Труды Русского энтомологического общества. С.-Петербург, 2017. Т. 88(2): 86–90.
Proceedings of the Russian Entomological Society. St Petersburg, 2017. Vol. 88(2): 86–90.

New data on megachilid bees (Hymenoptera: Megachilidae) of the European part of Russia

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Новые данные о пчелах-мегахилидах (Hymenoptera: Megachilidae) европейской части России

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Abstract. New data on distribution of 15 species of megachilid bees are given. *Pseudoanthidium melanurum* (Klug, 1832) is recorded from Russia for the first time; *Hoplitis fulva* (Eversmann, 1852) is newly recorded from Crimea; 13 species are found in the North Caucasus for the first time. Eight species listed for the European part of Russia in the "Fauna Europaea" Internet database must be excluded from the Russian fauna.

Key words. Fauna, distribution, North Caucasus, Crimea.

Резюме. Приводятся новые данные о распространении 15 видов пчел-мегахилид. *Pseudoanthidium melanurum* (Klug, 1832) впервые отмечен для фауны России, а *Hoplitis fulva* (Eversmann, 1852) – для Крыма; 13 видов указываются впервые для Северного Кавказа. Восемь видов, указанных для фауны европейской части России в электронной базе «Fauna Europaea», должны быть исключены из нее.

Ключевые слова. Фауна, распространение, Северный Кавказ, Крым.

Introduction

The present contribution is made within the framework of the preparation of "Annotated catalogue of Hymenoptera of Russia" in which the author takes part in the chapter on the bee family Megachilidae. More than 190 species of these bees are known in the Russian fauna (Proshchalykin, Astafurova, 2017) which are either described from Russia or confirmed by collection specimens. Some other species reports, especially represented in the Internet databases, require further confirmation. At the same time, new species records are expected in the southern regions of Russia (North Caucasus and Crimea). The bees of the North Caucasus are poor studied (Proshchalykin, Astafurova, 2017). For Crimea, however, the comprehensive faunistic paper on Megachilidae has been already submitted for publication (Fateryga et al., 2018).

The present paper adds one species of megachilid bees new for Russia, another one new for Crimea, and 13 species new for the North Caucasus. Additionally, eight species listed for the European Russia in the "Fauna Europaea" Internet database are excluded from the Russian fauna. Complete list of the family Megachilidae recorded in the fauna of Russia will be published in the "Annotated catalogue of Hymenoptera of Russia".

Material and methods

The material for the present study was collected mainly in 2017 by the author and colleagues. It is deposited in the collection of the Taurida Academy of the V.I. Vernadsky Crimean Federal University, Simferopol, Russia (formerly V.I. Vernadsky Taurida National University) (CFUS) and in private collection of I.B. Popov, Krasnodar, Russia (CIPK). The distribution of species is given mainly according to Banaszak and Romasenko (2001), Kuhlmann et al. (2015), Ascher and Pickering (2017) and Müller (2017). The abbreviations of the regions of Russia (in distribution sections) are as follows: EP – European part (without the North Caucasus and Crimea); NC – North Caucasus; CR – Crimea; UR – Ural; WS – Western Siberia; ES – Eastern Siberia; FE – Far East. New records are asterisked (*). The North Caucasus region includes Krasnodar and Stavropol Territories, and the republics of Adygea, Karachay-Cherkessia, Kabardino-Balkaria, North Ossetia-Alania, Ingushetia, Chechnya and Dagestan.

Results

Anthidium (*Anthidium*) *punctatum* Latreille, 1809

Material examined. Russia: Dagestan, Derbent District, valley of Kamyshchay River, 41.908° N 48.233° E, 11.VI.2017 (M. Mokrousov), 1 ♂ (CFUS).

Distribution. Russia (EP, *NC, UR, WS, ES, FE). – Europe, North Africa, Azerbaijan, Turkey, Syria, Israel, Iran, Uzbekistan, Kyrgyzstan, Kazakhstan, China.

Icteranthidium grohmanni (Spinola, 1838)

Material examined. Russia: Dagestan, Magaramkent District, Samur Reserve, 41.86° N 48.55° E, 5.VI.2017 (M. Mokrousov), 1 ♀, 1 ♂ (CFUS).

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

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

Material examined. Russia: Krasnodar Terr., Gelendzhyk, khutor Dzhankhot, pine forest, 10.VI.2017 (A. Fateryga), 1 ♀, (CFUS).

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

Remarks. This species is very common but its records from the North Caucasus were not documented previously.

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

Material examined. Russia: Crimea, Arabat Spit, Kamenskoye – Solyanoye, on Teucrium chamaedrys, 23.VI.2017 (A. Fateryga), 1 ♀, 3 ♂; ibid., on Linaria genistifolia, 23.VII.2017 (A. Fateryga), 1 ♀ (CFUS).

Distribution. Russia (EP, *CR, UR, ES). – E Europe, Armenia, Azerbaijan, Turkey, Syria, Jordan, Kazakhstan, Mongolia, China.

Remarks. Females of this species collected pollen from flowers of Teucrium chamaedrys L. (Fig. 1) along with the males feeding on them (Fig. 2). The female recorded on Linaria genistifolia (L.) Mill. were without pollen in the scopa, and it was caught when T. chamaedrys was already withered.

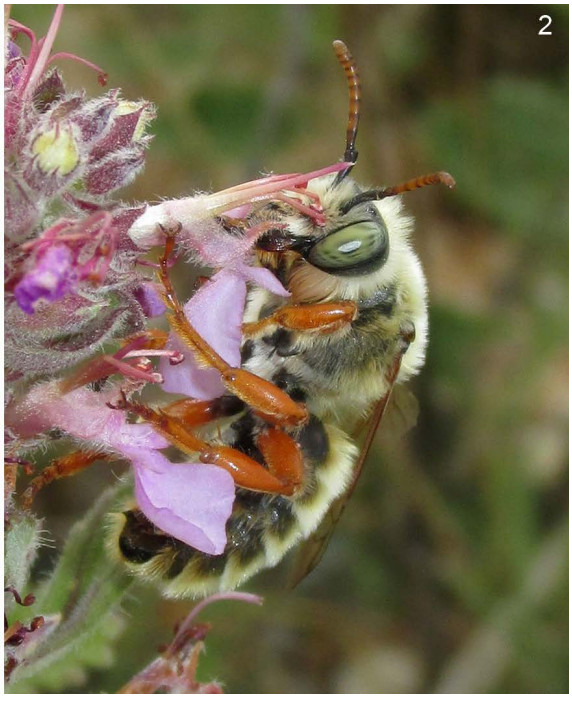
Hoplitis (*Anthocopa*) *mocsaryi* (Friese, 1895)

Material examined. Russia: Krasnodar Terr., Anapa, Supsekh, Mt. Lysaya, 8.VI.2017, on Linum lanuginosum (A. Fateryga), 2 ♀, 1 ♂ (CFUS).

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

Megachile (*Eutricharaea*) *leachella* Curtis, 1828

Material examined. Russia: Krasnodar Terr., Anapa, vicinity of Vityazevo, on Glycyrrhiza glabra, 7.VI.2017 (A. Fateryga), 6 ♂; Dagestan, Magaramkent District, Samur Reserve, 41.86° N, 48.55° E, 5.VI.2017 (M. Mokrousov), 1 ♂ (CFUS).



Figures 1 – 2. Female (1) and male (2) of *Hoplitis fulva* (Eversmann) on flowers of Teucrium chamaedrys.

Distribution. Russia (EP, *NC, CR, UR, WS, ES, FE). – Europe, North Africa, Georgia, Azerbaijan, Turkey, Iran, China.

Remarks. This species is very common but its records from the North Caucasus were not documented previously.

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

Material examined. Russia: Krasnodar Terr., Anapa, Supsekh, Mt. Lysaya, 8.VI.2017 (A. Fateryga), 1 ♂ (CFUS); Krasnodar Terr., Krasnodar, stanitsa Elizavetinskaya, 22.VII.2017 (I. Popov), 1 ♀, 1 ♂ (CIPK).

Distribution. Russia (EP, *NC, CR, UR, WS, ES, FE). – Europe, North Africa, Georgia, Azerbaijan, Turkey, Cyprus, Iran, Pakistan, Turkmenistan, Kazakhstan, Mongolia, China, Japan; India; introduced in North and South America, Australia and New Zealand.

Remarks. This species is very common but its records from the North Caucasus were not documented previously.

***Osmia* (*Allosmia*) *rufohirta* Latreille, 1811**

Material examined. Russia: Krasnodar Terr., Anapa, Supsekh, Mt. Lysaya, 8.VI.2017, on Hedysarum tauricum (A. Fateryga), 3 ♀ (CFUS).

Distribution. Russia (*NC, CR). – W, E and S Europe, North Africa, Georgia, Armenia, Turkey, Syria, Jordan, Israel, Iran, China.

Remarks. This species is very common but its records from the North Caucasus were not documented previously.

***Osmia* (*Erythrosmia*) *andrenoides* Spinola, 1808**

Material examined. Russia: Krasnodar Terr., Anapa, Supsekh, Mt. Lysaya, 8.VI.2017 (A. Fateryga), 1 ♀; Krasnodar Terr., Gelendzhyk, khutor Dzhankhot, pine forest, 10.VI.2017 (A. Fateryga), 1 ♀; Dagestan, 5 km SW Magaramkent, 41.573° N 48.247° E, 10.VI.2017 (M. Mokrousov), 1 ♀ (CFUS).

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

Remarks. This species is very common but its records from the North Caucasus were not documented previously.

***Osmia* (*Helicosmia*) *aurulenta* (Panzer, 1799)**

Material examined. Russia: Krasnodar Terr., Anapa, Supsekh, Mt. Lysaya, 8.VI.2017, 1 ♀, (A. Fateryga); ibid., on Hedysarum tauricum, 8.VI.2017 (A. Fateryga), 1 ♀ (CFUS).

Distribution. Russia (EP, *NC, CR). – Europe, Caucasus, Turkey, Lebanon, Iran.

Remarks. This species is very common but its records from the North Caucasus were not documented previously.

***Osmia* (*Helicosmia*) *dimidiata* Morawitz, 1870**

Material examined. Russia: Krasnodar Terr., Temryuk District, Taman' Peninsula, vicinity of Priazovskiy, steppe, coast of the Azov Sea, 12.VI.2011 (I. Popov), 2 ♀ (CIPK).

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

Remarks. This species was described from the Caucasus without details on the locality (Morawitz, 1870); its records from the North Caucasus were not documented previously.

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

Material examined. Russia: Krasnodar Terr., Anapa, vicinity of Bolshoy Utrish, juniper forest, 9.VI.2017 (A. Fateryga), 4 ♀; Krasnodar Terr., Gelendzhyk, khutor Dzhankhot, pine forest, 10.VI.2017 (A. Fateryga), 1 ♀, 1 ♂ (CFUS).

Distribution. Russia (*NC, CR). – E and S Europe, Caucasus, Turkey, Cyprus, Syria, Jordan, Israel, Iran, Turkmenistan, Uzbekistan.

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

Material examined. Russia: Krasnodar Terr., Gelendzhyk, khutor Dzhankhot, on Vicia villosa, 10.VI.2017 (A. Fateryga), 1 ♀ (CFUS).

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

***Pseudoanthidium* (*Royanthidium*) *melanurum* (Klug, 1832)**

Material examined. Russia: Krasnodar Terr., Novorossiysk, Verkhnebakanskiy, 5.VII.2012 (I. Popov), 1 ♀, 1 ♂ (CFUS).

Distribution. *Russia (NC). – W, E and S Europe, N Africa, Georgia, Azerbaijan, Turkey, Syria, Lebanon, Israel, Iran.

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

Material examined. Russia: Krasnodar Terr., Anapa, vicinity of Vityazevo, 7.VI.2017, on Glycyrrhiza glabra (A. Fateryga), 1 ♂; Dagestan, Kumtorkalinskiy District, Barkhan Sarykum, 43.01° N, 47.237° E, 31.V.2017 (M. Mokrousov), 1 ♂ (CFUS).

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

Corrections

The following species of megachilid bees listed in the "Fauna Europaea" Internet database (Polaszek, 2013) must be excluded from the fauna of Russia: *Chelostoma* (*Chelostoma*) *grande* (Nylander, 1852), *Coelioxys* (*Allocoelioxys*) *acanthura* (Illiger, 1806), *C.* (*Mesocoelioxys*) *argenteus* Lepeletier de Saint-Fargeau, 1841, *Hoplitis* (*Hoplitis*) *lepeletieri* (Pérez, 1879), *Rhodanthidium* (*Rhodanthidium*) *septemdentatum* (Latreille, 1809), *Stelis* (*Heterostelis*) *hungarica* Noskiewicz, 1962, *S.* (*Stelis*) *franconica* Blüthgen, 1930, and *S.* (*S.*) *iugae* Noskiewicz, 1962. All of them are reported in this database for the Northwest of European Russia. It is obvious that this is the result of a mistake. There are no any documented records of these species for Russia. For example, *S. hungarica*, which is often regarded as a synonym of *S.* (*Heterostelis*) *annulata* (Lepeletier de Saint-Fargeau, 1841), is known by just a single female from Hungary (Kasparek,

2015). Most other species are not so rare but they usually have even more southern distribution. Probably, the erroneous reports of all of these species from Russia in the "Fauna Europaea" database were caused by the presence of them in the "Keys to the insects of the European part of the USSR" (Osytshnjuk et al., 1978) where they are actually not reported for Russia but are reported for south or southwest of the USSR European part (which actually include also Ukraine and the Republic of Moldova).

Acknowledgements

The author thanks M.V. Mokrousov (N.I. Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia) and I.B. Popov (Kuban State Agrarian University, Krasnodar, Russia) for the material provided for the study. The work was partially supported by the Russian Funds for Basic Research (No. 17–04–00259).

References

Ascher J.S., Pickering J. 2017. *Discover Life bee species guide and world checklist (Hymenoptera: Apoidea: Anthophila)*. http://www.discoverlife.org/mp/20q?guide=Apoidea_species (Accessed 20 July 2017).

Banaszak J., Romasenko L. 2001. *Megachilid bees of Europe. Second edition.* Bydgoszcz: Bydgoszcz University Press. 239 pp.

Fateryga A.V., Ivanov S.P., Filatov M.A. 2018. Megachilid-bees (Hymenoptera: Megachilidae) of the Crimean Peninsula. *Entomofauna*, **39**. (In press).

Kasparek M. 2015. The cuckoo bees of the genus *Stelis* Panzer, 1806 in Europe, North Africa and the Middle East. *Entomofauna. Supplement,* **18**: 1–144.

Kuhlmann M., Ascher J.S., Dathe H.H., Ebmer A.W., Hartmann P., Michez D., Müller A., Patiny S., Pauly A., Praz C., Rasmont P., Risch S., Scheuchl E., Schwarz M., Terzo M., Williams P.H., Amiet F., Baldock D., Berg Ø., Bogusch P., Calabuig I., Cederberg B., Gogala A., Gusenleitner F., Josan Z., Madsen H.B., Nilsson A., Ødegaard F., Ortiz-Sanchez J., Paukkunen J., Pawlikowski T., Quaranta M., Roberts S.P.M., Sáropataki M., Schwenninger H.-R., Smit J., Söderman G., Tomozei B. 2015. *Checklist of the Western Palaearctic bees (Hymenoptera: Apoidea: Anthophila)*. http://westpalbees.myspecies.info (Accessed 20 July 2017).

Morawitz F. 1870. Beitrag zur Bienenfauna Russlands. *Horae Societatis Entomologicae Rossicae*, **7**(2/3): 305–320.

Müller A. 2017. *Palaearctic Osmiine bees*. http://blogs.ethz.ch/osmiini (Accessed 20 July 2017).

Osytshnjuk A.Z., Panfilov D.V., Ponomareva A.A. 1978. Superfam. Apoidea – bees. *Keys to the insects of the European part of the USSR. Hymenoptera*, **3**(1): 279–519. (In Russian).

Polaszek A. 2013. *Fauna Europaea: Family Apidae. Fauna Europaea version 2.6.2*. http://www.faunaeur.org/full_results.php?id=11300 (Accessed 16 August 2017).

Proshchalykin M.Yu., Astafurova Yu.V. 2017. The history of study of the Russian bees (Hymenoptera, Anthophila). *A.I. Kurentsov's Annual Memorial Meetings*, **28**: 26–34. (In Russian).