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Corrections and additions to the list of the megachilid bees (Hymenoptera: Megachilidae) of the Crimean Peninsula

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The paper summarizes all updates relevant to the megachilid-bee fauna of the Crimea published after the previous catalogue (Fateryga et al., 2018), as well as reported as original data. *Hoplitis mollis* Tkalců, 2000, *Osmia cyanoxantha* Pérez, 1879, and *O. hellados* van der Zanden, 1984 are recorded from the Crimea for the first time while *H. turcestanica* (Dalla Torre, 1896), *O. gallarum* Spinola, 1808, and *O. versicolor* Latreille, 1811 are excluded from the Crimean list of species. Other taxonomic changes and clarifications are also reported for some species. A new checklist of the Crimean megachilid bees contains 121 species from 16 genera and five tribes.

Key words: Apiformes, biodiversity, Palaearctic region, regional checklist.

INTRODUCTION

The family Megachilidae is a large group of bees numbering more than 4 000 described species world-wide (Michener, 2007; Ascher, Pickering, 2023). A catalogue of these bees of the Crimea was published five years ago (Fateryga et al., 2018). That paper was based on a large amount of examined specimens (nearly 9 000), collected up to 2016, and an extensive critical review of all relevant literature sources, including little-known ones. As the result, 120 species were reported, for 119 of which the material was examined by the authors while one species, *Hoplitis taurica* (Radoszkowski, 1874), was added due to its description from the Crimea, although its type specimens were not examined. Ten other species, which had been reported earlier but which occurrence in the Crimea was not confirmed by voucher materials, were excluded by Fateryga et al. (2018). For each species, all localities from where it was known in the Crimea were listed in that paper. Unfortunately, a few mistakes were made and further papers, such as Fateryga et al. (2019), corrected some of them. On the other hand, records of new species for the Crimea were made after 2016 (Fateryga, 2017; Ivanov, Fateryga, 2019).

The purpose of the present contribution is to summarize all updates to the Crimean megachilid-bee fauna made after Fateryga et al. (2018), as well as to report some new data correcting the list of these bees known from the peninsula.

MATERIAL AND METHODS

The present contribution was possible by bringing together new literature records and taxonomic updates published after the previous catalogue, as well as re-examination of the material used by Fateryga et al. (2018); newly collected specimens were also studied. Voucher specimens of new records are deposited in the research collection of A. V. Fateryga, Feodosiya, Russia [CAFK] and the collection of the V. I. Vernadsky Crimean Federal University, Simferopol, Russia [CFUS]. The systematics at above-species levels are mainly based on Michener (2007) and Ascher and Pickering (2023).

RESULTS AND DISCUSSION

In comparison with the previously published paper (Fateryga et al., 2018), the identity of four species were re-evaluated, six species were added (including three new records and three species reported after 2016), and five species were excluded from the Crimean checklist (three for the first time and two based on the already published data). A subgeneric placement of six species was changed and the distribution of one species in the Crimea was corrected. As the result, a new updated checklist of the Crimean megachilid bees is presented.

Taxonomic changes and clarifications

***Pseudoanthidium* (*Pseudoanthidium*) *stigmaticorne* (Dours, 1873)** (Fig. 1A)

This species was previously reported from the Crimea as *Pseudoanthidium* sp. aff. *nanum* (Mocsáry, 1880) (Fateryga et al., 2018) and not mentioned by Proshchalykin and Fateryga (2017) for Russia due to its incomplete identification. Taxonomic revision of the *P. scapulare* complex (Litman et al., 2021) assigned the Crimean material to *P. stigmaticorne*.

Distribution. Russia (Dagestan, Crimea), Western, Southern, and Eastern Europe, North Africa, Azerbaijan, Turkey, Cyprus, Syria, Jordan, Israel, Iran, and Turkmenistan (Litman et al., 2021).

***Trachusa* (*Paraanthidium*) *integra* (Eversmann, 1852)** (Fig. 1B)

Recognised as a valid species, not as a synonym of *Trachusa interrupta* (Fabricius, 1781), according to Kasparek (2020). In the narrow sense, *T. interrupta* is a mainly Mediterranean species distributed from southern Spain and France, southern Switzerland and Austria over the Balkans to Greece and western Turkey; in the south-eastern and Eastern European countries, the distribution extends to Slovakia, Hungary, Romania, and Ukraine (Kasparek, 2020, 2022).

Distribution. Russia (south of European part, North Caucasus, Crimea), France, Albania, North Macedonia, Greece, Bulgaria and Turkey (Kasparek, 2020, 2022).

Subgeneric classification of *Coelioxys* Latreille, 1809

A comprehensive revision of the *Coelioxys* subgenera by da Rocha Filho and Packer (2016) was overlooked by Fateryga et al. (2018). According to this revision, *Coelioxys elongatus* Lepeletier de Saint-Fargeau, 1841, *C. inermis* (Kirby, 1802), and *C. mandibularis* Nylander, 1848 should be placed in the subgenus *Paracoelioxys* Gribodo, 1884, *C. aurolimbatus* Förster, 1853 and *C. rufescens* Lepeletier de Saint-Fargeau & Audinet-Serville, 1825 should be placed in the subgenus *Rozeniana* da Rocha Filho, 2016, and *C. conoideus* (Illiger, 1806) should be placed in the monotypic subgenus *Melissoctonia* da Rocha Filho, 2016.

***Megachile* (*Chalicodoma*) *albocristata* Smith, 1853** (Fig. 1C)

This name replaces the use of *Megachile lefebvrei* (Lepeletier de Saint-Fargeau, 1841) sensu lato (Proshchalykin, Fateryga, 2017 and references therein; Fateryga et al., 2018). In the narrow sense, *M. lefebvrei* is present in northern Africa and on the Iberian Peninsula, and possibly in southern France (Ghisbain et al., 2023). Specimens from Russia were re-identified as *M. albocristata* by Fateryga and Proshchalykin (2020). The taxonomy of this species complex, known as the *M. lefebvrei* group and including *M. lefebvrei*, *M. albocristata*, as well as *M. hungarica* Mocsáry, 1877, *M. lucidifrons* Ferton, 1905, and *M. roeweri* (Alfken, 1927), requires further investigation (Ghisbain et al., 2023).

Distribution. Russia (North Caucasus, Crimea), south-eastern Europe, Georgia, Azerbaijan, Turkey, and Iran (Fateryga, Proshchalykin, 2020; Maharramov et al., 2021; Ghisbain et al., 2023).

***Megachile* (*Eutricharaea*) *argentata* (Fabricius, 1793)**

This species was confirmed as a senior synonym of the widespread species *Megachile pilidens* Alfken, 1924 (Praz, Bénon, 2023; Ghisbain et al., 2023).

Fig. 1. Some species of megachilid bees recently reported from the Crimea
A – male of *Pseudoanthidium stigmaticorne* (Dours, 1873) on inflorescence of *Thymus tauricus* Klokov & Des.-Shost.; B – female of *Trachusa integra* (Eversmann, 1852) on inflorescence of *Lomelosia argentea* (L.) Greuter & Burdet; C – male of *Megachile albocristata* Smith, 1853 on inflorescence of *Centaurea vankovii* Klokov; D – female of *Megachile sculpturalis* Smith, 1853 at flowers of *Styphnolobium japonicum* (L.) Schott. Photographs by A.V. Fateryga (A and C) and S.P. Ivanov (B and D).

Distribution. Russia (European part, Urals, Western Siberia), Western, Southern, and Eastern Europe, North Africa, Georgia, Armenia, Azerbaijan, Turkey, ?Cyprus, Jordan, Israel, Iran, and Kazakhstan (Maharramov et al., 2021; Praz, Bénon, 2023).

***Megachile* (*Megachile*) *genalis* Morawitz, 1880**

Re-investigation of the material from the Crimea revealed that most records of this species by Fateryga et al. (2018) were based on a misidentification of another species, *Megachile ligniseca* (Kirby, 1802). Only the female specimen collected from the Opuk Reserve on 18.VIII.2002 undoubtedly belonged to *M. genalis*. Photographs of this specimen kindly provided by M. A. Filatov were re-examined to confirm its identification.

Distribution. Russia (European part, Western Siberia, Far East), Western, Southern, and Eastern Europe, Caucasus, Turkey, Tajikistan, Kyrgyzstan, Kazakhstan, Mongolia, China (Xinjiang), and Japan (Proshchalykin, Fateryga, 2017; Ascher, Pickering, 2023).

Species recorded in the Crimea after 2016

***Hoplitis* (*Alcidamea*) *fulva* (Eversmann, 1852)**

First reported from the Crimea by Fateryga (2017). This record was made after the submission of the previously published Crimean catalogue (Fateryga et al., 2018) in 2017 and therefore not included in that paper.

Distribution. Russia (east of European part, Crimea, Urals), Eastern Europe, Armenia, Azerbaijan, Turkey, Syria, Jordan, Kazakhstan, Mongolia, and China (Proshchalykin, Fateryga, 2017; Proshchalykin, Müller, 2019; Müller, 2023).

***Hoplitis* (*Hoplitis*) *carinata* (Stanek, 1969)**

First reported from the Crimea by Fateryga et al. (2019). This species was previously misidentified in the Crimean fauna as *Hoplitis ravouxi* (Pérez, 1902) (see below).

Distribution. Russia (Crimea), Greece, Croatia, North Macedonia, Bulgaria, Armenia, Azerbaijan, Turkey, Syria, Jordan, and Iran (Fateryga et al., 2019; Müller, 2023).

***Megachile* (*Callomegachile*) *sculpturalis* Smith, 1853** (Fig. 1D)

First reported from the Crimea by Ivanov and Fateryga (2019) as an invasive species distributed in the peninsula since 2018.

Distribution. China (including Taiwan), Korean Peninsula, and Japan; introduced into USA, Canada, Russia (Crimea), Switzerland, Lichtenstein, Germany, Austria, Spain, France, Italy, Slovenia, Serbia, Croatia, Bosnia and Herzegovina, Hungary, Ukraine, and India (Ivanov, Fateryga, 2019; Sardar et al., 2021; Lanner et al., 2022; Mulenko et al., 2022).

New species for the Crimea

***Hoplitis* (*Alcidamea*) *mollis* Tkalců, 2000**

Material examined (new records). CRIMEA: Saki District, Uyutnoye, 31.V.1949, on *Onobrychis* sp., 1 ♀ [CFUS]; vicinity of Feodosiya, Lisya Bay, 4.VI.2008, 1 ♀, leg. S. Ivanov [CAFK]; Tarkhankut Peninsula, Kipchak, 1.VI.2012, 2 ♀, leg. V. Zhidkov [CFUS]; Karadag Reserve, 2013, 1 ♀, leg. M. Filatov [CFUS]. DONETSK PEOPLE'S REPUBLIC: Donetsk Region, from nest, 4.V.2009, 1 ♂, leg. E. Brustilo [CAFK]; ibid., from nest, VI.2009, 1 ♀, leg. E. Brustilo [CFUS]. These specimens were previously misidentified by Fateryga et al. (2018) as *Hoplitis caularis* (Morawitz, 1875), which was considered a senior synonym of *H. turcestanica* (Dalla Torre, 1896) (Ungricht et al., 2008, see also below). Then, *H. turcestanica* was restituted as a valid species by Fateryga and Proshchalykin (2020) but the specimens from the Crimea and Donetsk Region were treated as belonging to this species by a mistake (see below).

Distribution. Russia (Crimea, Donetsk People's Republic), Bulgaria, Azerbaijan, Turkey, Syria, Jordan, Uzbekistan, Kyrgyzstan, and Kazakhstan (Müller, 2023).

***Osmia* (*Pyrosmia*) *cyanoxantha* Pérez, 1879**

Material examined (new record). CRIMEA: Sudak, Mt. Taraktash, 22.V.2004, 2 ♂, leg. S. Ivanov [CAFK, CFUS]; vicinity of Feodosiya, Lisya Bay, 15.V.2013, 1 ♂, leg. A. Fateryga [CAFK]. These specimens were previously misidentified by Fateryga et al. (2018) as another species, *Osmia gallarum* Spinola, 1808 (see below).

Distribution. Russia (Dagestan, Crimea), Western, Southern, and Eastern Europe, North Africa, Armenia, Azerbaijan, Turkey, Cyprus, Syria, Jordan, Israel, and Iran (Fateryga, Proshchalykin, 2020; Müller, 2023).

***Osmia* (*Pyrosmia*) *hellados* van der Zanden, 1984**

Material examined (new record). CRIMEA: Sevastopol, vicinity of Chernorechye, 8.V.1997, 1 ♂, leg. V. Kholodov [CFUS]; ibid., 13.V.1997, 1 ♂, leg. V. Kholodov [CFUS]; Foros, 1.V.2002, 1 ♂, leg. M. Filatov [CFUS]; vicinity of Feodosiya, Lisya Bay, 17.VI.1995, 1 ♀, leg. S. Ivanov

[CFUS]; ibid., 44°53′54″N, 35°09′28″E, 5.V.2023, 1 ♀, leg. A. Fateryga [CAFK]; Karadag Reserve, 1.VI.2008, 1 ♂, leg. A. Fateryga [CAFK]; Karadag Reserve, Karadag Valley, 30.V.2012, 1 ♀, leg. S. Ivanov [CAFK]. Most female specimens listed above (except one collected in 2023) were previously misidentified by Fateryga et al. (2018) as another species, *Osmia gallarum*, while all male specimens were previously misidentified as *O. versicolor* Latreille, 1811 (see below). Females of *O. hellados* cannot be distinguished from those of *O. gallarum* (A. Müller, personal communication) but they were assigned to this species based on the males of *O. hellados* recorded from the Crimea and the absence of males of *O. gallarum* collected from the peninsula.

Distribution. Russia (Crimea), Southern and Eastern Europe, Georgia, Azerbaijan, Turkey, Cyprus, Jordan, and Israel (Müller, 2023).

Species to be excluded from the Crimean checklist

***Hoplitis* (*Alcidamea*) *turcestanica* (Dalla Torre, 1896)**

This species was reported by Fateryga et al. (2018) as *Hoplitis caularis*. Although, *H. turcestanica* and *H. caularis* are indeed two very different species (Fateryga, Proshchalykin, 2020), both are apparently not distributed in Russia. The material from the Crimea and Donetsk People's Republic belong to *H. mollis* (see above), while specimens from the Astrakhan Province mentioned by Fateryga and Proshchalykin (2020) belong to an apparently undescribed species (A. Müller, personal communication). *Hoplitis caularis* is absent from both Russia and Europe (Ghisbain et al., 2023; Müller, 2023) and the same is probably true for *H. turcestanica* as well.

Distribution. *Hoplitis turcestanica* is confirmed to Turkmenistan, Tajikistan, Kyrgyzstan, and Kazakhstan, while *H. caularis* is known from Kazakhstan (Müller, 2023). The records of both species from Turkey, Syria, Uzbekistan, and China require confirmation, as are the records of *H. turcestanica* from the North Caucasus and Urals mentioned by Proshchalykin and Fateryga (2017) and Fateryga and Proshchalykin (2020).

***Hoplitis* (*Anthocopa*) *taurica* (Radoszkowski, 1874)**

Pseudosmia taurica Radoszkowski, 1874 is considered to be a nomen dubium by Müller (2023) based on the poor description and the unavailabity of the type material.

***Hoplitis* (*Hoplitis*) *ravouxi* (Pérez, 1902)**

The report of this species from the Crimea by Fateryga et al. (2018) was based on a misidentification of *Hoplitis carinata* (Fateryga et al., 2019, see also above).

Distribution. *Hoplitis ravouxi* is distributed in Western, Southern, and Eastern Europe (Müller, 2023).

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

The report of this species from the Crimea by Fateryga et al. (2018) was based on misidentifications of females of *Osmia hellados* and males of *O. cyanoxantha* (see above).

Distribution. *Osmia gallarum* is distributed in Western, Southern, and Eastern Europe, North Africa, and Turkey (Müller, 2023).

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

The report of this species from the Crimea by Fateryga et al. (2018) was based on misidentifications: re-examination of the female specimens reported as *Osmia versicolor* revealed that all of them actually belonged to another species, *O. viridana* Morawitz, 1873, while male specimens belonged to *O. hellados* (see above).

Distribution. *Osmia versicolor* is distributed in Russia (Dagestan), Western, Southern, and Eastern Europe, North Africa, Georgia, Azerbaijan, Turkey, Syria, Jordan, Lebanon, and Israel (Fateryga, Proshchalykin, 2020; Müller, 2023).

Updated checklist of the Crimean megachilid bees

Family Megachilidae Latreille, 1802
Subfamily Megachilinae Latreille, 1802
Tribe Lithurgini Newman, 1834

Genus *Lithurgus* Berthold, 1827
Lithurgus chrysurus Fonscolombe, 1834
Lithurgus cornutus (Fabricius, 1787)

Tribe Anthidiini Ashmead, 1899

Genus *Anthidiellum* Cockerell, 1904
Anthidiellum (*Anthidiellum*) *strigatum* (Panzer, 1805)

Genus *Anthidium* Fabricius, 1804
Anthidium (*Anthidium*) *cingulatum* Latreille, 1809
Anthidium (*Anthidium*) *diadema* Latreille, 1809
Anthidium (*Anthidium*) *florentinum* (Fabricius, 1775)
Anthidium (*Anthidium*) *loti* Perris, 1852
Anthidium (*Anthidium*) *manicatum* (Linnaeus, 1758)
Anthidium (*Anthidium*) *montanum* Morawitz, 1865
Anthidium (*Anthidium*) *septemspinosum* Lepeletier de Saint-Fargeau, 1841
Anthidium (*Proanthidium*) *oblongatum* (Illiger, 1806)

Genus *Icteranthidium* Michener, 1948
Icteranthidium grohmanni (Spinola, 1838)
Icteranthidium laterale (Latreille, 1809)

Genus *Pseudoanthidium* Friese, 1898
Pseudoanthidium (*Pseudoanthidium*) *nanum* (Mocsáry, 1880)
Pseudoanthidium (*Pseudoanthidium*) *stigmaticorne* (Dours, 1873)
Pseudoanthidium (*Pseudoanthidium*) *tenellum* (Mocsáry, 1880)
Pseudoanthidium (*Royanthidium*) *reticulatum* (Mocsáry, 1884)

Genus *Stelis* Panzer, 1806
Stelis (*Heterostelis*) *annulata* (Lepeletier de Saint-Fargeau, 1841)
Stelis (*Protostelis*) *signata* (Latreille, 1809)
Stelis (*Stelidomorpha*) *nasuta* (Latreille, 1809)
Stelis (*Stelis*) *aculeata* Morawitz, 1880
Stelis (*Stelis*) *breviuscula* (Nylander, 1848)
Stelis (*Stelis*) *odontopyga* Noskiewicz, 1926
Stelis (*Stelis*) *ornatula* (Klug, 1807)
Stelis (*Stelis*) *phaeoptera* (Kirby, 1802)
Stelis (*Stelis*) *punctulatissima* (Kirby, 1802)
Stelis (*Stelis*) *simillima* Morawitz, 1875

Genus *Trachusa* Panzer, 1804
Trachusa (*Archianthidium*) *pubescens* (Morawitz, 1872)
Trachusa (*Paraanthidium*) *integra* (Eversmann, 1852)

Tribe Dioxyini Cockerell, 1902

Genus *Aglaoapis* Cameron, 1901
Aglaoapis tridentata (Nylander, 1848)

Genus *Dioxys* Lepeletier de Saint-Fargeau & Audinet-Serville, 1825
Dioxys cinctus (Jurine, 1807)

Tribe Osmiini Newman, 1834

Genus *Chelostoma* Latreille, 1809
Chelostoma (*Chelostoma*) *florisomne* (Linnaeus, 1758)
Chelostoma (*Chelostoma*) *mocsaryi* Schletterer, 1889
Chelostoma (*Foveosmia*) *campanularum* (Kirby, 1802)
Chelostoma (*Foveosmia*) *distinctum* (Stöckhert, 1929)
Chelostoma (*Gyrodromella*) *rapunculi* (Lepeletier de Saint-Fargeau, 1841)

Genus *Heriades* Spinola, 1808
Heriades (*Heriades*) *crenulata* Nylander, 1856
Heriades (*Heriades*) *rubicola* Pérez, 1890
Heriades (*Heriades*) *truncorum* (Linnaeus, 1758)

Genus *Hoplitis* Klug, 1807
Hoplitis (*Alcidamea*) *acuticornis* (Dufour & Perris, 1840)
Hoplitis (*Alcidamea*) *claviventris* (Thomson, 1872)
Hoplitis (*Alcidamea*) *fulva* (Eversmann, 1852)
Hoplitis (*Alcidamea*) *leucomelana* (Kirby, 1802)
Hoplitis (*Alcidamea*) *mitis* (Nylander, 1852)
Hoplitis (*Alcidamea*) *mollis* Tkalců, 2000
Hoplitis (*Alcidamea*) *praestans* (Morawitz, 1893)
Hoplitis (*Alcidamea*) *princeps* (Morawitz, 1872)
Hoplitis (*Alcidamea*) *tridentata* (Dufour & Perris, 1840)
Hoplitis (*Anthocopa*) *jakovlevi* (Radoszkowski, 1874)
Hoplitis (*Anthocopa*) *mocsaryi* (Friese, 1895)
Hoplitis (*Anthocopa*) *papaveris* (Latreille, 1799)
Hoplitis (*Hoplitis*) *anthocopoides* (Schenck, 1853)
Hoplitis (*Hoplitis*) *carinata* (Stanek, 1969)
Hoplitis (*Hoplitis*) *manicata* Morice, 1901

Genus *Osmia* Panzer, 1806
Osmia (*Allosmia*) *rufohirta* Latreille, 1811
Osmia (*Erythrosmia*) *andrenoides* Spinola, 1808
Osmia (*Helicosmia*) *aurulenta* (Panzer, 1799)
Osmia (*Helicosmia*) *caerulescens* (Linnaeus, 1758)
Osmia (*Helicosmia*) *dimidiata* Morawitz, 1870
Osmia (*Helicosmia*) *leaiana* (Kirby, 1802)
Osmia (*Helicosmia*) *melanogaster* Spinola, 1808
Osmia (*Helicosmia*) *niveata* (Fabricius, 1804)
Osmia (*Helicosmia*) *signata* Erichson, 1835
Osmia (*Hoplosmia*) *bidentata* Morawitz, 1875
Osmia (*Hoplosmia*) *scutellaris* Morawitz, 1868
Osmia (*Hoplosmia*) *spinulosa* (Kirby, 1802)
Osmia (*Metallinella*) *brevicornis* (Fabricius, 1798)

Osmia (*Osmia*) *bicornis* (Linnaeus, 1758)
Osmia (*Osmia*) *cerinthidis* Morawitz, 1876
Osmia (*Osmia*) *cornuta* (Latreille, 1805)
Osmia (*Osmia*) *mustelina* Gerstäcker, 1869
Osmia (*Pyrosmia*) *cephalotes* Morawitz, 1870
Osmia (*Pyrosmia*) *cyanoxantha* Pérez, 1879
Osmia (*Pyrosmia*) *hellados* van der Zanden, 1984
Osmia (*Pyrosmia*) *submicans* Morawitz, 1870
Osmia (*Pyrosmia*) *viridana* Morawitz, 1873
Osmia (*Tergosmia*) *tergestensis* Ducke, 1897

Genus *Protosmia* Ducke, 1900
Protosmia (*Protosmia*) *tauricola* Popov, 1961
Protosmia (*Protosmia*) *tiflensis* (Morawitz, 1876)

Tribe Megachilini Latreille, 1802

Genus *Coelioxys* Latreille, 1809
Coelioxys (*Allocoelioxys*) *afer* Lepeletier de Saint-Fargeau, 1841
Coelioxys (*Allocoelioxys*) *brevis* Eversmann, 1852
Coelioxys (*Allocoelioxys*) *caudatus* Spinola, 1838
Coelioxys (*Allocoelioxys*) *echinatus* Förster, 1853
Coelioxys (*Allocoelioxys*) *elsei* Schwarz, 2001
Coelioxys (*Allocoelioxys*) *emarginatus* Förster, 1853
Coelioxys (*Allocoelioxys*) *haemorrhoa* Förster, 1853
Coelioxys (*Allocoelioxys*) *obtusus* Pérez, 1884
Coelioxys (*Allocoelioxys*) *polycentris* Förster, 1853
Coelioxys (*Coelioxys*) *quadridentatus* (Linnaeus, 1758)
Coelioxys (*Melissoctonia*) *conoideus* (Illiger, 1806)
Coelioxys (*Paracoelioxys*) *elongatus* Lepeletier de Saint-Fargeau, 1841
Coelioxys (*Paracoelioxys*) *inermis* (Kirby, 1802)
Coelioxys (*Paracoelioxys*) *mandibularis* Nylander, 1848
Coelioxys (*Rozeniana*) *aurolimbatus* Förster, 1853
Coelioxys (*Rozeniana*) *rufescens* Lepeletier de Saint-Fargeau & Audinet-Serville, 1825

Genus *Megachile* Latreille, 1802
Megachile (*Callomegachile*) *sculpturalis* Smith, 1853
Megachile (*Chalicodoma*) *albocristata* Smith, 1853
Megachile (*Chalicodoma*) *parietina* (Geoffroy, 1785)
Megachile (*Creightonella*) *albisecta* (Klug, 1817)
Megachile (*Eutricharaea*) *apicalis* Spinola, 1808
Megachile (*Eutricharaea*) *argentata* (Fabricius, 1793)
Megachile (*Eutricharaea*) *deceptoria* Pérez, 1890
Megachile (*Eutricharaea*) *giraudi* Gerstäcker, 1869
Megachile (*Eutricharaea*) *leachella* Curtis, 1828
Megachile (*Eutricharaea*) *leucomalla* Gerstäcker, 1869
Megachile (*Eutricharaea*) *marginata* Smith, 1853
Megachile (*Eutricharaea*) *melanogaster* Eversmann, 1852
Megachile (*Eutricharaea*) *rotundata* (Fabricius, 1787)
Megachile (*Eutricharaea*) *semicircularis* auct. nec van der Zanden, 1996
Megachile (*Megachile*) *centuncularis* (Linnaeus, 1758)
Megachile (*Megachile*) *genalis* Morawitz, 1880
Megachile (*Megachile*) *ligniseca* (Kirby, 1802)

Megachile (*Megachile*) *melanopyga* Costa, 1863
Megachile (*Megachile*) *octosignata* Nylander, 1852
Megachile (*Megachile*) *pilicrus* Morawitz, 1877
Megachile (*Megachile*) *versicolor* Smith, 1844
Megachile (*Pseudomegachile*) *ericetorum* Lepeletier de Saint-Fargeau, 1841
Megachile (*Xanthosarus*) *circumcincta* (Kirby, 1802)
Megachile (*Xanthosarus*) *lagopoda* (Linnaeus, 1761)
Megachile (*Xanthosarus*) *maritima* (Kirby, 1802)
Megachile (*Xanthosarus*) *willughbiella* (Kirby, 1802)

CONCLUSION

A total of 121 species of megachilid bees from 16 genera and five tribes are currently known from the Crimea.

Andreas Müller (ETH Zurich, Switzerland) kindly identified some specimens of the osmiine bees used in the present study.

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Фатерыга А. В., Иванов С. П. Исправления и дополнения к списку пчел-мегахилид (Hymenoptera: Megachilidae) Крымского полуострова // Экосистемы. 2023. Вып. 36. С. 56–65.

В работе обобщены все сведения, касающиеся пчел-мегахилид фауны Крыма, опубликованные после предыдущего каталога (Fateryga et al., 2018), а также представленные в качестве оригинальных материалов. Впервые для Крыма отмечены *Hoplitis mollis* Tkalců, 2000, *Osmia cyanoxantha* Pérez, 1879 и *O. hellados* van der Zanden, 1984, в то время как *H. turcestanica* (Dalla Torre, 1896), *O. gallarum* Spinola, 1808 и *O. versicolor* Latreille, 1811 исключены из списка крымских видов. Приведены также таксономические изменения и уточнения по некоторым видам. Новый чеклист пчел-мегахилид Крыма насчитывает 121 вид из 16 родов и пяти триб.

Ключевые слова: биоразнообразие, Палеарктика, пчелы, региональный чеклист.

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