kuybyshevo, Mt. Cherdakly-Bair; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Gvardeyskoye, Kizilkoba, Ayan, Krasnolesye; Kirovskoye distr.: Staryy Krym; South Coast (without details); Yalta: Mukhalatka (currently Oliva), Katsiveli, Zori Ukrainy (currently Zori Rossii), Simeiz, Alupka, Lastochkino Gnezdo, Yalta, Gruzport, Mys Martyan Reserve; Alushta: Mt. Chatyrdag, Crimean Reserve, Mt. Kastel, Alushta, Mt. Demerdzhi, 12 km E Alushta, 20 km E Alushta, Rybachye, Kanaka valley; Sudak: riv. Voron, Veseloye, Sudak; Feodosiya: Kiziltash valley, Otuzy (currently Shchebetovka), Mt. Echkidag, Karadag; Lenino distr.: Kurortnoye. Sevastopol: Sevastopol, Cape Ayya, Laspi Bay, Cape Sarych, Orlinoye, Alsu (currently Morozovka).

**Distribution:** Russia (EP, CR), W, E and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Kazakhstan.

***Heriades (Heriades) rubicola* PÉREZ, 1890**

*Heriades rubicola* PÉREZ: IVANOV et al. 2007: 7 (Crimea); IVANOV et al. 2009b: 210 (Karadag).

**Material examined:** Republic of Crimea: Bakhchisaray distr.: Peschanoye, 29.VIII 2011, 3♀♀, 1♂, SI; Yalta: Katsiveli, 12.VII, 14.VII 2005, 1♀, 3♂♂, SI, Yalta Reserve, 12.VII 2010, 1♀, SI [CFUS]; Feodosiya: Karadag, 16.VIII 1936, 1♂, GK [ZMMU], Tikhaya Bay, 1.VII 2008, 1♀, SI. Sevastopol: Lyubimovka, 24.VII 2016, 1♀, 4♂♂, SI, Laspi Bay, 13.VII 2004, 1♀, AF, Cape Sarych, 5-10.VII 1998, 2♀♀, SI [CFUS].

**Distribution:** Russia (CR), W, E and S Europe, N Africa, Turkey, Cyprus, Syria, Jordan, Israel, Turkmenistan, Kyrgyzstan, Kazakhstan.

***Heriades (Heriades) truncorum* (LINNAEUS, 1758)**

*Heriades truncorum* (LINNAEUS): ROMASENKO 1980: 74 (Crimean Reserve); ROMASENKO 1984: 256 (Crimean Reserve, Generalskoye, Solnechnogorskoye); ROMASENKO 1995: 68 (Crimean Reserve, other territories); FILATOV 2003: 85 (Karadag); IVANOV et al. 2005a: 91 (Krasnolesye); IVANOV et al. 2005b: 210 (Crimea); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Otuzy valley, Lysya Bay); IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** 89♀♀, 45♂♂ [CFUS], 3♀♀, 3♂♂ [ZIN], 9♀♀, 5♂♂ [ZMMU], 21♀♀, 9♂♂ [IZAN], 2♀♀ [KHEO]. Republic of Crimea: Crimea (without details); Bakhchisaray distr.: Shelkovichnoye, Kuybyshevo, Golubinka; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Ayan, Krasnolesye, Mt. Pakhalkaya; Belogorsk distr.: Kaliston Pass; Kirovskoye distr.: Staryy Krym; South Coast (without details); Yalta: Parkovoye, Katsiveli, Zori Ukrainy (currently Zori Rossii), Alupka, Lastochkino Gnezdo, Mt. Lapata, Gruzport, Nikita, Mys Martyan Reserve; Alushta: Crimean Reserve, Alushta, Luchistoye, Angarskiy Pass,



Mt. Demerdzhi, 12 km E Alushta, Solnechnogorskoye, Generalskoye, Rybachye, Kanaka valley, Zelenogorye; Sudak: Veseloye; Feodosiya: Kiziltash valley, Kiziltash valley – Shchebetovka, Mt. Echkidag – Shchebetovka, Otuzy (currently Shchebetovka) valley, Lisya Bay, Kurortnoye, Karadag. Sevastopol: Sevastopol, Inkerman, Laspi Bay, Cape Sarych, Orlinoe, riv. Chernaya.

**Distribution:** Russia (EP, NC, CR, FE), W, E, N and S Europe, N Africa, Georgia, Armenia, Azerbaijan, Turkey, Cyprus, Syria, Lebanon, Israel, Iran, Uzbekistan, Kyrgyzstan, Kazakhstan, N America (introduced).

### ***Hoplitis (Alcidamea) acuticornis* (DUFOR & PERRIS, 1840)**

*Hoplitis acuticornis* (DUFOR & PERRIS): ROMASENKO 1984: 257 (Crimean Reserve, Alushta); ROMASENKO 1995: 69 (Crimean Reserve, other territories); FILATOV 2003: 85 (Karadag); FILATOV 2006: 112 (Opuk Reserve); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Lisya Bay); IVANOV & FATERYGA 2011: 86 (Yalta Reserve); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** 24 ♀♀, 13 ♂♂ [CFUS], 1 ♀ [ZMMU], 1 ♀ [IZAN], 5 ♀♀, 5 ♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Kipchak, Donuzlav Lake; Pervomayskoye distr.: Voykovo; Bakhchisaray distr.: Mt. Bakla; Simferopol distr.: Gvardeyskoye, Krasnolesye; Yalta: Sovetskoye, Gruzport, Mys Martyan Reserve; Alushta: Crimean Reserve, Angarskiy Pass, Rybachye, Kanaka valley; Feodosiya: Kiziltash valley, Mt. Echkidag, Lisya Bay, Karadag; Lenino distr.: Opuk Reserve. Sevastopol: Balaklava – Ayazma valley, Peredovoye, Uzundzha Canyon.

**Distribution:** Russia (EP, CR, UR, WS, ES), W, E and S Europe, N Africa, Armenia, Turkey, Cyprus, Syria, Jordan, Israel, Iran, Turkmenistan, Tajikistan, Kyrgyzstan, Kazakhstan.

### ***Hoplitis (Alcidamea) caularis* (MORAWITZ, 1875)**

*Hoplitis turcestanica* (DALLA TORRE): IVANOV et al. 2007: 7 (Crimea).

*Hoplitis caularis* (MORAWITZ): FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** Republic of Crimea: Chernomorskoye distr.: Kipchak, 1.VI 2012, 2 ♀♀, VZ; Saki distr.: Uytunoye, 31.V 1949, 1 ♀; Feodosiya: Lisya Bay, 4.VI 2008, 1 ♀, SI, Karadag, 2013, 1 ♀, MF [CFUS].

**Distribution:** Russia (NC, CR, UR), E Europe (Ukraine), Turkey, Syria, Turkmenistan, Uzbekistan, Kyrgyzstan, Kazakhstan, China.

### ***Hoplitis (Alcidamea) claviventris* (THOMSON, 1872)**

*Hoplitis leucomelana* (KIRBY): ROMASENKO 1984: 261 (Crimean Reserve); IVANOV & FATERYGA 2011: 86 (Yalta Reserve). These records belong to *H. claviventris*.

*Hoplitis claviventris* (THOMSON): IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** Republic of Crimea: Yalta: Mt. Lapata, 30.VIII 2004, 1 ♀, AF, Yaltinskaya Yayla, 28.VIII 2004, 1 ♀, AF [CFUS].

**Distribution:** Russia (EP, CR, WS), W, E, N and S Europe, Caucasus, Turkey, Kazakhstan, Mongolia, China.

### ***Hoplitis (Alcidamea) leucomelana* (KIRBY, 1802)**

*Osmia leucomelana* (KIRBY): RADOSZKOWSKI 1887: 281 (Crimea).

*Hoplitis leucomelana* (KIRBY): POPOV 1958: 111 (Crimean Mountains); FILATOV 2003: 85 (Karadag); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Otuzy valley).

*Hoplitis parvula* (DUFOUR & PERRIS): ROMASENKO 1984: 262 (Crimean Mountains); ROMASENKO 1995: 69 (Crimean Reserve, other territories).

**Material examined:** Republic of Crimea: Saki distr.: Uyutnoye, 3.V 1949, 1♂; Simferopol, 3.V 1911, 1♂; Simferopol distr.: Dobroye, 8.VI 2003, 1♂, SI, Druzhnoye, 9.VI 2001, 1♂, SI, Ayan, 24.V 2003, 20.VI 2010, 1♀, 1♂, AF, 15.VI 2005, 1♂, SI, Krasnolesye, 11.VI 2003, 1♂, SI, 1.VIII 2007, 1♀, AF [CFUS]; Alushta: vicinity of Alushta, VII 1983, 1♀, L. ROMASENKO, Mt. Karabi, 17.VI 1963, 1♂, AO [IZAN], Rybachye, 7.VI, 12.VI 2002, 1♀, 1♂, MF [KHEO], Kanaka valley, 27-28.V 2000, 1♂, SI; Feodosiya: Kiziltash valley – Shchebetovka, 10.VI 2012, 1♀, SI, Shchebetovka, 13.VI 2004, 1♀, SI, Karadag, 6.VII 1989, 1♀, SI [CFUS], 5.V 2000, 1♂, MF [KHEO]; Lenino distr.: Opuk Reserve, 1.VI, 3.VI 2002, 1♀, 1♂, SI; Kerch, 8.VII 1998, 1♀, M. GORDIYENKO [CFUS].

**Distribution:** Russia (EP, NC, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Georgia, Armenia, Azerbaijan, Turkey, Iran, Tajikistan, Kyrgyzstan, Kazakhstan, Mongolia, China.

### ***Hoplitis (Alcidamea) mitis* (NYLANDER, 1852)**

*Hoplitis mitis* (NYLANDER): IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** Republic of Crimea: Simferopol distr.: Mt. Pakhkalkaya, 17.VII 2007, 1♀, 1♂, SI [CFUS]; Yalta: Mt. Aypetri, 5.VII 1978, 1♂, AO [IZAN]; Alushta: Mt. Chatyrdag, 12.VII 1997, 1♀, 1♂, SI [CFUS].

**Distribution:** Russia (CR, UR, WS, ES), W, E, N and S Europe, Armenia, Kazakhstan, Mongolia.

### ***Hoplitis (Alcidamea) praestans* (MORAWITZ, 1893)**

*Hoplitis praestans* (MORAWITZ): IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2011: 86 (Yalta Reserve); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** Republic of Crimea: Chernomorskoye distr.: Kipchak, 1.VI 2012, 1♂, VZ; Simferopol: Mar'ino, 31.VII 2007, 1♀, AF; Simferopol distr.: Mt. Pakhkalkaya, 17.VII 2007, 1♀, 1♂, SI; Belogorsk distr.: Belaya Skala, VI 2009, 4♀ ♀, SI; Kirovskoye distr.: Staryy Krym, 31.V-4.VI 1997, 1♀, SI; Yalta: Uchkosh Canyon, 5.VI 2004, 1♀, AF; Alushta: Mt. Chatyrdag, 12.VII 1997, 1♂, SI, 17.VII 2007, 1♀, AF. Sevastopol: Peredovoye, 13.VI 1988, 1♂, SI [CFUS].

**Distribution:** Russia (EP, CR), W, E and S Europe, N Africa, Caucasus, Turkey, Jordan, Israel, Iran, Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan.

### ***Hoplitis (Alcidamea) princeps* (MORAWITZ, 1872)**

*Hoplitis princeps* (MORAWITZ): IVANOV et al. 2007: 8 (Crimea); FATERYGA et al. 2013: 63 (Donuzlav Lake).

**Material examined:** Republic of Crimea: Crimea (without details), 1928, 1♂; Saki distr.: Popovka, 19.VII 1983, I. PLJUSHTCH [IZAN]; Yevpatoriya: Mimyy, 07.VI 2013, 3♀ ♀, SI [CFUS], 1♀, MF [KHEO].

**Distribution:** Russia (EP, CR, UR, ES), E Europe, Kazakhstan, Mongolia, China.

***Hoplitis (Alcidamea) tridentata* (DUFOR & PERRIS, 1840)**

*Hoplitis tridentata* (DUFOR & PERRIS): ROMASENKO 1995: 69 (Crimean Reserve, other territories); FILATOV 2003: 85 (Karadag); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** Republic of Crimea: Chernomorskoye distr.: Kipchak, 31.V 2012, 1♂, VZ; Simferopol distr.: Krasnolesye, 17.VI 1982, 1♀, LS; Yalta: Miskhor, 5.VI 1976, 1♀, SI [CFUS]; Feodosiya: Karadag, 19.VII 1998, 1♀, L. LEZHENINA [KHEO], 26.V 2002, 1♂, SI, Tikhaya Bay, 1.VII 2008, 1♀, SI; Lenino distr.: Kamenskoye – Solyanoye, 28.V 2016, 1♂, AF, Cape Kazantip, 6.VI, 12.VI 2006, 1♀, 3♂♂, AF, Osoviny, 19.VI 2011, 1♀, SI [CFUS]. Additional nest records (without collection specimens): Dzhankoy distr.: Solenoye Ozero.

**Distribution:** Russia (EP, CR, UR, WS), W, E, N and S Europe, N Africa, Georgia, Armenia, Turkey, Syria, Israel, Iran, Uzbekistan, Kyrgyzstan, Kazakhstan.

***Hoplitis (Anthocopa) jakovlevi* (RADOSZKOWSKI, 1874)**

*Hoplitis serrilabris* (MORAWITZ): FILATOV 2006: 112 (Opuk Reserve); IVANOV et al. 2007: 7 (Crimea); IVANOV et al. 2009b: 210 (Karadag).

*Hoplitis jakovlevi* (RADOSZKOWSKI): IVANOV & FATERYGA 2011: 86 (Yalta Reserve).

**Material examined:** 10♀♀, 1♂ [CFUS], 1♀ [IZAN], 12♀♀, 4♂♂ [KHEO]. Republic of Crimea: Yevpatoriya; Yalta: Zori Ukrainy (currently Zori Rossii), Yalta; Alushta: Rybachye; Sudak: Veseloye; Feodosiya: Karadag; Lenino distr.: Opuk Reserve. Additional nest records (without collection specimens): Feodosiya: Lisy Bay.

**Distribution:** Russia (EP, CR), W and S Europe, N Africa, Armenia, Azerbaijan, Turkey, Iran, Turkmenistan, Tajikistan, Kyrgyzstan, Kazakhstan, China.

***Hoplitis (Anthocopa) mocsaryi* (FRIESE, 1895)**

*Hoplitis mocsaryi* (FRIESE): FILATOV 2003: 85 (Karadag); FILATOV 2006: 113 (Opuk Reserve); IVANOV et al. 2007: 7 (Crimea); IVANOV & FILATOV 2008: 113 (Crimean Foothills, South Coast); IVANOV et al. 2009b: 210 (Karadag).

**Material examined:** Republic of Crimea: Sudak: Cape Meganom, 27.V 2016, 1♀, 1♂, AF [CFUS]; Feodosiya: Karadag, 10.V 2000, 2♂♂, MF [CFUS, KHEO]; Lenino distr.: Opuk Reserve, 26-29.V 2005, 1♀, 4♂♂, MF [KHEO], 9.VI 2011, 1♀, SI. Sevastopol: Peredovoye, 14.VI 1988, 1♀, SI [CFUS].

**Distribution:** Russia (CR), W, E and S Europe, Armenia, Turkey, Israel, Iran.

***Hoplitis (Anthocopa) papaveris* (LATREILLE, 1799)**

*Hoplitis papaveris* (LATREILLE): FILATOV 2003: 85 (Karadag); IVANOV et al. 2007: 7 (Crimea); IVANOV et al. 2009b: 210 (Karadag); IVANOV & FATERYGA 2011: 87 (Yalta Reserve); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** 13♀♀, 14♂♂ [CFUS], 2♀♀ [ZIN], 2♀♀ [IZAN], 1♀, 2♂♂ [KHEO]. Republic of Crimea: Chernomorskoye distr.: Kipchak, Bol. Kastel; Simferopol; Yalta: Mt. Aypetri, Yalta, Sovetskoye, Gruzport; Alushta: Luchistoye, Angarskiy Pass, Kanaka valley; Feodosiya: Mt. Echkidag, Karadag; Lenino distr.: Opuk Reserve. Sevastopol: Balaklava, Adym-Chokrak valley.

**Distribution:** Russia (EP, NC, CR, UR, ES), W, E and S Europe, Caucasus, Turkey, Kazakhstan, China.

### ***Hoplitis (Anthocopa) taurica* (RADOSZKOWSKI, 1874)**

*Pseudosmia Taurica* RADOSZKOWSKI 1874: 157, ♀ ♂ ["Crimée (Salguir)"], syntypes probably in Institute of Systematics and Evolution of Animals, Kraków, Poland.

*Anthocopa taurica* (RADOSZKOWSKI): POPOV 1958: 111 (South Coast).

*Hoplitis taurica* (RADOSZKOWSKI): IVANOV et al. 2007: 8 (Crimea).

**Material examined:** No specimens were examined. The record from Crimea is based on RADOSZKOWSKI (1874).

**Distribution:** Russia (CR).

**Remarks:** The species is known only by the type series and requires the revision. Synonymy of *P. taurica* with *Osmia dimidiata* MORAWITZ, 1870 in UNGRICH et al. (2008) was rejected by IVANOV et al. (2013).

### ***Hoplitis (Hoplitis) anthocopoides* (SCHENCK, 1853)**

*Hoplitis anthocopoides* (SCHENCK): IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

**Material examined:** 39♀♀, 31♂♂ [CFUS]. Republic of Crimea: Chernomorskoye distr.: Kipchak; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Gvardeyskoye, Dobroye, Ayan, Mt. Pakhalkaya; Yalta: Mt. Aypetri, Yalta, Mt. Lapata, Sovetskoye, Gruzport; Alushta: Mt. Chatyrdag, Angarskiy Pass, Mt. Demerdzhi; Feodosiya: Kiziltash valley, Mt. Echkidag – Shchebetovka, Karadag; Lenino distr.: Opuk Reserve.

**Distribution:** Russia (EP, NC, CR), W, E, N and S Europe, N Africa, Armenia, N America (introduced).

### ***Hoplitis (Hoplitis) manicata* MORICE, 1901**

*Hoplitis adunca* (PANZER): ROMASENKO 1995: 69 (Crimean Reserve, other territories); IVANOV et al. 2005a: 91 (Krasnolesye); IVANOV et al. 2005b: 210 (Crimea); FILATOV 2006: 112 (Opuk Reserve); IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Otuzy valley). These records belong to *H. manicata*.

*Hoplitis manicata* MORICE: FILATOV 2006: 112 (Opuk Reserve); IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Otuzy valley); IVANOV & FATERYGA 2011: 87 (Yalta Reserve); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** 61♀♀, 63♂♂ [CFUS], 19♀♀, 7♂♂ [ZIN], 1♀, 1♂ [ZMMU], 2♀♀, 3♂♂ [IZAN], 3♀♀, 5♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Tarkhankut, Kipchak, Bol. Kastel, Belyaus; Bakhchisaray distr.: Vilino, Schastlivoye, cordon Zelenyy Gay; Simferopol; Simferopol distr.: Gvardeyskoye, Dobroye, Ayan, Krasnolesye; Belogorsk distr.: Karasevka; Yalta: Mukhalatka (currently Oliva), Parkovoye, Miskhor, Yalta, Sovetskoye, Gruzport, Nikita; Alushta: Alushta, Kanaka valley; Sudak: riv. Voron – riv. Shelen, Sudak, Cape Meganom; Feodosiya: Otuzy (currently Shchebetovka), Mt. Echkidag – Shchebetovka, Lisy Bay, Kurortnoye, Karadag, Karadag – Mt. Echkidag; Lenino distr.: Cape Kazantip, Zolotoye, Opuk Reserve; Kerch. Sevastopol: Sevastopol, Inkerman, Cape Ayia, Cape Lukull.

**Distribution:** Russia (CR), W, E and S Europe, ?N Africa, Armenia, Turkey.

### ***Hoplitis (Hoplitis) ravouxi* (PÉREZ, 1902)**

*Hoplitis ravouxi* (PÉREZ): FILATOV 2006: 113 (Opuk Reserve); IVANOV et al. 2007: 8 (Crimea); IVANOV et al. 2009b: 210 (Karadag); FATERYGA et al. 2014: 84 (Tarkhankut).

Material examined: 12♀♀, 15♂♂ [CFUS], 1♂ [IZAN], 4♀♀, 1♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Tarkhankut, Kipchak; Simferopol: Mar'ino; Yalta: Mt. Aypetri; Alushta: Mt. Demerdzhi, Mt. Karabi; Sudak: Cape Meganom; Feodosiya: Lisya Bay, Karadag; Lenino distr.: Karal'nyy Steppe, Opuk Reserve.

Distribution: Russia (CR), W, E and S Europe.

### ***Osmia (Allosmia) rufohirta* LATREILLE, 1811**

*Osmia rufohirta* LATREILLE: ROMASENKO 1995: 69 (Crimean Mountains); FILATOV 2006: 113 (Opuk Reserve); IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Lisya Bay); IVANOV & FATERYGA 2011: 87 (Yalta Reserve); FATERYGA et al. 2014: 84 (Tarkhankut).

*Hoplitis rufohirta* (LATREILLE): IVANOV et al. 2005a: 91 (Krasnolesye).

Material examined: 106♀♀, 11♂♂ [CFUS], 8♀♀, 2♂♂ [ZIN], 6♀♀ [IZAN], 2♀♀, 1♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Kipchak, Bol. Kastel, Kipchak – Bol. Kastel, 6 km E Olenevka, Belyaus; Pervomayskoye distr.: Voykovo; Bakhchisaray distr.: Priyatnoye Svidaniye; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Dubki, Donskoye, Gvardeyskoye, Dobroye, Druzhnoye, Krasnolesye; Belogorsk distr.: Karasevka; Yalta: Gaspra, Mt. Lapata, Sovetskoye, Gruzport, Gurzufskoye Sedlo Pass; Alushta: Alushta, Luchistoye, Angarskiy Pass, Generalskoye; Feodosiya: Mt. Echkidag, Karadag; Lenino distr.: Cape Kazantip, Opuk Reserve. Sevastopol: Sevastopol, Inkerman, Chernorechye, Belbek (currently Verkhnesadovoye).

Distribution: Russia (CR), W, E and S Europe, N Africa, Georgia, Armenia, Turkey, Syria, Jordan, Israel, Iran, China.

### ***Osmia (Erythrosmia) andrenoides* SPINOLA, 1808**

*Anthocopa andrenoides* (SPINOLA): POPOV 1958: 111 (Crimean Mountains); ROMASENKO 1995: 69 (Crimean Mountains).

*Osmia andrenoides* SPINOLA: FILATOV 2003: 85 (Karadag); FILATOV 2006: 113 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV et al. 2007: 8 (Crimea); IVANOV et al. 2009b: 210 (Karadag, Otuznyy valley, Lisya Bay); IVANOV & FATERYGA 2011: 87 (Yalta Reserve); FATERYGA et al. 2014: 84 (Tarkhankut).

*Hoplitis andrenoides* (SPINOLA): IVANOV et al. 2005a: 91 (Krasnolesye).

Material examined: 54♀♀, 43♂♂ [CFUS], 17♀♀, 17♂♂ [ZIN], 2♀♀ [ZMMU], 5♀♀ [IZAN], 11♀♀, 10♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Kipchak, Dzhangul; Bakhchisaray distr.: Mt. Kachikalyon, Mt. Bakla; Simferopol: Simferopol, Mar'ino, Chumakarka; Simferopol distr.: Fontany, Dubki, Skvortsovo, Urozhaynoye, Gvardeyskoye, Pionerskoye, Ayan, Krasnolesye; Belogorsk distr.: Karasevka, Kaliston Pass; Sovetskiy distr.: Markovo; Yalta: Foros, Mukhalatka (currently Oliva), Mt. Koshka, Gaspra, Yalta, Mt. Lapata, Nikita; Alushta: Mt. Chatyrdag, Alushta, Luchistoye, Mt. Demerdzhi, Rybachye, Kanaka valley; Sudak: riv. Voron, Mt. Tarakhtash, Cape Meganom; Feodosiya: Kiziltash valley, Mt. Echkidag, Shchebetovka, Lisya Bay, Karadag, Karadag – Mt. Echkidag, Feodosiya; Lenino distr.: Kamenskoye – Solyanoye, Cape Kazantip, Mysovoye, Zolotoye, Opuk Reserve; Kerch. Sevastopol: Sevastopol, Inkerman, Kazachya Bay, Balaklava, Cape Ayya, Batiliman, Chernorechye, Belbek (currently Verkhnesadovoye).

Distribution: Russia (CR), W, E and S Europe, Georgia, Turkey, Cyprus, Syria, Jordan, Israel, Iran.

### ***Osmia (Helicosmia) aurulenta* (PANZER, 1799)**

*Osmia aurulenta* (PANZER): ROMASENKO 1984: 267 (Alushta); ROMASENKO 1995: 69 (Crimean Reserve, other territories); FILATOV 2003: 85 (Karadag); IVANOV et al. 2005a: 91

(Krasnolesye); FILATOV 2006: 113 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Lysa Bay); IVANOV & FATERYGA 2011: 87 (Yalta Reserve); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** 130♀♀, 125♂♂ [CFUS], 1♂ [ZIN], 12♀♀ [ZMMU], 73♀♀, 7♂♂ [IZAN], 10♀♀, 11♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Tarkhankut, Kipchak, Kipchak – Bol. Kastel, Bol. Kastel, Bol. Kastel – Dzhangul, Mal. Kastel, Dzhangul, Belyaus; Saki distr.: Pribrezhnoye; Yevpatoriya: Mirnyy; Bakhchisaray distr.: Prokhladnoye, Mt. Bakla, Mt. Selbukhra; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Urozhaynoye, Gvardeyskoye, Pionerskoye, Ayan, Krasnolesye; Belogorsk distr.: Karasevka; Kirovskoye distr.: Staryy Krym; Yalta: Foros, Mt. Aypetri, Yalta, Sovetskoye, Nikita, Mys Martyan Reserve; Alushta: Mt. Ayudag, Mt. Chatyrdag, cordon Sadovyy, Kutuzovka, Luchistoye, Generalskoye, Mt. Karabi, Sudak highway; Sudak: Novyy Svet, Sudak, Cape Meganom; Feodosiya: Lysa Bay, Karadag, Mt. Uzunsyrt; Lenino distr.: Kamenskoye – Solyanoye, Cape Kazantip, Mysovoye, Cape Chauda, Novootradnoye, Zolotoye, Zavetnoye, Bulganak Steppe, Opuk Reserve; Kerch. Sevastopol: Sevastopol, Ayazma valley, Laspi Bay, Batiliman, Baydarskaya Yayla, Chernorechye.

**Distribution:** Russia (EP, CR), W, E, N and S Europe, Georgia, Armenia, Azerbaijan, Turkey, Lebanon, Iran.

### ***Osmia (Helicosmia) caerulea* (LINNAEUS, 1758)**

*Osmia cyanea* (FABRICIUS): RADOSZKOWSKI 1887: 289 (Crimea).

*Osmia caerulea* (LINNAEUS): ROMASENKO 1980: 74 (Crimean Reserve); ROMASENKO 1984: 270 (Crimean Reserve, Rybachye); ROMASENKO 1995: 69 (Crimean Reserve); FILATOV 2003: 85 (Karadag); FILATOV 2006: 113 (Opuk Reserve); IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Otuzy valley, Lysa Bay).

*Osmia caerulea* (LINNAEUS): IVANOV et al. 2005a: 91 (Krasnolesye); IVANOV et al. 2005b: 210 (Crimea); IVANOV & FATERYGA 2011: 87 (Yalta Reserve); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** 175♀♀, 100♂♂ [CFUS], 5♀♀, 4♂♂ [ZIN], 5♀♀, 4♂♂ [ZMMU], 15♀♀, 8♂♂ [IZAN], 15♀♀, 6♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Kipchak, Bol. Kastel – Dzhangul, Mal. Kastel, Belyaus, Donuzlav Lake; Krasnoperekopsk distr.: Ishun', Krasnoarmeyskoye; Saki distr.: Pribrezhnoye; Yevpatoriya: Mirnyy; Bakhchisaray distr.: Bakhchisaray distr. (without details), Rechnoye, Mt. Selbukhra, Mt. Bakla, Priyatnoye Svidaniye, Schastlivoye, cordon Zelenyy Gay; Simferopol: Simferopol, Mar'ino, Chumakarka, Khoshkeldy; Simferopol distr.: sovkhos Vinogradnyy (currently Kolchugino), Fontany, Urozhaynoye, Gvardeyskoye, Dobroye, Druzhnoye, Ayan, Krasnolesye, Sosnovka (Privolnoye), Mt. Pakhkalkaya; Belogorsk distr.: Vishennoye, Karasevka, riv. Karasu; Yalta: Katsiveli, Mt. Aypetri, Yalta, Sovetskoye, Massandra, Gruzport, Nikita, Mys Martyan Reserve, Artek; Alushta: Mt. Ayudag, Mt. Chatyrdag, Crimean Reserve, cordon Sadovyy, cordon Asport, Alushta, Krasnyy Ray, Isobilnoye, Angarskiy Pass, Mt. Demerdzhi, Solnechnogorskoye, Generalskoye, Rybachye, Kanaka valley; Sudak: Gromovka, Mt. Karauloba, Veseloye, Mt. Tarakhtash; Feodosiya: Kiziltash valley – Shchebetovka, Mt. Echkidag – Shchebetovka, Otuzy (currently Shchebetovka), Lysa Bay, Karadag; Lenino distr.: Cape Kazantip, Mysovoye, Lenino, Zolotoye, Zavetnoye, 3.5 km SE Zavetnoye, Yakovenkovo, Opuk Reserve. Sevastopol: Sevastopol, Lyubimovka – airport Belbek, Kazachya Bay, Balaklava, Batiliman, Cape Sarych, Chernorechye, Orlinoe, Peredovoye, Baydarskaya Yayla.

**Distribution:** Russia (EP, NC, CR), W, E, N and S Europe, N Africa, Georgia, Armenia, Azerbaijan, Turkey, Cyprus, Syria, Jordan, Israel, Iran, Turkmenistan, Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan, China, N America (introduced), India, New Zealand (introduced).

### ***Osmia (Helicosmia) dimidiata* MORAWITZ, 1870**

*Osmia Taurica* RADOSZKOWSKI 1887: 285, holotype, ♀, "Tauria" [Museum für Naturkunde der Humboldt-Universität, Berlin, Germany]. Synonymy in FRIESE 1909: 126.

*Osmia rossica* FRIESE 1899: 64. New name for *Osmia taurica* RADOSZKOWSKI, 1887.

*Osmia dimidiata rossica* FRIESE: TKALCŮ 1975: 308 (Crimea); IVANOV et al. 2007: 8 (Crimea); IVANOV et al. 2009b: 210 (Karadag, Otuz valley, Lysa Bay).

*Osmia dimidiata* MORAWITZ: FILATOV 2003: 85 (Karadag); FILATOV 2006: 113 (Opuk Reserve); IVANOV et al. 2013: (Tarkhankut, Urozhaynoye, Dobroye, Karadag, Opuk Reserve); FATERYGA et al. 2014: 84 (Tarkhankut).

*Osmia mustelina* GERSTÄCKER: IVANOV et al. 2005b: 210 (Crimea). This record belongs to *O. dimidiata* according to IVANOV et al. (2007).

**Material examined:** 21 ♀♀, 18 ♂♂ [CFUS], 1 ♀ [ZIN], 2 ♀♀ [ZMMU], 1 ♂ [IZAN], 4 ♀♀, 1 ♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Tarkhankut, Kipchak; Simferopol distr.: Fontany, Gvardeyskoye; Yalta: Katsiveli; Sudak: Cape Meganom; Feodosiya: Mt. Echkidag, Otuzy (currently Shchebetovka), Lysa Bay, Karadag; Lenino distr.: Zavetnoye, Opuk Reserve. Sevastopol: Sevastopol. Additional nest records (without collection specimens): Simferopol distr.: Urozhaynoye, Dobroye.

**Distribution:** Russia (CR), W, E and S Europe, N Africa, Caucasus, Turkey, Cyprus, Lebanon, Israel, Iran, Turkmenistan, Kyrgyzstan.

### ***Osmia (Helicosmia) leaiana* (KIRBY, 1802)**

*Osmia Soluskyi* MORAWITZ 1870: 317, ♀ ("Tauria", "Armenia", "Helvetia", "Germania"), lectotype (designated by PROSHCHALYKIN et al. 2017: 26), ♀, "Wildbad" [ZIN]. Synonymy in ALFKEN 1899: 146.

*Osmia soluskyi* MORAWITZ: POPOV 1958: 111 (Crimean Mountains).

*Osmia leaiana* (KIRBY): ROMASENKO 1980: 74 (Crimean Reserve); ROMASENKO 1984: 273-274 (Simferopol, Crimean Reserve); ROMASENKO 1995: 69 (Crimean Reserve, other territories); IVANOV et al. 2005a: 92 (Krasnolesye); IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

*Osmia confusa* MORAWITZ: IVANOV et al. 2005b: 210 (Crimea).

**Material examined:** 43 ♀♀, 9 ♂♂ [CFUS], 1 ♀ [ZIN], 2 ♀♀ [ZMMU], 25 ♀♀ [IZAN], 1 ♀ [KHEO]. Republic of Crimea: Crimea (without details); Pervomayskoye distr.: Kalinino; Bakhchisaray distr.: Kuybyshevo, cordon Svetlaya Polyana; Simferopol; Simferopol distr.: Dobroye, Perevalnoye, Krasnolesye, Mt. Pakhalkaya; Kirovskoye distr.: Staryy Krym; Yalta: Mt. Aypetri, Mt. Lapata; Alushta: Mt. Chatyrdag, Crimean Reserve, cordon Sadovyy, Angarskiy Pass, Mt. Demerdzhi, General'skoye. Sevastopol: Peredovoye, Chernorechenskiy Canyon.

**Distribution:** Russia (EP, NC, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Georgia, Armenia, Azerbaijan, Turkey, Iran, Kazakhstan.

### ***Osmia (Helicosmia) melanogaster* SPINOLA, 1808**

*Osmia aterrima* MORAWITZ: ROMASENKO 1984: 265 (Simferopol); ROMASENKO 1995: 69 (Crimean Mountains).

*Osmia melanogaster* SPINOLA: IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Otuz valley); IVANOV & FATERYGA 2011: 87 (Yalta Reserve); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** 57 ♀♀, 45 ♂♂ [CFUS], 3 ♀♀ [ZIN], 4 ♀♀, 1 ♂ [ZMMU], 12 ♀♀, 7 ♂♂ [IZAN], 2 ♀♀ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Tarkhankut, Kipchak – Dzhankul, Chernomorskoye, Donuzlav Lake; Dzhankoy distr. (without details); Bakhchisaray distr.: Mt. Bakla, Kuybyshevo; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Urozhaynoye, Gvardeyskoye, Pionerskoye, Kizilkoba, Ayan, Krasnolesye;

Yalta: Mt. Aypetri; Alushta: Mt. Chatyrdag, Alushta, Luchistoye, Generalskoye; Feodosiya: Kiziltash valley, Otuzy (currently Shchebetovka), Kurortnoye, Karadag; Kerch Peninsula (without details); Lenino distr.: Opuk Reserve. Sevastopol: Sevastopol, Cape Ayya, Peredovoye.

**Distribution:** Russia (NC, CR), W, E and S Europe, N Africa, Armenia, Turkey, Cyprus, Syria, Jordan, Israel, Iran, ?China.

### ***Osmia (Helicosmia) niveata* (FABRICIUS, 1804)**

*Osmia fulviventris* (LATREILLE): MORAWITZ 1870: 318 (Crimea).

*Osmia carneiventris* DOURS in RADOSZKOWSKI 1887: 286, holotype, ♀, "Crimée" [Institute of Systematics and Evolution of Animals, Kraków, Poland]. Synonymy in TKALCŮ 1970: 3.

*Osmia fulviventris* (PANZER): RADOSZKOWSKI 1887: 290 (Crimea); POPOV 1958: 111 (Crimean Mountains); ROMASENKO 1984: 273 (Crimean Mountains); ROMASENKO 1995: 69 (Crimean Reserve, other territories); IVANOV et al. 2005b: 210 (Crimea).

*Osmia carneiventris* DOURS: POPOV 1958: 111 (South Coast).

*Osmia fulviventris niveata* (FABRICIUS): TKALCŮ 1975: 307 (Crimea).

*Osmia sieversi* MORAWITZ: ROMASENKO 1995: 69 (Crimean Mountains); IVANOV et al. 2005a: 92 (Krasnolesye); IVANOV et al. 2005b: 210 (Crimea).

*Osmia niveata* (FABRICIUS): IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Otuzy valley); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** 28♀♀, 37♂♂ [CFUS], 2♀♀ [ZIN], 3♀♀, 4♂♂ [ZMMU], 26♀♀, 2♂♂ [IZAN], 1♀ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Kipchak; Dzhangkoy distr. (without details); Yevpatoriya: Mirnyy, Yevpatoriya; Bakhchisaray distr.: Kuybyshevo, cordon Zelenyy Gay, riv. Alma; Simferopol: Simferopol, Mar'ino, Chumakarka; Simferopol distr.: Pionerskoye, Ayan, Krasnolesye; Yalta; Alushta: Mt. Demerdzhi; Feodosiya: Otuzy (currently Shchebetovka), Lisy Bay, Karadag; Lenino distr.: Cape Kazantip, Mysovoye, Zolotoye; Kerch. Sevastopol: Sevastopol, Uzundzha Canyon.

**Distribution:** Russia (EP, NC, CR), W, E, N and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Cyprus, Syria, Jordan, Lebanon, Israel, Iran, ?China.

### ***Osmia (Helicosmia) signata* ERICHSON, 1835**

*Osmia melanogaster* SPINOLA: IVANOV et al. 2005a: 93 (Crimean Foothills); IVANOV et al. 2005b: 210 (Crimea); FILATOV 2006: 113 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip). These records belong to *O. signata* according to IVANOV et al. (2007).

*Osmia signata* ERICHSON: IVANOV et al. 2007: 8 (Crimea); IVANOV et al. 2009a: 43 (Simferopol); IVANOV et al. 2009b: 210 (Karadag, Otuzy valley, Lisy Bay); FATERYGA et al. 2014: 84 (Tarkhankut).

*Osmia prasina* MORAWITZ: IVANOV et al. 2007: 8 (Crimea); IVANOV et al. 2009b: 210 (Otuzy valley). These records belong to *O. signata*.

**Material examined:** 106♀♀, 60♂♂ [CFUS], 2♀♀ [ZIN], 3♀♀, 5♂♂ [ZMMU], 2♂♂ [IZAN], 11♀♀, 8♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Tarkhankut, Kipchak, Dzhangul, Atlesh, Cape Uret; Pervomayskoye distr.: Voykovo; Bakhchisaray distr.: Peschanoye – Uglovoye; Simferopol; Simferopol distr.: Demyanovka, Urozhaynoye, Gvardeyskoye, Krasnolesye; Alushta: Kanaka valley; Sudak: Mt. Tarakhtash, Cape Meganom; Feodosiya: Otuzy (currently Shchebetovka), Lisy Bay, Kurortnoye, Karadag, Tikhaya Bay, Mt. Uzunsyrt; Lenino distr.: Kamenskoye – Solyanoye, Cape Kazantip, Cape Chauda, Novootradnoye, Zolotoye, Karalany Steppe, 3.5 km SE Zavetnoye, Yakovenkovo, Opuk Reserve; Kerch. Sevastopol: Balaklava, Cape Lukull.

**Distribution:** Russia (NC, CR), W and S Europe, N Africa, Turkey, Cyprus, Syria, Jordan, Israel, Iran, Turkmenistan, China.



### ***Osmia (Hoplosmia) bidentata* MORAWITZ, 1876**

*Hoplitis bidentata* (MORAWITZ): ROMASENKO 1984: 259 (Alushta, Krasnyy Ray, Solnechnogorskoye); IVANOV et al. 2005a: 91 (Krasnolesye); IVANOV et al. 2005b: 210 (Crimea).

*Anthocopa bidentata* (MORAWITZ): ROMASENKO 1995: 69 (Crimean Reserve, other territories).

*Hoplosmia bidentata* (MORAWITZ): FILATOV 2006: 113 (Opuk Reserve); IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Lysya Bay).

**Material examined:** 25 ♀♀, 22 ♂♂ [CFUS], 26 ♀♀, 18 ♂♂ [ZIN], 1 ♀ [ZMMU], 11 ♀♀, 5 ♂♂ [IZAN], 4 ♀♀ [KHEO]. Republic of Crimea: Chernomorskoye distr.: Chernomorskoye; Krasnogvardeyskoye distr.: Kalinino; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Fontany, Urozhaynoye, Gvardeyskoye, Ayan; Belogorsk distr.: Bogatoye; Kirovskoye distr.: Staryy Krym; Yalta: Mukhalatka (currently Oliva); Alushta: Alushta, Izobilnoye, Kutuzovka, Solnechnogorskoye; Sudak: Veseloye; Feodosiya: Lysya Bay, Karadag; Lenino distr.: Zolotoye, Opuk Reserve. Sevastopol: Cape Sarych.

**Distribution:** Russia (EP, CR), W, E and S Europe, N Africa, Armenia, Azerbaijan, Turkey, Syria, Jordan, Israel, Iran.

### ***Osmia (Hoplosmia) scutellaris* MORAWITZ, 1868**

*Osmia scutellaris* MORAWITZ: MORAWITZ 1870: 319 (Crimea).

*Anthocopa scutellaris* (MORAWITZ): POPOV 1958: 111 (Crimean Mountains); ROMASENKO 1995: 69 (Crimean Mountains).

*Hoplitis scutellaris* (MORAWITZ): IVANOV et al. 2005a: 91 (Krasnolesye).

*Hoplosmia scutellaris* (MORAWITZ): IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag); IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

*Hoplosmia ligurica* (MORAWITZ): IVANOV et al. 2007: 8 (Crimea). This record belongs to *O. scutellaris*.

**Material examined:** 31 ♀♀, 23 ♂♂ [CFUS], 8 ♀♀, 11 ♂♂ [ZIN], 13 ♀♀, 7 ♂♂ [ZMMU], 38 ♀♀, 40 ♂♂ [IZAN], 5 ♀♀, 2 ♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Bakhchisaray distr.: Priyatnoye Svidaniye; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Pionerskoye, Perevalnoye, Ayan, Krasnolesye; Belogorsk distr.: Karasevka; Kirovskoye distr.: Staryy Krym; Yalta: Mukhalatka (currently Oliva), Parkovoye, Limenez (currently Goluboy Zaliv), Simeiz, Alupka, Mt. Aypetri, Yalta, Sovetskoye, Gruzport, Nikita, Mys Martyan Reserve, Artek; Alushta: Mt. Ayudag, cordon Bukovyy, Mt. Chatyrdag, Mt. Kastel, Alushta, Krasnyy Ray, Luchistoye, Mt. Demerdzhi, Generalskoye, Rybachye, Sudak highway; Feodosiya: Karadag; Lenino distr.: Opuk Reserve; Kerch. Sevastopol: Peredovoye, riv. Urkusta.

**Distribution:** Russia (NC, CR), W, E and S Europe, N Africa, Caucasus, Turkey, Cyprus, Syria, Jordan, Israel, Iran.

### ***Osmia (Hoplosmia) spinulosa* (KIRBY, 1802)**

*Osmia spinulosa* (KIRBY): MORAWITZ 1870: 319 (Crimea).

*Pseudosmia spinulosa* (KIRBY): RADOSZKOWSKI 1874: 159 (Crimea).

*Anthocopa spinulosa* (KIRBY): POPOV 1958: 111 (Crimean Mountains); ROMASENKO 1995: 69 (Crimean Reserve, other territories).

*Hoplitis spinulosa* (KIRBY): ROMASENKO 1980: 74 (Crimean Reserve); ROMASENKO 1984: 263 (Generalskoye); IVANOV et al. 2005a: 91 (Krasnolesye).

*Hoplosmia spinulosa* (KIRBY): FILATOV 2003: 85 (Karadag); FILATOV 2006: 113 (Opuk Reserve); IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Otuzy valley); IVANOV & FATERYGA 2011: 87 (Yalta Reserve); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** 162 ♀♀, 66 ♂♂ [CFUS], 7 ♀♀, 4 ♂♂ [ZIN], 6 ♀♀ [ZMMU], 37 ♀♀, 23 ♂♂ [IZAN], 10 ♀♀ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Kipchak – Dzhangul, Bol. Kastel, Dzhangul; Armyansk: Perekop; Saki distr.: Popovka – Shtormovoye, Novofedorovka; Bakhchisaray distr.: riv. Alma, Peschanoye – Uglovoye, Topoli – Priyatnoye Svidaniye, Priyatnoye Svidaniye; Simferopol: Simferopol, Mar'ino, Khoshkeldy; Simferopol distr.: Fontany, Urozhaynoye, Gvardeyskoye, Lozovoye, Pionerskoye, Dobroye, Druzhnoye, Ayan, Krasnolesye; Belogorsk distr.: Karasevka, Krinichnoye, Kirpichnoye; South Coast (without details); Yalta: Mt. Aypetri, Yaltinskaya Yayla, Mt. Lapata, Nikita, Artek, Alushta: Mt. Chatyrdag, Alushta, Kutuzovka, Luchistoye, Angarskiy Pass, Mt. Demerdzhi, Generalskoye, Rybachye, Sudak highway; Sudak: Veseloye; Feodosiya: Karadag, Feodosiya; Lenino distr.: Shchelkino, Zolotoye, Kurortnoye, Opuk Reserve. Sevastopol: Sevastopol, Khersones, Kamyshevaya Bay, Lyubimovka, Lyubimovka – airport Belbek, riv. Chernaya, riv. Urkusta, Belbek (currently Verkhnesadovoye), 5 km W Verkhnesadovoye.

**Distribution:** Russia (EP, NC, CR, UR, WS, ES), W, E, N and S Europe, Armenia, Turkey, Kyrgyzstan, Kazakhstan.

### ***Osmia (Metallinella) brevicornis* (FABRICIUS, 1798)**

*Osmia Panzeri* MORAWITZ: MORAWITZ 1870: 318 (Crimea).

*Osmia panzeri* MORAWITZ: POPOV 1958: 111 (Crimea).

*Osmia atrocoerulea* SCHILLING: ROMASENKO 1984: 266 (Crimean Reserve, Alushta); ROMASENKO 1995: 69 (Crimean Reserve, other territories).

*Osmia brevicornis* (FABRICIUS): FILATOV 2003: 85 (Karadag); IVANOV et al. 2005a: 93 (Crimean Foothills); IVANOV et al. 2005b: 210 (Crimea); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Otuzy valley); IVANOV & FATERYGA 2011: 87 (Yalta Reserve); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** 35 ♀♀, 27 ♂♂ [CFUS], 2 ♀♀ [ZIN], 1 ♀ [ZMMU], 1 ♂ [IZAN]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Tarkhankut, Kipchak; Yevpatoriya; Bakhchisaray distr.: Priyatnoye Svidaniye; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Dubki, Gvardeyskoye, Strogonovka, Pionerskoye, Sosnovka (Privolnoye); Yalta: Yalta, Sovetskoye; Alushta: Mt. Ayudag, Generalskoye, Mt. Karabi; Sudak: Veseloye; Feodosiya: Shchebetovka, Karadag; Lenino distr.: Cape Kazantip. Sevastopol: Balaklava, Chernorechye.

**Distribution:** Russia (EP, NC, CR), W, E, N and S Europe, N Africa, Armenia, Azerbaijan, Turkey, Cyprus, Iran, Afghanistan, Turkmenistan, Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan.

### ***Osmia (Osmia) bicornis* (LINNAEUS, 1758)**

*Osmia rufa* (LINNAEUS): ROMASENKO 1984: 275 (Crimean Mountains); ROMASENKO 1995: 69 (Crimean Reserve, other territories); IVANOV et al. 2005a: 92 (Krasnolesye); IVANOV et al. 2005b: 210 (Crimea); IVANOV 2006: 351 (Crimean Foothills); IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag, Lisy Bay).

*Osmia bicornis* (LINNAEUS): IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

**Material examined:** 51 ♀♀, 26 ♂♂ [CFUS], 2 ♀♀ [ZIN], 21 ♀♀, 22 ♂♂ [IZAN], 1 ♀, 1 ♂ [KHEO]. Republic of Crimea: Crimea (without details); Bakhchisaray distr.: Bakhchisaray, Mt. Bakla, Sokolinoye; Simferopol: Simferopol distr.: Konstantinovka, Urozhaynoye, Gvardeyskoye, Ayan, Krasnolesye, Dolgorukovskaya Yayla; Yalta: Mt. Aypetri, Yalta, Sovetskoye, Nikita, Mys Martyan Reserve; Alushta: Mt. Ayudag, Mt. Chatyrdag, Alushta, Luchistoye, Angarskiy Pass; Sudak: Gromovka, Veseloye, Novyy Svet, Mt. Tarakhtash; Feodosiya: Mt. Echkidag, Lisy Bay, Kurortnoye, Karadag, Koktebel. Sevastopol: Cape Streletskiy, Ayazma valley, Laspi Bay, Chernorechye.

**Distribution:** Russia (EP, NC, CR, UR), W, E, N and S Europe, N Africa, Georgia, Armenia, Azerbaijan, Turkey, Cyprus, Syria, Israel, Iran, Turkmenistan, Kyrgyzstan, Kazakhstan.

***Osmia (Osmia) cerinthidis* MORAWITZ, 1876**

*Osmia cerinthidis* MORAWITZ: ROMASENKO 1984: 268 (Crimean Mountains); IVANOV et al. 2005a: 92 (Krasnolesye); IVANOV et al. 2005b: 210 (Crimea); IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009a: 43 (Simferopol).

**Material examined:** Republic of Crimea: Crimea (without details), 30.V, 6.VII, 7.VII 1928, 3 ♀♀ [CFUS], 27.IV 1929, 1 ♀ [KHEO]; Yevpatoriya, 1.V 2004, 1 ♂, D. PUZANOV [CFUS]; Simferopol: vicinity of Simferopol, 1.IX 1983, 1 ♂ [IZAN], Simferopol, 10.III 1887, 18.VI 1929, 2 ♀♀, 13.VI 2003, 1 ♀, SI; Simferopol distr.: Gvardeyskoye, 20.VI 2002, 25.V, 9.VI 2003, 2 ♀♀, 7 ♂♂, A. MILOVANOV [CFUS], Krasnolesye, 29.V 1982, 4 ♀♀ [CFUS, IZAN]; Alushta: cordon Dubrava, 4.VI 2006, 1 ♀, SI [CFUS], vicinity of Generalskoye, 24.VII 1964, 1 ♀, V. ERMOLENKO [IZAN]; Sudak: Veseloye, 27.IV 1978, 1 ♂, SI [CFUS]. Sevastopol: Sevastopol, 1 ♀, 1 ♂, E. PAWLOWSKI [ZIN]. Additional nest records (without collection specimens): Simferopol distr.: Urozhaynoye.

**Distribution:** Russia (EP, NC, CR), W, E and S Europe, Georgia, Armenia, Azerbaijan, Turkey, Iran, ?China.

***Osmia (Osmia) cornuta* (LATREILLE, 1805)**

*Osmia cornuta* (LATREILLE): RADOSZKOWSKI 1887: 291 (Crimea); POPOV 1958: 111 (Crimean Mountains); ROMASENKO 1984: 271 (Crimean Mountains); ROMASENKO 1995: 69 (Crimean Reserve, other territories); IVANOV et al. 2005a: 93 (Crimean Foothills); IVANOV et al. 2005b: 210 (Crimea); IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 210 (Karadag); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** Republic of Crimea: Crimea (without details), 27.IV 1929, 7 ♀♀ [CFUS, KHEO], IV 2016, 1 ♀, SI; Chernomorskoye distr.: Kipchak, III 2008, 1 ♀, 2 ♂♂, AF; Simferopol, 27.II 1907, 1 ♂, 1.IV 2002, 1 ♂, SI, 27.IV 2003, 2 ♂♂, AF; Simferopol distr.: Gvardeyskoye, 1.IV 1998, 5 ♂♂, A. MILOVANOV; Yalta, 24.II 2002, 2 ♂♂, AF [CFUS]. Additional nest records (without collection specimens): Feodosiya: Karadag.

**Distribution:** Russia (EP, CR), W, E and S Europe, N Africa, Georgia, Armenia, Azerbaijan, Turkey, Cyprus, Syria, Iran, Turkmenistan, Kazakhstan.

***Osmia (Osmia) mustelina* GERSTÄCKER, 1869**

*Osmia emarginata* LEPELETIER: IVANOV et al. 2007: 9 (Crimea). This record belongs to *O. mustelina*.

**Material examined:** Republic of Crimea: Razdolnoye distr.: Ruch'i, 5.VIII 1993, 1 ♀, SI; Yalta: Mt. Lapata, 9.VII 2011, 1 ♀, AF [CFUS]; Alushta: vicinity of Generalskoye, 25.VI 1964, 1 ♂, V. ERMOLENKO [IZAN]; Feodosiya: Lisy Bay, 26.VI 2009, 1 ♀, AF [CFUS]. Sevastopol: Batiliman, 15.VI 1964, 1 ♀, AO [IZAN], Uzundzha Canyon, 18.VI 1987, 1 ♀, SI [CFUS].

**Distribution:** Russia (CR), W, E and S Europe, N Africa, Georgia, Armenia, Turkey, Lebanon, Israel, Iran.

***Osmia (Pyrosmia) cephalotes longiceps* MORAWITZ, 1876**

*Osmia cephalotes longiceps* MORAWITZ: IVANOV et al. 2005a: 92 (Krasnolesye); IVANOV et al. 2007: 8 (Crimea); IVANOV et al. 2009b: 211 (Karadag); IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

**Material examined:** Republic of Crimea: Yalta: Foros, 1.V 2002, 1♂, MF [KHEO], Yalta, 2♀♀, 1♂ [ZIN], 5.VI 2010, 1♀, SI [CFUS]; Sudak: Sudak, 18.V, 21.V, 3.VI, 4.VI 1904, 2♀♀, 5♂♂, D. GLAZUNOV [ZIN], Mt. Tarakhtash, 22.V 2004, 1♀, SI [CFUS]; Feodosiya: Karadag, 19.VI 1963, 1♀, AO [IZAN].

**Distribution:** Russia (CR), E and S Europe, Georgia, Armenia, Azerbaijan, Turkey, Cyprus, Syria, Jordan, Israel, Iran, Turkmenistan, Uzbekistan.

**Remarks:** Our previous record from Simferopol distr.: Krasnolesye is doubtful.

***Osmia (Pyrosmia) gallarum* SPINOLA, 1808**

*Osmia gallarum* SPINOLA: FILATOV 2003: 85 (Karadag); IVANOV et al. 2007: 8 (Crimea); IVANOV et al. 2009b: 211 (Karadag).

*Osmia* sp.: IVANOV et al. 2009b: 210 (Lisya Bay). This record belongs to *O. gallarum*.

**Material examined:** Republic of Crimea: Sudak: Mt. Tarakhtash, 22.V 2004, 2♂♂, SI; Feodosiya: Lisya Bay, 17.VI 1995, 1♀, SI, 15.V 2013, 1♂, AF [CFUS], Karadag, 6.V 2000, 1♂, MF [KHEO], 30.V 2012, 1♀, SI [CFUS].

**Distribution:** Russia (CR), W, E and S Europe, N Africa, Turkey.

***Osmia (Pyrosmia) submicans* MORAWITZ, 1870**

*Osmia submicans* MORAWITZ 1870: 314-315 ("Tauria"), lectotype (designated by VAN DER ZANDEN 1991: 64), ♀, "Tauria, BALLION" [ZIN].

*Diceratosmia submicans* (MORAWITZ): POPOV 1958: 111 (Crimean Mountains).

*Osmia submicans* MORAWITZ: ROMASENKO 1995: 69 (Crimean Mountains); IVANOV et al. 2005a: 92 (Krasnolesye); IVANOV et al. 2007: 8 (Crimea).

**Material examined:** Lectotype: "Tauria", 1♀, BALLION. Paralectotype: "Tauria", 1♀ [ZIN].

**Distribution:** Russia (CR), W, E and S Europe, N Africa, Turkey, Cyprus, Syria, Jordan, Lebanon, Israel, Kazakhstan.

**Remarks:** Our previous record from Simferopol distr.: Krasnolesye is doubtful.

***Osmia (Pyrosmia) versicolor* LATREILLE, 1811**

*Osmia versicolor* LATREILLE: IVANOV et al. 2005a: 92 (Krasnolesye); IVANOV et al. 2007: 8 (Crimea); IVANOV et al. 2009b: 211 (Karadag).

**Material examined:** Republic of Crimea: Yalta: Foros, 1.V 2002, 1♂, MF [CFUS], Yalta, 1♀ [ZIN]; Alushta: Kanaka valley, 27-28.V 2000, 2♀♀, SI; Feodosiya: Karadag, 3.VI 1997, 26.V 2002, 5♀♀, SI, 1.VI 2008, 1♂, AF. Sevastopol: vicinity of Chernorechye, 8.V, 13.V 1997, 2♂♂, V. KHOLODOV [CFUS].

**Distribution:** Russia (CR), W, E and S Europe, N Africa, Georgia, Turkey, Syria, Jordan, Lebanon, Israel.

**Remarks:** Our previous record from Simferopol distr.: Krasnolesye is doubtful.

***Osmia (Pyrosmia) viridana* MORAWITZ, 1874**

*Osmia viridana* MORAWITZ: FILATOV 2006: 113 (Opuk Reserve); IVANOV et al. 2007: 8 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 211 (Lisya Bay); IVANOV & FATERYGA 2011: 87 (Yalta Reserve); FATERYGA et al. 2014: 85 (Tarkhankut).

*Osmia submicans* MORAWITZ: FILATOV et al. 2006: 260 (Cape Kazantip). This record belongs to *O. viridana*.

**Material examined:** 63♀, 41♂ [CFUS], 1♀, 1♂ [IZAN], 18♀, 3♂ [KHEO]. Republic of Crimea: Chernomorskoye distr.: Tarkhankut, Kipchak, Bol. Kastel, Belyaus; Bakhchisaray distr.: Mt. Bakla, Priyatnoye Svidaniye; Simferopol: Simferopol, Mar'ino, Chumakarka; Simferopol distr.: Dubki, Gvardeyskoye, Ayan, Krasnolesye; Belogorsk distr.: Krinichnoye, Karasevka; Sovetskiy distr.: Markovo; Yalta: Mt. Aypetri, Gurzufskoye Sedlo Pass; Alushta: Luchistoye; Feodosiya: Mt. Echkidag, Lisya Bay, Karadag, Mt. Uzunsyrt; Lenino distr.: Kamenskoye – Solyanoye, Cape Kazantip, Zolotoye, Opuk Reserve. Sevastopol: Cape Lukull.

**Distribution:** Russia (NC, CR), W, E and S Europe, N Africa, Armenia, Turkey, Cyprus, Syria, Jordan, Lebanon, Israel, Iran, Turkmenistan, Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan.

***Osmia (Tergosmia) tergestensis* DUCKE, 1897**

*Hoplitis tergestensis* (DUCKE): IVANOV et al. 2007: 8 (Crimea).

*Osmia tergestensis* DUCKE: IVANOV & FILATOV 2008: 113 (Crimean Foothills, Katsiveli, Mt. Demerdzhi); IVANOV et al. 2009b: 211 (Karadag, Otuzy valley); IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

**Material examined:** 33♀, 8♂ [CFUS], 1♀, 1♂ [ZIN], 5♀, 3♂ [ZMMU], 2♀, 1♂ [IZAN], 1♂ [KHEO]. Republic of Crimea: Crimea (without details); Simferopol: Mar'ino; Simferopol distr.: Urozhaynoye, Pionerskoye, Ayan, Krasnolesye, Mt. Pakhalkaya; Belogorsk distr.: Karasevka; Kirovskoye distr.: Staryy Krym; Yalta: Mt. Aypetri; Alushta: Mt. Chatyrdag, Izobilnoye, Mt. Demerdzhi, Chiginitra valley; Sudak: Cape Meganom; Feodosiya: Lisya Bay, Kurortnoye, Karadag. Sevastopol: Laspi Bay, riv. Chernaya.

**Distribution:** Russia (CR), W, E and S Europe, N Africa, Turkey, Kazakhstan.

***Protosmia (Protosmia) tauricola* POPOV, 1961**

*Protosmia tauricola* POPOV 1961: 364-366, ♀ ♂ ("Khersones", "Sevastopol", "Belbek", "Mukhalatka"), lectotype (designated by PROSHCHALYKIN et al. 2017: 27), ♂, "Sebastopol, Krim, khutor Delagarda" [ZIN].

*Protosmia tauricola* POPOV: ROMASENKO 1995: 68 (Crimean Mountains); FILATOV 2003: 85 (Karadag); FILATOV 2006: 113 (Opuk Reserve); IVANOV et al. 2007: 9 (Crimea); IVANOV et al. 2009b: 210 (Karadag, Lisya Bay); FATERYGA et al. 2014: 84 (Tarkhankut).

**Material examined:** Lectotype: Sevastopol, 22.V 1908, 1♂, VP. Paralectotypes: Yalta: Mukhalatka (currently Oliva), 29-30.VI 1900, 1♀, V. AGGEENKO; Sevastopol: Sevastopol, 27.IV 1914, 1♂, VP, Khersones, 22.VI 1914, 1♀, VP, Belbek (currently Verkhnesadovoye), 15.V, 18.V 1914, 2♀, 1♂, VP [ZIN]. Additional material: 19♀, 33♂ [CFUS], 1♀ [ZMMU], 1♂ [IZAN], 2♀, 6♂ [KHEO]. Republic of Crimea: Chernomorskoye distr.: Tarkhankut, Kipchak, Bol. Kastel; Simferopol; Simferopol distr.: Dubki, Urozhaynoye, Druzhnoye, Perevalnoye; Yalta; Sudak: Mt. Tarakhtash, Cape Meganom; Feodosiya: Mt. Echkidag, Lisya Bay, Karadag, Mt. Tepeoba; Lenino distr.: Kamenskoye – Solyanoye, Opuk Reserve. Sevastopol: Chernorechye.

**Distribution:** Russia (CR), E and S Europe, Turkey.

***Protosmia (Protosmia) tiflensis* (MORAWITZ, 1876)**

*Protosmia tiflensis* (MORAWITZ): POPOV 1961: 363 (Sudak); ROMASENKO 1995: 68 (Crimean Mountains); FILATOV 2003: 85 (Karadag); IVANOV et al. 2007: 9 (Crimea); IVANOV et al. 2009b: 210 (Karadag).

**Material examined:** Republic of Crimea: Bakhchisaray distr.: Mt. Cherdakly-Bair, 20.IV, 23.VI 2016, 4♀♀, VZ [CFUS]; Yalta: Foros, 1.V 2002, 1♀, 4♂♂, MF [CFUS, KHEO]; Sudak, 4.VI, 5.VI 1904, 2♀♀, D. GLAZUNOV [ZIN]; Feodosiya: Karadag, 23.IV 1986, 1♂, L. ROMASENKO [IZAN], 7.V 2000, 1♂, MF [KHEO], 26.V 2001, 1♂, SI [CFUS]. Sevastopol: Inkerman, 2.V 1910, 1♀, VP [ZIN].

**Distribution:** Russia (CR), E and S Europe, Georgia, Turkey, Jordan, Israel.

**Tribe Megachilini**

***Coelioxys (Allocoelioxys) afer* LEPELETIER, 1841**

*Coelioxys afer* LEPELETIER: FILATOV 2006: 113 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV et al. 2007: 6 (Crimea); IVANOV et al. 2009b: 211 (Karadag, Otuzy valley, Lisy Bay); IVANOV & FATERYGA 2011: 87 (Yalta Reserve); FATERYGA et al. 2014: 85 (Tarkhankut).

**Material examined:** 46♀♀, 35♂♂ [CFUS], 1♀, 1♂ [ZMMU], 8♀♀, 7♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Kipchak, Bol. Kastel; Krasnogvardeyskoye distr.: Krasnoarmeyskoye; Saki distr.: Popovka – Shtormovoye; Yevpatoriya: Mirnyy, Moynaki Lake; Simferopol: Simferopol, Mar'ino, Chumakarka; Simferopol distr.: Simferopol distr. (without details), Mt. Tashdzhargan, Fontany, Urozhaynoye, Lozovoye, Krasnolesye, Mt. Pakhalkaya; Yalta: Zori Ukrainy (currently Zori Rossii), Katsiveli, Yalta, Gruzport, Mys Martyan Reserve; Feodosiya: Mt. Echkidag – Shchebetovka, Shchebetovka, Lisy Bay, Kurortnoye, Karadag, Mt. Tepeoba; Lenino distr.: Cape Kazantip, Shchelkino, Zolotoye, Leninskoye, Kurortnoye, Opuk Reserve; Kerch. Sevastopol: Cape Ayya, Morozovka, Kizilovoye, 3.5 km W Verkhnesadovoye, Adym-Chokrak valley.

**Distribution:** Russia (EP, NC, CR, WS, ES, FE), W, E, N and S Europe, N and S Africa, Georgia, Armenia, Turkey, Cyprus, Israel, Saudi Arabia, Iran, Turkmenistan, Kyrgyzstan, Kazakhstan, China, SE Asia.

**Remarks:** The adjective species group names in the genus *Coelioxys* must be used in masculine gender (RASMONT et al. 2017).

***Coelioxys (Allocoelioxys) brevis* EVERSMAAN, 1852**

*Coelioxys brevis* EVERSMAAN: FILATOV 2003: 85 (Karadag); IVANOV et al. 2005a: 93 (Crimean Foothills); FILATOV 2006: 113 (Opuk Reserve); IVANOV et al. 2007: 6 (Crimea); IVANOV et al. 2009b: 211 (Karadag, Otuzy valley); FATERYGA et al. 2014: 85 (Tarkhankut).

**Material examined:** 17♀♀, 9♂♂ [CFUS], 1♀ [ZMMU], 1♀, 2♂♂ [IZAN], 2♀♀, 1♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Kipchak, Bol. Kastel, Belyaus; Dzhankoy distr.: 2 km E Solenoye Ozero; Saki distr.: Popovka – Shtormovoye, Uyutnoye; Yevpatoriya: Mirnyy; Bakhchisaray distr.: Peschanoye; Simferopol; Alushta: Rybachye; Feodosiya: Otuzy (currently Shchebetovka), Lisy Bay, Karadag; Lenino distr.: Kamenskoye – Solyanoye, Cape Kazantip, Kurortnoye, Novootradnoye, Opuk Reserve. Sevastopol: Lyubimovka – airport Belbek.

**Distribution:** Russia (NC, CR, UR, ES), W, E and S Europe, N Africa, Caucasus, Turkey, Cyprus, Israel, Tajikistan, Uzbekistan, Kazakhstan, China, Japan.

***Coelioxys (Allocoelioxys) caudatus* SPINOLA, 1838**

*Coelioxys foersteri* MORAWITZ: ROMASENKO 1995: 71 (Crimean Mountains).

*Coelioxys caudata* SPINOLA: FILATOV 2003: 85 (Karadag); FILATOV 2006: 113 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV et al. 2007: 6 (Crimea); IVANOV et al. 2009b: 211 (Karadag, Otuzy valley, Lisy Bay); IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

**Material examined:** 36♀♀, 28♂♂ [CFUS], 4♀♀, 2♂♂ [ZMMU], 16♀♀, 8♂♂ [KHEO]. Republic of Crimea: Chernomorskoye distr.: Bol. Kastel; Pervomayskoye distr.: Alekseyevka; Yevpatoriya: Mirnyy, Yevpatoriya; Bakhchisaray distr.: Peschanoye – Uglovoye; Simferopol; Yalta: Zori Ukrainy (currently Zori Rossii); Alushta; Sudak: Veseloye, Sudak; Feodosiya: Otuzy (currently Shchebetovka), Kurortnoye, Lisy Bay, Karadag, Mt. Tepeoba; Lenino distr.: Cape Kazantip, Shchelkino, Cape Chauda, 3.5 km SE Zavetnoye, Opuk Reserve. Sevastopol: Batiliman, Cape Sarych, Cape Lukull.

**Distribution:** Russia (EP, CR), W, E and S Europe, N Africa, Caucasus, Turkey, Israel, Iran, Turkmenistan, Tajikistan, Uzbekistan, Kyrgyzstan, China.

***Coelioxys (Allocoelioxys) echinatus* FÖRSTER, 1853**

*Coelioxys ruficaudata* SMITH: ROMASENKO 1995: 71 (Crimean Reserve, other territories).

*Coelioxys echinata* FÖRSTER: IVANOV et al. 2007: 6 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve).

**Material examined:** Republic of Crimea: Crimea (without details), 1♂; Bakhchisaray distr.: Tabachnoye, 2-3.VII 2010, 2♀♀, 1♂, VZ; Simferopol, 28.VIII 1981, 3♀♀, 1♂, LS, 14.VIII 2013, 2♀♀, SI, 18.VI-14.VII 2008, 26.VI 2010, 1♀, 8♂♂, VZ; Feodosiya: Lisy Bay, 5.VII 2008, 1♂, VZ [CFUS].

**Distribution:** Russia (EP, CR), W, E and S Europe, N Africa, Azerbaijan, Turkey, Iraq, Iran.

***Coelioxys (Allocoelioxys) elsei* SCHWARZ, 2001**

**Material examined:** Republic of Crimea: Chernomorskoye distr.: Bol. Kastel, 4.VII 2014, 1♀, VZ; Lenino distr.: Opuk Reserve, 2.VI 2002, 8.VI 2011, 2♀♀, 1♂, SI, 26-29.V 2005, 1♂, MF [CFUS].

**Distribution:** Russia (CR), E and S Europe, Turkey, Jordan.

***Coelioxys (Allocoelioxys) emarginatus* FÖRSTER, 1853**

*Coelioxys emarginata* FÖRSTER: IVANOV et al. 2007: 6 (Crimea).

**Material examined:** Republic of Crimea: Crimea (without details), 15.VI, 19.VIII, 1♀, 1♂; Yevpatoriya: Mirnyy, 1.VI 2013, 15.VI 2016, 1♀, 1♂, SI; Lenino distr.: Zolotoye, 2.VII 1999, 1♀, SI [CFUS].

**Distribution:** Russia (EP, CR, UR, WS, ES, FE), W, E and S Europe, N Africa, Armenia, Turkey, Turkmenistan, Uzbekistan, Kyrgyzstan, Kazakhstan, China, India.

***Coelioxys (Allocoelioxys) haemorrhoea* FÖRSTER, 1853**

*Coelioxys haemorrhoea* FÖRSTER: IVANOV et al. 2005a: 93 (Crimean Foothills); IVANOV et al. 2007: 6 (Crimea); IVANOV et al. 2009b: 211 (Karadag).

**Material examined:** Republic of Crimea: Crimea (without details), 18.VI, 2.VIII 1976, 2♀ ♀; Chernomorskoye distr.: Belyaus, 16.VI 2016, 2♀ ♀, AF; Simferopol distr.: Fontany, 18-23.VI 2006, 6♂ ♂, VZ, Urozhaynoye, 25.VI 2003, 1♂ ♂, SI; Feodosiya: Lysa Bay, 15.VI 2008, 18.VI 2011, 3♀ ♀, SI, 1.VII 2014, 1♀ ♀, AF [CFUS], Karadag, 11.VIII 2001, 1♀ ♀, MF, 27.VII 2002, 1♂ ♂, K. SHORENKO [KHEO], 24.VI 2016, 1♀ ♀, AF, 3.VIII 2016, 1♀ ♀, SI; Lenino distr.: Kurortnoye, 1.VIII 2004, 1♂ ♂, AF [CFUS], Opuk Reserve, 16.VIII 2003, 7.VIII 2004, 2♀ ♀, 1♂ ♂, MF [KHEO], 1.VII, 3.VIII, 4.VIII 2010, 3♀ ♀, 1♂ ♂, SI, 3.VIII 2010, 1♀ ♀, AF [CFUS].

**Distribution:** Russia (NC, CR), W, E and S Europe, N Africa, Caucasus, Turkey, Cyprus, Israel, Pakistan, Turkmenistan, Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan, China, Korea, India.

### ***Coelioxys (Allocoelioxys) obtusus* PÉREZ, 1884**

*Coelioxys obtusa* PÉREZ: IVANOV et al. 2007: 6 (Crimea); IVANOV et al. 2009b: 211 (Karadag, Otuzy valley).

*Coelioxys brevis* EVERSMANN: FATERYGA et al. 2014: 85 (Tarkhankut). This record partially belongs to *C. obtusa*.

**Material examined:** Republic of Crimea: Crimea (without details), 29.VII, 31.VII, 1♀ ♀, 1♂ ♂; Chernomorskoye distr.: Atlesh, 29.VII 2008, 4♀ ♀, 3♂ ♂, SI; Pervomayskoye distr.: Alekseyevka, 29.VII 1944, I. MALTSEV; Simferopol, 26.VIII 2011, 1♂ ♂, SI; Simferopol distr.: Ayan, 23.VIII 2004, 1♀ ♀, AF [CFUS]; Feodosiya: Otuzy (currently Shchebetovka), 30.VII, 13.VIII 1927, 2♀ ♀, GK, Karadag, 22.VII 1927, 1♀ ♀, GK [ZMMU]; Lenino distr.: Cape Kazantip, 2.VIII 2003, 1♀ ♀, SI. Sevastopol: Cape Lukull, 9.VII 2016, 16♀ ♀, 1♂ ♂, AF, 5 km W Verkhnesadovoye, 10.IX 2006, 2♀ ♀, AF [CFUS].

**Distribution:** Russia (EP, CR), W, E and S Europe, N Africa, Caucasus, Turkey, Iraq, Iran, Turkmenistan.

### ***Coelioxys (Allocoelioxys) polycentris* FÖRSTER, 1853**

*Coelioxys polycentris* FÖRSTER: FILATOV 2006: 113 (Opuk Reserve); IVANOV et al. 2007: 6 (Crimea); FATERYGA et al. 2014: 85 (Tarkhankut).

**Material examined:** Republic of Crimea: Chernomorskoye distr.: Kipchak, 25.VI 2003, 23.VI 2005, 22.VI, 24.VI, 25.VI 2007, 11♀ ♀, 3♂ ♂, AF, 26-27.VI 2013, 17.VI 2015, 2♀ ♀, VZ [CFUS]; Yevpatoriya: 3 km SE Yevpatoriya, 6.VIII 2001, A. AMOLIN [IZAN]; Lenino distr.: Aktash Lake, 19.VI 2013, 3♀ ♀, 1♂ ♂, AF [CFUS], Opuk Reserve, 14.VIII 2002, 1♂ ♂, MF [KHEO].

**Distribution:** Russia (CR, ES), W, E and S Europe, Turkey, Cyprus, Iran, Pakistan, China.

### ***Coelioxys (Boreocoelioxys) inermis* (KIRBY, 1802)**

*Coelioxys inermis* (KIRBY): ROMASENKO 1995: 71 (Crimean Reserve, other territories); FILATOV 2003: 85 (Karadag); IVANOV et al. 2007: 6 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 211 (Karadag, Otuzy valley).

**Material examined:** 26♀ ♀, 8♂ ♂ [CFUS], 1♂ ♂ [ZMMU], 2♂ ♂ [IZAN], 6♀ ♀, 7♂ ♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Mezhdvodnoye; Simferopol; Simferopol distr.: Fontany, Zhivopisnoye, Pionerskoye, Krasnolesye; Alushta: cordon Sadovyy, Rybachye; Feodosiya: Shchebetovka, Kurortnoye, Karadag; Lenino distr.: Kurortnoye, Opuk Reserve; Kerch.

**Distribution:** Russia (EP, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Georgia, Turkey, Kyrgyzstan, China, Japan.



***Coelioxys (Boreocoelioxys) mandibularis* NYLANDER, 1848**

*Coelioxys mandibularis* NYLANDER: IVANOV et al. 2007: 6 (Crimea).

**Material examined:** Republic of Crimea: Crimea (without details), 1 ♀; Simferopol distr.: Ayan, 20.VII 2004, 1 ♀, AF, Perevalnoye, 1 ♀, I. MALTSEV, Krasnolesye, 1.VIII, 4.VIII 2007, 2 ♂ ♂, AF; Feodosiya: Shchebetovka, 25.VIII 2010, 1 ♀, SI [CFUS].

**Distribution:** Russia (EP, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Georgia, Turkey, Kyrgyzstan, Mongolia, China.

***Coelioxys (Boreocoelioxys) rufescens* LEPELETIER & AUDINET-SERVILLE, 1825**

*Coelioxys rufescens* LEPELETIER & AUDINET-SERVILLE: IVANOV et al. 2007: 6 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve).

**Material examined:** Republic of Crimea: Crimea (without details), 2 ♂ ♂ [CFUS, ZIN], 16.IX, 1 ♂, 20.VIII 2011, 11.IX 2012, 9.VIII 2013, 5.VI 2014, 2 ♀ ♀, 2 ♂ ♂, SI; Bakhchisaray distr.: cordon Zelenyy Gay, 5.VI 2006, 1 ♀, SI; Simferopol: Mar'ino, 31.VII 2007, 1 ♀, AF [CFUS]; Simferopol distr.: Pionerskoye, 12.IX 1975, 1 ♀, L. ZIMINA [ZMMU], Ayan, 23.VIII 2004, 17.VII 2011, 1 ♀, 1 ♂, AF, Krasnolesye, 4.VII, 1.VIII, 4.VIII, 9.VIII, 18.VIII 2007, 4 ♀ ♀, 5 ♂ ♂, AF; Alushta: Mt. Chatyrdag, 17.VII 2007, 1 ♀, AF; Feodosiya: Shchebetovka, 25.VIII 2010, 1 ♀, SI [CFUS].

**Distribution:** Russia (EP, NC, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Georgia, Armenia, Azerbaijan, Turkey, Iran, Tajikistan, Uzbekistan, Kazakhstan, Mongolia, China, Japan.

***Coelioxys (Coelioxys) aurolimbatus* FÖRSTER, 1853**

*Coelioxys aurolimbata* FÖRSTER: IVANOV et al. 2007: 6 (Crimea); IVANOV et al. 2009b: 211 (Karadag, Lysa Bay); IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

**Material examined:** Republic of Crimea: Simferopol: Mar'ino, 13.VI, 2.VIII 2008, 17.VI 2009, 2 ♀ ♀, 1 ♂, AF [CFUS]; Simferopol distr.: Pionerskoye, 26.V 1975, 1 ♂, L. ZIMINA [ZMMU]; Yalta: Mt. Lapata, 11.VI 2003, 1 ♂, AF; Feodosiya: Lysa Bay, 14.VI 2007, 29.VI 2008, 12.IX 2013, 13.VI, 17.VI 2014, 4 ♀ ♀, 1 ♂, AF, Karadag, 5.VII 2002, 24.VI 2003, 1 ♀, 3 ♂ ♂, SI [CFUS].

**Distribution:** Russia (EP, NC, CR, UR), W, E, N and S Europe, N Africa, Georgia, Armenia, Turkey, Lebanon, Iran, Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan, Mongolia, China.

***Coelioxys (Coelioxys) conoideus* (ILLIGER, 1806)**

*Coelioxys conoidea* (ILLIGER): IVANOV et al. 2007: 6 (Crimea); IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

**Material examined:** Republic of Crimea: Crimea (without details), 2.VI, 1 ♂; Simferopol: Simferopol, 28.VI 1899, 1 ♀, Z. SOKOL, 14.IX 1928, 1 ♀, 14.IX 2013, 1 ♀, AF, 30.V 2016, 1 ♂, SI, Mar'ino, 14.VII 2015, 1 ♀, AF, Chumakarka, 21.VIII, 1.IX 1929, 2 ♀ ♀, 1 ♂; Simferopol distr.: vicinity of Chistenkaya, 18.VIII 2015, 1 ♀, VZ, Fontany, 16.VII 2004, 1 ♂, VZ, Gvardeyskoye – Kurgannoye, 5.VIII 2009, 1 ♂, SI, Krasnolesye, 29.VI 1982, 1 ♀, 1 ♂, LS, 4.VI, 1.VIII, 9.VIII 2007, 2 ♀ ♀, 2 ♂ ♂, AF; South Coast (without details), 8.VII 1928, 1 ♂; Yalta: Mt. Lapata, 11.VI 2003, 1 ♂, AF; Alushta: Mt. Chatyrdag, 3.VIII 2004, 1 ♀, AF [CFUS].

**Distribution:** Russia (EP, NC, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Georgia, Turkey, Cyprus.

### ***Coelioxys (Coelioxys) elongatus* LEPELETIER, 1841**

*Coelioxys elongata* LEPELETIER: ROMASENKO 1995: 71 (Crimean Reserve, other territories); FILATOV 2003: 85 (Karadag); IVANOV et al. 2005a: 93 (Crimean Foothills); IVANOV et al. 2007: 6 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 211 (Karadag).

**Material examined:** Republic of Crimea: Bakhchisaray distr.: Bakhchisaray, 8.VI 1929, 1 ♀; Simferopol distr.: Ayan, 4.VI 2012, 1 ♂, SI [CFUS]; Alushta: Angarskiy Pass, 12.VII 1976, 2 ♂ ♂, L. ZIMINA [ZMMU]; Feodosiya: Karadag, 29.VII, 5.VIII 1998, 7 ♀ ♀, MF [KHEO]; Kerch, 22.VII 1998, 1 ♀, M. GORDIYENKO [CFUS]. Sevastopol: Duvankoy (currently Verkhnesadovoye), 8.VI 1929, 1 ♂ [CFUS].

**Distribution:** Russia (EP, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Azerbaijan, Turkey, Iran.

### ***Coelioxys (Coelioxys) quadridentatus* (LINNAEUS, 1758)**

*Coelioxys quadridentata* (LINNAEUS): IVANOV et al. 2007: 6 (Crimea); IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

**Material examined:** Republic of Crimea: Crimea (without details), 1 ♀, 4.VII 1928, 1 ♀; Bakhchisaray distr.: Rechnoye, 7.VI 1980, 1 ♂, P. SHCHERBATENKO; Simferopol distr.: Ayan, 15.VI 2003, 13.V 2012, 2 ♂ ♂, SI, 11.VI 2006, 1 ♂, AF, Krasnolesye, 3.VI 1982, 1 ♂, LS, Mt. Pakhalkaya, 30.VII 2011, 1 ♀, SI; Yalta: Mt. Aypetri, 21.VIII 2003, 2 ♀ ♀, SI [CFUS].

**Distribution:** Russia (EP, CR, UR, WS, ES, FE), W, E, N and S Europe, Turkey, Iran, China.

### ***Megachile (Chalicodoma) lefebvrei* (LEPELETIER, 1841)**

*Chalicodoma Lefebvrei* LEPELETIER: MORAWITZ 1870: 319 (Crimea).

*Megachile Lefebvrei* (LEPELETIER): RADOSZKOWSKI 1874: 141 (Crimea).

*Chalicodoma lefeburei* LEPELETIER: POPOV 1958: 112 (South Coast); ROMASENKO 1984: 277 (Mt. Demerdzhi, Karadag, Cape Kazantip); ROMASENKO 1995: 70 (Crimean Reserve, other territories).

*Megachile lefebvrei* (LEPELETIER): FILATOV 2003: 85 (Karadag); IVANOV et al. 2005b: 210 (Crimea); FILATOV 2006: 114 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV et al. 2007: 6 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009a: 43 (Simferopol); IVANOV et al. 2009b: 211 (Karadag, Lisy Bay); RADCHENKO et al. 2009: 173-174 (numerous localities); IVANOV & FATERYGA 2011: 87 (Yalta Reserve); FATERYGA et al. 2014: 85 (Tarkhankut); IVANOV et al. 2015: 304 (Lisy Bay, Karadag); FATERYGA & IVANOV 2016: 243 (Sevastopol, Inkerman, Khersones, Kazachya Bay, Ayazma valley, Cape Ayya, Laspi Bay, Cape Sarych, Belbek).

**Material examined:** 40 ♀ ♀, 27 ♂ ♂ [CFUS], 33 ♀ ♀, 12 ♂ ♂ [ZIN], 2 ♀ ♀ [ZMMU], 17 ♀ ♀, 2 ♂ ♂ [IZAN], 23 ♀ ♀, 3 ♂ ♂ [KHEO]. Republic of Crimea: Chernomorskoye distr.: Tarkhankut, Kipchak, Kipchak – Bol. Kastel, Kipchak – Dzhangul, Bol. Kastel, Mal. Kastel, Dzhangul, Atleshe, Belyaus, Donuzlav Lake; Yevpatoriya; Simferopol; Simferopol distr.: Fontany, Urozhaynoye; Yalta: Kastropol, Katsiveli, Alupka, Yaltinskaya Yayla, Uchkosh Canyon; Alushta: Mt. Kastel, Mt. Demerdzhi; Sudak: Novyy Svet, Mt. Karauloba; Feodosiya: Lisy Bay, Karadag, Feodosiya; Lenino distr.: Cape Kazantip, Mysovoye, Novootradnoye, Zolotoye, Opuk Reserve; Kerch. Sevastopol: Sevastopol, Inkerman, Khersones, Kazachya Bay, Cape Ayya, Laspi Bay, Cape Sarych, Belbek (currently Verkhnesadovoye).

**Distribution:** Russia (NC, CR), W, E and S Europe, N Africa, Georgia, Iran.

***Megachile (Chalicodoma) parietina* (GEOFFROY, 1785)**

*Chalicodoma muraria* LEPELETIER: RADOSZKOWSKI 1867: 80 (Crimea).

*Chalicodoma muraria nestorea* (BRULLÉ): POPOV 1958: 111 (South Coast).

*Chalicodoma parietinum nestoreum* (BRULLÉ): ROMASENKO 1980: 74 (Crimean Reserve); ROMASENKO 1984: 277 (Mt. Demerdzhi, Mt. Karabi, Karadag, Baydarskaya Yayla, Laspi Bay); ROMASENKO 1995: 70 (Crimean Reserve, other territories).

*Megachile parietina* (GEOFFROY): IVANOV et al. 2005a: 93 (Crimean Foothills); IVANOV et al. 2007: 6 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009a: 43 (Simferopol); IVANOV et al. 2009b: 211 (Karadag, Otuzy valley, Lisy Bay); IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

**Material examined:** 33♀♀, 15♂♂ [CFUS], 86♀♀, 10♂♂ [ZIN], 3♀♀ [ZMMU], 57♀♀, 3♂♂ [IZAN], 2♀♀ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Donuzlav Lake; Simferopol; Simferopol distr.: Kizilkoba, Mt. Pakhkalkaya; Yayla (without details); South Coast (without details); Yalta: Mukhalatka (currently Oliva), Alupka, Mt. Aypetri, Miskhor, Gaspra, Yaltinskaya Yayla, Yalta, Uchkosh Canyon, Natashino, Magarach, Mys Martyan Reserve, Gurzufskoye Sedlo Pass, Artek; Alushta: Degermenkoy (currently Zaprudnoye), Mt. Kastel, Mt. Demerdzhi, Mt. Karabi, Rybachye; Sudak: Gromovka, Mt. Karauloba, Mt. Tarakhtash, Mt. Perchem, Aysavskaya valley; Feodosiya: Mt. Echkidag – Shchebetovka, Otuzy (currently Shchebetovka), Lisy Bay, Karadag, Koktebel, Feodosiya; Kerch. Sevastopol: Balaklava, Ayazma valley, Batiliman, Baydarskaya Yayla, Shaytan-Merdven Pass, Uzundzha Canyon, Morozovka.

**Distribution:** Russia (NC, CR), W, E and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Syria, Jordan, Israel, Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan.

***Megachile (Creightonella) albisecta* (KLUG, 1817)**

*Megachile caucasica* LEPELETIER: RADOSZKOWSKI 1867: 80 (Crimea).

*Megachile caucasica* LEPELETIER: POPOV 1958: 112 (Crimean Mountains).

*Megachile albisecta* var. *caucasica* (KLUG): ROMASENKO 1995: 70 (Crimean Mountains).

*Creightonella albisecta* (KLUG): IVANOV et al. 2005a: 93 (Crimean Foothills).

*Megachile albisecta* (KLUG): FILATOV 2003: 84 (Karadag); FILATOV 2006: 113 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV & FILATOV 2008: 110 (Crimean Foothills, South Coast, Mt. Echkidag, Karadag, Kerch Peninsula, Cape Kazantip); IVANOV et al. 2007: 6 (Crimea); IVANOV et al. 2009b: 211 (Karadag, Otuzy valley, Lisy Bay); FATERYGA & IVANOV 2016: 243 (Kazachya Bay, Cape Ayya, Batiliman, Cape Sarych, Cape Lukull).

**Material examined:** 51♀♀, 25♂♂ [CFUS], 2♀♀ [IZAN], 6♀♀, 2♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Kipchak – Bol. Kastel, Atlesh; Razdolnoye distr.: Ruch'i; Yevpatoriya: Mirnyy; Bakhchisaray distr.: Peschanoye – Uglovoye, Kuybyshevo; Yalta: Yalta, Mys Martyan Reserve; Sudak: Sudak, Veseloye, Mt. Karauloba; Feodosiya: Mt. Echkidag, Lisy Bay, Kurortnoye, Karadag; Lenino distr.: Cape Kazantip, Mysovoye, Zolotoye, Zavetnoye, 3.5 km SE Zavetnoye, Opuk Reserve. Sevastopol: Kazachya Bay, Cape Ayya, Batiliman, Cape Sarych, Cape Lukull.

**Distribution:** Russia (CR), W, E and S Europe, N Africa, Azerbaijan, Turkey, Cyprus, Syria, Israel, Iran, Turkmenistan, Uzbekistan, Kyrgyzstan.

***Megachile (Eutricharaea) apicalis* SPINOLA, 1808**

*Megachile apicalis* SPINOLA: ROMASENKO 1984: 279 (Kropotkino, Tavricheskoye); ROMASENKO 1995: 70 (Crimean Reserve, other territories); FILATOV 2003: 84 (Karadag); IVANOV et al. 2005a: 93 (Crimean Foothills); IVANOV et al. 2005b: 210 (Crimea); FILATOV 2006: 113 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV et al. 2007: 6 (Crimea);

IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 211 (Karadag, Otuzu valley, Lisy Bay); IVANOV & FATERYGA 2011: 87 (Yalta Reserve); FATERYGA et al. 2014: 85 (Tarkhankut).

**Material examined:** 143♀, 126♂ [CFUS], 3♀, 9♂ [ZMMU], 9♀, 5♂ [IZAN], 22♀, 7♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Tarkhankut, Kipchak, Kipchak – Bol. Kastel, Kipchak – Dzhangul, Bol. Kastel, Dzhangul, Atlesh, Chernomorskoye, Mezhdvodnoye, Belyaus; Razdolnoye distr.: Voronki, Kukushkino, Kropotkino; Krasnoperekopsk distr.: Tavricheskoye, Sovkhoznoye, Krasnoarmeyskoye; Dzhanikoy distr.: Severnyy; Yevpatoriya: Mirnyy, 3 km SE Yevpatoriya; Bakhchisaray distr.: Peschanoye – Uglovoye, Tabachnoye, Mt. Cherdakly-Bair, Kuybyshevo; Simferopol: Simferopol, Chumakarka; Simferopol distr.: Demyanovka, Fontany, Partizanskoye, Urozhaynoye, Gvardeyskoye, Ayan; Belogorsk distr.: Belogorsk; Sovetskoye distr.: Makovka; Yalta: Mt. Aypetri, Yalta, Mys Martyan Reserve, Artek, Alushta: Pushkino, Alushta, General'skoye; Sudak: Veseloye, Cape Meganom; Feodosiya: Otuzi (currently Shchebetovka), Lisy Bay, Kurortnoye, Karadag, Tikhaya Bay; Lenino distr.: Arabat Spit, Cape Kazantip, Cape Chauda, Novootradnoye, Zolotoye, Kurortnoye, 3.5 km SE Zavetnoye, Opuk Reserve. Sevastopol: Sevastopol, Lyubimovka – airport Belbek, Cape Ayya, Laspi Bay, Cape Lukull, 5 km W Verkhnesadovoye.

**Distribution:** Russia (EP, NC, CR), W, E and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Cyprus, Israel, Iran, Pakistan, Uzbekistan, Kazakhstan, N America (introduced).

### ***Megachile (Eutricharaea) deceptor* PÉREZ, 1890**

*Megachile deceptor* PÉREZ: IVANOV et al. 2005a: 93 (Crimean Foothills); IVANOV et al. 2007: 6 (Crimea); IVANOV et al. 2009b: 211 (Otuzu valley, Lisy Bay); FATERYGA et al. 2011: 262 (Tarkhankut); FATERYGA et al. 2014: 85 (Tarkhankut).

**Material examined:** 44♀, 32♂ [CFUS], 3♂ [IZAN]. Republic of Crimea: Chernomorskoye distr.: Tarkhankut, Kipchak, Kipchak – Bol. Kastel, Bol. Kastel, Belyaus; Krasnoperekopsk distr.: Krasnoarmeyskoye; Dzhanikoy distr.: Severnyy; Saki distr.: Karatobe; Simferopol: Mar'ino; Simferopol distr.: Mt. Tashdzhargan; Alushta: Mt. Demerdzhi, Rybachye, Kanaka valley; Feodosiya: Lisy Bay, Kurortnoye, Barakol Lake; Lenino distr.: Kamenskoye – Solyanoye. Sevastopol: Sevastopol.

**Distribution:** Russia (EP, CR), W, E and S Europe, N Africa, Azerbaijan, Turkey, Pakistan, Turkmenistan, Kazakhstan.

### ***Megachile (Eutricharaea) giraudi* GERSTÄCKER, 1869**

*Megachile giraudi* GERSTÄCKER: FILATOV 2006: 114 (Opuk Reserve); IVANOV et al. 2007: 7 (Crimea); RADCHENKO et al. 2009: 176 (Tarkhankut, Mt. Demerdzhi, Cape Kazantip, Opuk Reserve, Laspi Bay); FATERYGA et al. 2014: 86 (Tarkhankut); FATERYGA & IVANOV 2016: 243 (Batiliman).

**Material examined:** Republic of Crimea: Chernomorskoye distr.: Kipchak, 28.V-4.VI 2004, 2♀, 2♂, SI, 31.V 2012, 1♂, VZ, Bol. Kastel, 16.VII 1989, 1♀, SI, Donuzlav Lake, 16.VI 2011, 2♀, VZ; Bakhchisaray distr.: Mt. Bakla, 15.V 2015, 1♂, A. SVOLYNSKIY; Simferopol distr.: Ayan, 4.VI 2012, 1♀, SI; Alushta: Mt. Demerdzhi, 17.VII 2007, 1♀, SI; Sudak: Cape Meganom, 27.V 2016, 3♀, 2♂, AF [CFUS]; Lenino distr.: Cape Kazantip, 9.VI 1985, 1♀, I. PLJUSHTCH [IZAN], Opuk Reserve, 2.VI, 3.VI 2002, 8.VI, 9.VI 2012, 6♀, SI [CFUS], 26-29.V 2005, 1♀, 4♂, MF [CFUS, KHEO]. Sevastopol: Batiliman, 16.VI 1964, 2♀, AO [IZAN].

**Distribution:** Russia (CR), W, E and S Europe, Armenia, Turkey, Uzbekistan.

**Remarks:** This species is traditionally placed within the subgenus *Xanthosarus* due

to the specific structure of male forelegs, however it belongs to the subgenus *Eutricharaea* according to the recent phylogenetic study based on DNA barcoding (TRUNZ et al. 2016). Moreover, the structure of male forelegs in *M. giraudi* differs from typical *Xanthosarus*, and shows characters similar to some other species of *Eutricharaea*, especially *M. leucomalla*.

### ***Megachile (Eutricharaea) leachella* CURTIS, 1828**

*Megachile argentata* (FABRICIUS): ROMASENKO 1984: 281 (Kropotkino, Lastochkino Gnezdo, Mt. Karabi, Karadag, Koktebel); ROMASENKO 1995: 70 (Crimean Reserve, other territories). These records belong to *M. leachella*.

*Megachile leachella* CURTIS: FILATOV 2003: 85 (Karadag); IVANOV et al. 2005a: 92 (Krasnolesye); IVANOV et al. 2007: 6 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 211 (Karadag).

**Material examined:** 24♀♀, 40♂♂ [CFUS], 1♂ [ZMMU], 6♀♀, 11♂♂ [IZAN], 2♀♀ [KHEO]. Republic of Crimea: Chernomorskoye distr.: Kipchak, Chernomorskoye, Belyaus; Krasnoperekopsk distr.: Pochetnoye, Tavricheskoye, Sovkhoznoye, Krasnoarmeyskoye; Saki distr.: Uyutnoye, Popovka – Shtormovoye; Yevpatoriya: Mirnyy; Simferopol; Yalta: Alupka, Lastochkino Gnezdo; Alushta: Mt. Demerdzhi, Sudak highway; Sudak; Feodosiya: Karadag, Koktebel; Lenino distr.: Kamenskoye – Solyanoye, Mysovoye, Shchelkino, Novootradnoye, Zolotoye, Kurortnoye, Opuk Reserve. Sevastopol: Sevastopol.

**Distribution:** Russia (EP, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Iran, China.

### ***Megachile (Eutricharaea) leucomalla* GERSTÄCKER, 1869**

*Megachile excellens* MORAWITZ 1872: 53 ("Tauria"), lectotype (designated by VAN DER ZANDEN 1995: 432), ♂, "Tauria, BALLION" [ZIN]. Synonymy in VAN DER ZANDEN 1995: 432.

*Megachile leucomalla* GERSTÄCKER: IVANOV et al. 2007: 6 (Crimea).

**Material examined:** Lectotype of *M. excellens*: "Tauria", 1♂, BALLION. Paralectotype of *M. excellens*: "Tauria", 1♂, BALLION [ZIN].

**Distribution:** Russia (CR), W, E and S Europe, N Africa, Georgia, Turkey, Jordan, Kazakhstan.

### ***Megachile (Eutricharaea) melanogaster* EVERSMAAN, 1852**

*Megachile melanogaster* EVERSMAAN: IVANOV et al. 2009b: 211 (Lisia Bay).

**Material examined:** Republic of Crimea: Feodosiya: Lisia Bay, 15.VI 2007, 1♀, AF [CFUS].

**Distribution:** Russia (CR, UR), W and S Europe, N Africa, Turkey, Kazakhstan.

### ***Megachile (Eutricharaea) marginata* SMITH, 1853**

*Megachile picicornis* (FABRICIUS): ROMASENKO 1984: 291 (Ulyanovka).

*Megachile deceptor* PÉREZ: FILATOV 2006: 113 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip). These records belong to *M. marginata*.

*Megachile picicornis* MORAWITZ: IVANOV et al. 2007: 6 (Crimea); IVANOV et al. 2009b: 211 (Karadag, Otuz valley, Lisia Bay); FATERYGA et al. 2011: 262 (Karadag, Opuk Reserve); FATERYGA et al. 2014: 86 (Tarkhankut).

*Megachile marginata* SMITH: IVANOV et al. 2007: 6 (Crimea); IVANOV et al. 2009b: 211 (Karadag).

**Material examined:** 31♀♀, 29♂♂ [CFUS], 3♀♀ [ZMMU], 4♀♀, 2♂♂ [IZAN], 30♀♀, 24♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Kipchak – Bol. Kastel, Bol. Kastel, Atlesh, Chernomorskoye; Ulyanovka (currently unknown, there are three "Ulyanovka" in Crimea); Krasnoperekopsk distr.: Sovkhoznoye; Bakhchisaray distr.: Peschanoye – Uglovoye; Simferopol distr.: Fontany; Sudak: Veseloye; Feodosiya: Mt. Echkidag – Shchebetovka, Lisya Bay, Kurortnoye, Karadag; Lenino distr.: Cape Kazantip, Cape Chauda, Zolotoye, Kurortnoye, 3.5 km SE Zavetnoye, Opuk Reserve. Sevastopol: Cape Lukull.

**Distribution:** Russia (CR), W and S Europe, N Africa, Azerbaijan, Turkey, Cyprus, Iraq, Iran, Afghanistan, Pakistan, Tajikistan, Kyrgyzstan.

**Remarks:** *Megachile picicornis* MORAWITZ, 1877 was recently synonymised with *M. marginata* (PRAZ 2017).

### ***Megachile (Eutricharaea) pilidens* ALFKEN, 1924**

*Megachile pilidens* ALFKEN: ROMASENKO 1980: 74 (Crimean Reserve); ROMASENKO 1984: 292 (Krasnoperekopsk distr., Crimean Reserve, Karadag); ROMASENKO 1995: 70 (Crimean Reserve, other territories); FILATOV 2003: 85 (Karadag); IVANOV et al. 2005a: 93 (Crimean Foothills); FILATOV 2006: 114 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV et al. 2007: 6 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 211 (Karadag, Otuzy valley, Lisya Bay); IVANOV & FATERYGA 2011: 87 (Yalta Reserve); FATERYGA et al. 2014: 86 (Tarkhankut).

**Material examined:** 238♀♀, 116♂♂ [CFUS], 11♀♀, 6♂♂ [ZMMU], 16♀♀, 15♂♂ [IZAN], 23♀♀, 20♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Kipchak, Kipchak – Bol. Kastel, Bol. Kastel, Mal. Kastel, Atlesh, Chernomorskoye, Mar'ino, Donuzlav Lake; Krasnoperekopsk distr.: Krasnoarmeyskoye, Sovkhoznoye; coast of Sivash (without details); Dzhankoy distr.: 2 km E Solenoye Ozero; Saki distr.: Frunze; Yevpatoriya: Mimyy, Yevpatoriya, Moynaki Lake, 3 km SE Yevpatoriya; Bakhchisaray distr.: Zagorskoye Reservoir, Topoli – Priyatnoye Svidaniye, Priyatnoye Svidaniye, Glubokiy Yar; Simferopol: Simferopol, Mar'ino, Khoshkeldy; Simferopol distr.: Nikolayevka, Demyanovka, Chistenkaya, Mt. Tashdzhargan, Fontany, Partizanskoye, Urozhaynoye, Gvardeyskoye, Lozovoye, Ayan, Krasnolesye; Belogorsk distr.: Zuya, Belogorsk, Belaya Skala, Krinichnoye, Karasevka; Yalta: Parkovoye, Zori Ukrainy (currently Zori Rossii), Alupka, Lastochkino Gnezdo, Yalta, Sovetskoye, Nikita, Mys Martyan Reserve, Artek; Alushta: Mt. Chatyrdag, Crimean Reserve, cordon Sadovyy, Alushta, Isobilnoye, Mt. Demerdzhi, Generalskoye, Chiginitra valley, Rybachye, Zelenogorye; Sudak: Veseloye, Mt. Karauloba, Cape Meganom; Feodosiya: Kiziltash valley – Shchebetovka, Mt. Echkidag – Shchebetovka, Otuzy (currently Shchebetovka), Lisya Bay, Kurortnoye, Karadag, Koktebel, Tikhaya Bay, Barakol Lake, Mt. Uzunsyrt, Mt. Tepeoba; Lenino distr.: Cape Kazantip, Novootradnoye, Zolotoye, Opuk Reserve; Kerch. Sevastopol: Sevastopol, Lyubimovka – airport Belbek, Kamyshovaya Bay, Cape Khersones, Cape Ayya, Laspi Bay, Batiliman, Cape Sarych, Kizilovoye, Peredovoye, Uzundzha Canyon, Morozovka, Duvankoy (currently Verkhnesadovoye), 5 km W Verkhnesadovoye, Adym-Chokrak valley.

**Distribution:** Russia (EP, NC, CR, UR), W, E and S Europe, N Africa, Georgia, Armenia, Turkey, Cyprus, Jordan, Kazakhstan.

### ***Megachile (Eutricharaea) rotundata* (FABRICIUS, 1787)**

*Megachile imbecilla* GERSTÄCKER: MORAWITZ 1870: 319 (Crimea); POPOV 1958: 112 (Crimean Mountains).

*Megachile rotundata* (FABRICIUS): ROMASENKO 1980: 74 (Crimean Reserve); ROMASENKO 1984: 293 (Crimean Reserve, Generalskoye); ROMASENKO 1995: 70 (Crimean Reserve, other territories); FILATOV 2003: 85 (Karadag); IVANOV et al. 2005a: 93 (Crimean Foothills); IVANOV et al. 2005b: 210 (Crimea); IVANOV et al. 2007: 6 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV & FATERYGA 2009: 31 (Simferopol); IVANOV et al. 2009b: 211 (Karadag, Otuzy valley); IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

**Material examined:** 38♀♀, 41♂♂ [CFUS], 1♂ [ZIN], 2♀♀, 5♂♂ [IZAN], 2♀♀, 2♂♂ [KHEO]. Republic of Crimea: Chernomorskoye distr.: Mezhvodnoye; Krasnoperekopsk distr.: Krasnoarmeyskoye; Yevpatoriya; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Demyanovka, Fontany; Yalta: Parkovoye, Artek; Alushta: Kanaka valley; Sudak; Feodosiya: Kiziltash valley – Shchebetovka, Otuzy (currently Shchebetovka), Kurortnoye, Karadag, Barakol Lake, Mt. Tepeoba; Lenino distr.: Cape Kazantip, Kurortnoye, Yakovenkovo; Kerch. Sevastopol: Cape Ayya.

**Distribution:** Russia (EP, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Cyprus, Iran, Pakistan, Turkmenistan, Kazakhstan, Mongolia, China, Japan, N America (introduced), India, S America (introduced), Australia and New Zealand (introduced).

### ***Megachile (Eutricharaea) semicircularis* auct. nec VAN DER ZANDEN, 1996**

*Megachile flabellipes* PÉREZ: FILATOV 2003: 85 (Karadag); FILATOV 2006: 114 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV et al. 2007: 6 (Crimea); IVANOV et al. 2009b: 211 (Karadag); FATERYGA et al. 2014: 85-86 (Tarkhankut). These records belong to *M. semicircularis*.

**Material examined:** 36♀♀, 16♂♂ [CFUS], 1♀ [IZAN], 15♀♀, 9♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Tarkhankut, Kipchak, Kipchak – Bol. Kastel, Bol. Kastel, Bol. Kastel – Dzhangul, Chernomorskoye, Belyaus; Krasnoperekopsk distr.: Krasnoarmeyskoye; Saki distr.: Uytunoye; Feodosiya: Mt. Echikidag, Lisy Bay, Karadag, Koktebel; Kerch Peninsula (without details); Lenino distr.: Kamenskoye – Solyanoye, L'vovo, Cape Kazantip, Opuk Reserve. Sevastopol: Duvankoy (currently Verkhnesadovoye).

**Distribution:** Russia (CR), S Europe (Greece), Turkey, Iran.

**Remarks:** The description of *M. semicircularis* by VAN DER ZANDEN clearly points to this species, however the type series is composed of several taxa and the male holotype does not belong to this species but belongs to *M. apicalis* (C. PRAZ, in litt.).

### ***Megachile (Megachile) centuncularis* (LINNAEUS, 1758)**

*Megachile centuncularis* (LINNAEUS): ROMASENKO 1984: 283 (Mt. Karabi); ROMASENKO 1995: 70 (Crimean Reserve, other territories); FILATOV 2003: 84 (Karadag); IVANOV et al. 2005a: 92 (Krasnolesye); IVANOV et al. 2005b: 210 (Crimea); FILATOV 2006: 113 (Opuk Reserve); IVANOV et al. 2007: 6 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 211 (Karadag, Otuzy valley, Lisy Bay); IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

**Material examined:** 96♀♀, 158♂♂ [CFUS], 2♀♀, 3♂♂ [ZMMU], 2♀♀, 1♂ [IZAN], 6♀♀, 10♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Mezhvodnoye; Krasnoperekopsk distr.: sovkhos Geroi Sivasha (Ishun'); Dzhanikoy; Dzhanikoy distr. (without details); Saki distr.: Mityayevo; Bakhchisaray distr.: Bakhchisaray distr. (without details), Priyatnoye Svidaniye, Glubokiy Yar, Mt. Cherdakly-Bair, Golubinka, cordon Zelenyy Gay; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Fontany, Partizanskoye, Urozhaynoye, Zhivopisnoye, Dobroye, Ayan, Perevalnoye, Krasnolesye, Mt. Pakhalkaya, riv. Suat; Belogorsk distr.: Belogorsk, Karasevka; Kirovskoye distr.: Zhuravki; Yalta: Zori Ukrainy (currently Zori Rossii), Yalta, Mt. Lapata, Uchkosh Canyon, Gruzport, Mys Martyan Reserve, Artek; Alushta: Pushkino, Mt. Chatyrdag, Kutuzovka, Angarskiy Pass, Rybachye; Sudak; Feodosiya: Kiziltash valley, Otuzy (currently Shchebetovka), Lisy Bay, Kurortnoye, Karadag; Lenino distr.: Zolotoye, Opuk Reserve. Sevastopol: Kazachya Bay, Cape Khersones, Uzundzha Canyon, Morozovka, Adym-Chokrak valley.

**Distribution:** Russia (EP, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Cyprus, Israel, Iran, Kazakhstan, China, Japan, N America, SE Asia, India.

***Megachile (Megachile) genalis* MORAWITZ, 1880**

*Megachile genalis* MORAWITZ: FILATOV 2006: 114 (Opuk Reserve); IVANOV et al. 2007: 6 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV & FATERYGA 2009: 31 (Simferopol); IVANOV et al. 2009b: 211 (Karadag); IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

**Material examined:** Republic of Crimea: Crimea (without details), 25.VII 1928, 2♂♂; Simferopol distr.: Krasnolesye, 28.VII 1978, 1♀, I. MALTSEV; Yalta: Uchkosh Canyon, 17.VII 2004, 1♂, AF; Alushta: Crimean Reserve, 18.VII 1928, 1♂ [CFUS]; Lenino distr.: Opuk Reserve, 18.VIII 2002, 1♀, MF [KHEO]. Additional nest records (without collection specimens): Feodosiya: Karadag.

**Distribution:** Russia (EP, NC, CR, WS, FE), W, E, N and S Europe, Caucasus, Turkey, Tajikistan, Kazakhstan, Mongolia, China, Japan.

***Megachile (Megachile) ligniseca* (KIRBY, 1802)**

*Megachile ligniseca* (KIRBY): ROMASENKO 1980: 74 (Crimean Reserve); ROMASENKO 1984: 288 (Crimean Reserve); ROMASENKO 1995: 70 (Crimean Reserve, other territories); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve).

**Material examined:** Republic of Crimea: Bakhchisaray distr.: cordon Svetlaya Polyana, 31.VII 1977, 1♂, L. ROMASENKO [IZAN]; Simferopol distr.: Krasnolesye, 27.VII 2004, 29.VII 2007, 3♀♀, 1♂, AF, Sosnovka (Privolnoye), 25.VII 2011, 1♀, AF; Alushta: Mt. Chatyrdag, 17.VII 2007, 1♂, AF [CFUS].

**Distribution:** Russia (EP, NC, CR, UR, WS, ES, FE), W, E, N and S Europe, Caucasus, Turkey, China, Japan.

***Megachile (Megachile) melanopyga* COSTA, 1863**

*Megachile melanopyga* COSTA: FILATOV 2003: 85 (Karadag); IVANOV et al. 2005a: 93 (Crimean Foothills); FILATOV 2006: 114 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV et al. 2007: 7 (Crimea); IVANOV et al. 2009b: 211 (Karadag, Otuzy valley, Lisy Bay); IVANOV & FATERYGA 2011: 87 (Yalta Reserve); FATERYGA et al. 2014: 86 (Tarkhankut).

**Material examined:** 35♀♀, 42♂♂ [CFUS], 5♂♂ [ZMMU], 4♀♀, 7♂♂ [IZAN], 13♀♀, 4♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Tarkhankut, Kipchak, Bol. Kastel; Yevpatoriya; Krasnogvardeyskoye distr.: Kalinino; Bakhchisaray distr.: Peschanoye, Peschanoye – Uglovoye, Kuybyshevo, Topoli – Priyatnoye Svidaniye, Priyatnoye Svidaniye; Simferopol; Simferopol distr.: Fontany, Urozhaynoye, Gvardeyskoye, Pionerskoye, Ayan, Krasnolesye; Belogorsk distr.: Belogorsk distr. (without details), Karasevka, Krasnoselovka, Belaya Skala; Kirovskoye distr.: Zhuravki; Yalta: Mt. Aypetri, Yalta, Gruzport, Nikita, Mys Martyan Reserve, Artek; Alushta: Mt. Chatyrdag, Alushta, Rybachye; Sudak: Gromovka, Cape Meganom; Feodosiya: Mt. Echkidag – Shchebetovka, Otuzy (currently Shchebetovka), Lisy Bay, Karadag, Tikhaya Bay, Barakol Lake, Mt. Uzunsyrt; Lenino distr.: Cape Kazantip, Zolotoye, Kurortnoye, Opuk Reserve. Sevastopol: Sevastopol, Cape Ayya.

**Distribution:** Russia (NC, CR, WS, ES), W, E and S Europe, Azerbaijan, Turkey, Cyprus, Jordan, Israel, China, Korea, Japan.

***Megachile (Megachile) octosignata* NYLANDER, 1852**

*Megachile octosignata* (KIRBY): ROMASENKO 1980: 74 (Crimean Reserve).

*Megachile octosignata* NYLANDER: ROMASENKO 1984: 291 (Krasnolesye, Mt. Chatyrdag, Crimean Reserve); ROMASENKO 1995: 70 (Crimean Reserve, other territories); IVANOV et al. 2005a: 93 (Krasnolesye); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258



(Crimean Reserve); IVANOV & FATERYGA 2009: 31 (Simferopol); IVANOV et al. 2009b: 211 (Karadag, Otuz valley); IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

**Material examined:** 26♀♀, 10♂♂ [CFUS], 1♀ [ZIN], 5♀♀, 1♂ [ZMMU], 9♀♀, 5♂♂ [IZAN], 1♀, 2♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chalmekli (currently unknown); Simferopol: Mar'ino; Simferopol distr.: Lozovoye, Pionerskoye, Ayan, Krasnolesye; Yalta: Mt. Aypetri, Yalta, Mt. Lapata, Sovetskoye; Alushta: Mt. Chatyrdag, cordon Sadovyy, Mt. Chuchel, Alushta, Angarskiy Pass, Mt. Demerdzhi; Sudak: Gromovka, Feodosiya: Otuz (currently Shchebetovka), Otuz – Sudak, Karadag. Sevastopol: Morozovka, Adym-Chokrak valley.

**Distribution:** Russia (CR), W, E and S Europe, Georgia, Turkey.

### ***Megachile (Megachile) pilicrus* MORAWITZ, 1877**

*Megachile pilicrus* MORAWITZ: ROMASENKO 1980: 74 (Crimean Reserve); ROMASENKO 1984: 292 (Crimean Reserve); ROMASENKO 1995: 70 (Crimean Reserve, other territories); FILATOV 2003: 85 (Karadag); IVANOV et al. 2005a: 93 (Krasnolesye); FILATOV 2006: 114 (Opuk Reserve); FILATOV et al. 2006: 260 (Cape Kazantip); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 211 (Karadag, Otuz valley, Lisy Bay); IVANOV & FATERYGA 2011: 87 (Yalta Reserve).

**Material examined:** 53♀♀, 81♂♂ [CFUS], 2♀♀ [ZMMU], 7♀♀, 1♂ [IZAN], 15♀♀, 5♂♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Bol. Kastel; Yevpatoriya: Mirnyy; Bakhchisaray distr.: Mt. Cherdakly-Bair, Kuybyshevo; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Mt. Tashdzhargan, Ayan, Krasnolesye; Belogorsk distr.: Karasevka; Yalta: Zori Ukrainy (currently Zori Rossii), Katsiveli, Gruzport, Mys Martyan Reserve; Alushta: Crimean Reserve, Alushta, Chiginitra valley; Sudak: Veseloye, Sudak; Feodosiya: Kiziltash valley, Mt. Echkidag, Mt. Echkidag – Shchebetovka, Otuz (currently Shchebetovka), Otuz – Sudak, Kinogorodok, Lisy Bay, Karadag; Lenino distr.: Cape Kazantip, Novootradnoye, Zolotoye, Kurortnoye, Opuk Reserve. Sevastopol: Cape Ayya.

**Distribution:** Russia (CR), W, E and S Europe, Georgia, Turkey, Iran, Kyrgyzstan, China.

### ***Megachile (Megachile) versicolor* SMITH, 1844**

*Megachile versicolor* SMITH: IVANOV et al. 2005a: 93 (Krasnolesye); IVANOV et al. 2005b: 210 (Crimea); FILATOV 2006: 114 (Opuk Reserve); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 211 (Karadag); IVANOV & FATERYGA 2011: 88 (Yalta Reserve).

**Material examined:** 37♀♀, 30♂♂ [CFUS], 1♂ [ZMMU], 4♀♀, 15♂♂ [IZAN], 2♀♀ [KHEO]. Republic of Crimea: Crimea (without details); Bakhchisaray distr.: Mt. Bakla, cordon Zelenyy Gay; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Partizanskoye, Ayan, Krasnolesye; Belogorsk distr.: Karasevka; Nizhnegorskiy distr.: Kostochkovka; Kirovskoye distr.: Mt. Agarmysh; Yalta: Mt. Aypetri, Mt. Lapata; Alushta: Mt. Chatyrdag, cordon Sadovyy, Alushta, Mt. Demerdzhi, Generalskoye, Rybachye; Sudak; Feodosiya: Shchebetovka, Karadag; Lenino distr.: Opuk Reserve. Sevastopol: Morozovka.

**Distribution:** Russia (EP, NC, CR, UR, WS, ES, FE), W, E, N and S Europe, Azerbaijan, Turkey, Kazakhstan, Mongolia.

### ***Megachile (Pseudomegachile) ericetorum* LEPELETIER, 1841**

*Chalicodoma ericetorum* (LEPELETIER): ROMASENKO 1995: 70 (Crimean Reserve, other territories).

*Megachile ericetorum* LEPELETIER: FILATOV 2003: 85 (Karadag); IVANOV et al. 2005a: 92 (Krasnolesye); FILATOV 2006: 114 (Opuk Reserve); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 211 (Karadag, Otuz valley, Lisy Bay); IVANOV & FATERYGA 2011: 88 (Yalta Reserve); FATERYGA et al. 2014: 86 (Tarkhankut).

**Material examined:** 33♀, 63♂ [CFUS], 2♀, 2♂ [IZAN], 4♀ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Tarkhankut, Kipchak, Donuzlav Lake; Yevpatoriya: Mirnyy; Bakhchisaray distr.: Nauchnyy, Shelkovichnoye; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Fontany, Urozhaynoye, Urozhaynoye – Molochnoye, Dobroye, Ayan, Krasnolesye, Mt. Pakhalkaya; Belogorsk distr.: Krymskaya Roza; Yalta: Mt. Aypetri, Yalta, Sovetskoye, Nikita; Alushta: Lazurnoye, Sudak highway; Feodosiya: Lisy Bay, Kurortnoye, Karadag; Lenino distr.: Mysovoye, Opuk Reserve. Sevastopol: Laspi Bay, riv. Urkusta.

**Distribution:** Russia (EP, CR, UR), W, E, N and S Europe, N Africa, Armenia, Turkey, Syria, China, N America (introduced).

### *Megachile (Xanthosarus) circumcincta* (KIRBY, 1802)

*Megachile circumcincta* (KIRBY): ROMASENKO 1980: 74 (Crimean Reserve); ROMASENKO 1984: 285 (Crimean Reserve); ROMASENKO 1995: 70 (Crimean Reserve, other territories); IVANOV et al. 2005a: 92 (Krasnolesye); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV & FATERYGA 2011: 88 (Yalta Reserve).

**Material examined:** 27♀, 34♂ [CFUS], 3♀, 2♂ [ZMMU], 12♀, 11♂ [IZAN]. Republic of Crimea: Crimea (without details); Bakhchisaray distr.: Vysokoye, cordon Zelenyy Gay; Simferopol: Simferopol distr.: Gvardeyskoye, Pionerskoye, Druzhnoye, Ayan, Krasnolesye, Mt. Pakhalkaya; Belogorsk distr.: Karasevka; Kirovskoye distr.: Staryy Krym; Yalta: Miskhor, Mt. Aypetri, Mt. Lapata, Uchkosh Canyon; Alushta: Mt. Chatyrdag, Crimean Reserve, Mt. Romankosh, Izobilnoye, Luchistoye, Generalskoye; Sudak: Mt. Tarakhtash; Lenino distr.: Cape Kazantip, Zolotoye. Sevastopol: Batiliman, Tylovoye, Orlinoye, Kizilovoye, Peredovoye, Uzundzha Canyon, Baydarskaya Yayla.

**Distribution:** Russia (EP, NC, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Iran, N America.

### *Megachile (Xanthosarus) lagopoda* (LINNAEUS, 1761)

*Megachile lagopoda* (LINNAEUS): ROMASENKO 1980: 74 (Crimean Reserve); ROMASENKO 1984: 287 (Crimean Reserve, Generalskoye, Mt. Karabi); ROMASENKO 1995: 70 (Crimean Reserve, other territories); FILATOV 2003: 85 (Karadag); IVANOV et al. 2005a: 92 (Krasnolesye); IVANOV et al. 2005b: 210 (Crimea); FILATOV 2006: 114 (Opuk Reserve); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 211 (Karadag, Otuz valley); IVANOV & FATERYGA 2011: 88 (Yalta Reserve).

**Material examined:** 70♀, 42♂ [CFUS], 2♀, 1♂ [ZIN], 4♂ [ZMMU], 32♀, 13♂ [IZAN], 5♀, 1♂ [KHEO]. Republic of Crimea: Crimea (without details); Yevpatoriya; Nizhnegorskiy distr.: Nizhnegorskiy; Bakhchisaray distr.: Skalistoye, cordon Svetlaya Polyana, riv. Pisara; Simferopol: Simferopol, Chumakarka; Simferopol distr.: Fontany, Gvardeyskoye, Dobroye, Ayan, Krasnolesye; Belogorsk distr.: Belogorsk, Alekseyevka, Krinichnoye, Karasevka, Krasnoselovka; Yalta: Mt. Aypetri, Mt. Lapata, Uchkosh Canyon, cordon Grushevaya Polyana; Alushta: Mt. Chatyrdag, Crimean Reserve, Alushta, Angarskiy Pass, Mt. Demerdzhi, Generalskoye, Mt. Karabi; Sudak: Gromovka, Veseloye; Feodosiya: Otuzy (currently Shchebetovka), Lisy Bay, Karadag, Mt. Uzunsyrt; Lenino distr.: Kurortnoye, Opuk Reserve. Sevastopol: Sevastopol.

**Distribution:** Russia (EP, NC, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Azerbaijan, Turkey, Israel, Iran, Tajikistan, Kyrgyzstan, Kazakhstan, China, Korea, Japan.

### ***Megachile (Xanthosarus) maritima* (KIRBY, 1802)**

*Megachile maritima* (KIRBY): ROMASENKO 1995: 70 (Crimean Reserve, other territories); FILATOV 2003: 85 (Karadag); IVANOV et al. 2005a: 93 (Krasnolesye); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 211 (Karadag); IVANOV & FATERYGA 2011: 88 (Yalta Reserve); FATERYGA et al. 2014: 86 (Tarkhankut).

**Material examined:** 59 ♀♀, 30 ♂♂ [CFUS], 1 ♂ [ZIN], 4 ♀♀ [IZAN], 2 ♀♀, 1 ♂ [KHEO]. Republic of Crimea: Crimea (without details); Chernomorskoye distr.: Kipchak; Yevpatoriya: Mirnyy, Yevpatoriya, Zaozernoye; Simferopol: Simferopol, Mar'ino, Chumakarka; Simferopol distr.: Fontany, Partizanskoye, Gvardeyskoye, Ayan, Krasnolesye; Belogorsk distr.: Zuya, Belogorsk, Karasevka; Yalta: Mt. Lapata; Alushta: Crimean Reserve, Kutuzovka, Mt. Demerdzhi, Generalskoye, Mt. Karabi, Chiginitra valley, Sudak highway; Sudak: Mt. Karauloba; Lenino distr.: Zolotoye, Kurortnoye; Kerch. Sevastopol: Morozovka, Duvankoy (currently Verkhnesadovoye).

**Distribution:** Russia (EP, NC, CR, ES, FE), W, E, N and S Europe, N Africa, Azerbaijan, Turkey, Iran, Kyrgyzstan, Kazakhstan, China, Korea.

### ***Megachile (Xanthosarus) willoughbiella* (KIRBY, 1802)**

*Megachile willoughbiella* (KIRBY): ROMASENKO 1980: 74 (Crimean Reserve); ROMASENKO 1984: 296 (Crimean Reserve); ROMASENKO 1995: 70 (Crimean Reserve, other territories).

*Megachile willoughbiella* (KIRBY): FILATOV 2003: 85 (Karadag); IVANOV et al. 2005a: 93 (Krasnolesye); IVANOV et al. 2007: 7 (Crimea); IVANOV & FATERYGA 2007: 258 (Crimean Reserve); IVANOV et al. 2009b: 211 (Karadag); IVANOV & FATERYGA 2011: 88 (Yalta Reserve).

**Material examined:** 22 ♀♀, 32 ♂♂ [CFUS], 1 ♂ [ZIN], 1 ♀, 8 ♂♂ [IZAN], 2 ♀♀, 1 ♂ [KHEO]. Republic of Crimea: Chernomorskoye distr.: Kipchak; Yevpatoriya: Mirnyy; Bakhchisaray distr.: Kuybyshevo; Simferopol: Simferopol, Mar'ino; Simferopol distr.: Urozhaynoye, Dobroye, Druzhnoye, Krasnolesye, Mt. Pakhalkaya, riv. Suat; Yalta: Mt. Aypetri, Yalta, Mt. Lapata, Gruzport; Alushta: Mt. Chatyrdag, Crimean Reserve, Mt. Chuchel, Mt. Demerdzhi; Feodosiya: Karadag; Lenino distr.: Kurortnoye; Kerch. Sevastopol: Cape Ayya, Peredovoye, Uzundzha Canyon, Adym-Chokrak valley.

**Distribution:** Russia (EP, NC, CR, UR, WS, ES, FE), W, E, N and S Europe, N Africa, Georgia, Turkey, Israel, Kyrgyzstan, China, Japan.

## **Discussion**

A total of 120 megachilid species of 16 genera are recognized in the fauna of Crimea; 119 of them are confirmed by the examined collection material, one species (*Hoplitis taurica*) is added due to its first description from Crimea. The number of species in the present investigation is less than one in our previous paper (IVANOV et al. 2007); ten taxa were excluded and five other ones were added.

*Hoplitis (Hoplitis) adunca* (PANZER, 1798), *Osmia (Hoplosmia) ligurica* MORAWITZ, 1868, and *O. (Helicosmia) prasina* MORAWITZ, 1875 were re-identified respectively as *H. manicata*, *O. scutellaris*, and *O. signata*; *Megachile (Eutricharaea) picicornis* MORAWITZ, 1877 was synonymised with *M. marginata* (see above). Additionally, six other species were excluded: *Trachusa (Trachusa) byssina* (PANZER, 1798) and *Chelostoma (Foveosmia) foveolatum* (MORAWITZ, 1868) initially reported by ROMASENKO (1995) and *Osmia (Pyrosmia) nana* MORAWITZ, 1874, *Megachile (Xanthosarus) fulvimana* EVERSMAAN, 1852, *M. (X.) maackii* RADOSZKOWSKI, 1874, and *M. (X.) nigriventris* SCHENCK, 1870 initially reported by IVANOV et al. (2005a).

Collection material on the species listed above was not preserved, and in our opinion identification of them was incorrect. However some of these species are widely distributed Palaearctic taxa which should be found in Crimea.

Among five species which were added in comparison with IVANOV et al. (2007), two ones had been already reported in literature: *Megachile melanogaster* (IVANOV et al. 2009b) and *Stelis aculeata* (FATERYGA et al. 2013). Two other species, *Pseudoanthidium* sp. aff. *nanum* and *P. tenellum* were singled out from *P. "lituratum"*-complex which had been not carefully studied in Crimea previously and were added in addition to *P. nanum* (= *P. lituratum* s. str.). The one remained species, *Coelioxys elsei* is reported for Crimea for the first time; it was previously known from Greece, Bulgaria, Turkey, and Jordan (SCHWARZ 2001).

Additionally, without changing the number of species, *Osmia* (*Osmia*) *emarginata* LEPELETIER, 1841 was re-identified as *O. mustelina* and *Megachile* (*Eutricharaea*) *flabellipes* PÉREZ, 1895 was re-identified as *M. semicircularis*.

The studying of megachilid-bees in the fauna of Crimea is not complete. Large areas in the north and in the central part of the peninsula are badly studied faunistically. Some species reported in the literature and not confirmed by collection specimens require further confirmation of their presence in Crimea. Type material of *Hoplitis taurica* should be found and studied to verify the species individuality. *Pseudoanthidium* sp. aff. *nanum* and *M. semicircularis* should be studied taxonomically to ascertain correct names for these two species.

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