

New synonyms and records of the parasitoid family Gasteruptiidae (Hymenoptera: Evanioidea) for the fauna of Russia

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Новые синонимы и находки паразитоидов семейства Gasteruptiidae (Hymenoptera: Evanioidea) в фауне России

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Abstract. In the paper new records of the Gasteruptiidae species for the fauna of Russia are provided. The following species are newly recorded for the fauna of Russia: *Gasteruption diversipes* (Abeille de Perrin, 1879); *G. flavimarginatum* van Achterberg, 2014; *G. freyi* (Tournier, 1877); *G. goberti* (Tournier, 1877); *G. laticeps* (Tournier, 1877); *G. minutum* (Tournier, 1877); *G. opacum* (Tournier, 1877); *G. zarudnyi* Semenov-Tian-Shanskij et Kostylev, 1928. Two new synonyms are proposed: *Gasteruption poecilothecum* Kieffer, 1911 of *G. subtile* (Thomson, 1883) (**syn. nov.**), and *G. terebrelligerum* Enderlein, 1913, of *G. brevicuspis* Kieffer, 1911 (**syn. nov.**).

Key words. Parasitoids, Gasteruptiidae, new records, new synonyms, Russia.

Резюме. В статье приводятся сведения с новыми данными о находках в фауне России видов сем. Gasteruptiidae. В фауне России впервые обнаружены следующие виды: *Gasteruption diversipes* (Abeille de Perrin, 1879); *G. flavimarginatum* van Achterberg, 2014; *G. freyi* (Tournier, 1877); *G. goberti* (Tournier, 1877); *G. laticeps* (Tournier, 1877); *G. minutum* (Tournier, 1877); *G. opacum* (Tournier, 1877); *G. zarudnyi* Semenov-Tian-Shanskij et Kostylev, 1928. Предложены новые синонимы: *Gasteruption poecilothecum* Kieffer, 1911 для *G. subtile* (Thomson, 1883) (**syn. nov.**); *G. terebrelligerum* Enderlein, 1913 для *G. brevicuspis* Kieffer, 1911 (**syn. nov.**).

Ключевые слова. Паразитоиды, Gasteruptiidae, новые находки, новые синонимы, Россия.

Introduction

The Evanioidea family Gasteruptiidae has a worldwide distribution and includes two extant subfamilies, Hyptiogastrinae and Gasteruptiinae, with about 500 known species. The long and slender adults can be found near bee nests (in wood or in vertical walls) and on flowers with easily accessible nectar. The combination of the inflated hind tibia, the unarmed hind femur and the elongate pronotum (neck) makes

them easy to recognise. The adults fly conspicuously in front of the bee nests with the metasoma upwards and using the hind legs for balance and hearing, the latter with the subgenual organ inside the enlarged tibia (Mikó et al., 2019). The larva consumes first the bee larva (behaving as an ectoparasitoid) and continues with the stored food (making it a “predator-inquiline”). Considering the size of some individuals and the size differences within a species it is likely that in some cases more than one larva and its food is devoured. Adult females may show interest in nests of Vespidae (Eumeninae) and Crabronidae, but as yet there is no inclusive evidence that they are suitable hosts.

The Gasteruptiidae have a nearly worldwide distribution with more species in tropical and subtropical than in temperate areas. Only recently research on the Palaearctic and Northeast Oriental gasteruptiid wasps was intensified (Zhao et al., 2012; van Achterberg, Talebi, 2014; Tan et al., 2016; Saure et al., 2017), which allows to give overviews of countries or part of it.

Our knowledge of the gasteruptiid fauna of the large territories of Russia and former USSR is fragmentary with only few overviews available (Semenov, 1892; Semenov-Tian-Shanskij, Kostylev, 1928; Kozlov, 1988; Alekseev, 1995; van Achterberg et al., 2019; van Achterberg, 2019). In the current study new and additional distributional data about the Gasteruptiidae species on the territory of Russia as well as two new synonyms are provided.

Material and methods

All material used for this study are mainly deposited in the Hymenoptera collection of Zoological Institute of the Russian Academy of Sciences (St Petersburg) (ZISP).

The abbreviations of the regions of Russia were used from the first volume of the Annotated catalogue of the Hymenoptera of Russia (Belokobylskij, Lelej, 2017). General distribution of the species follows Tan et al. (2016), Zhao et al. (2012), Johansson, van Achterberg (2016), van Achterberg et al. (2019). New distribution records are marked with an asterisk (*).

Taxonomic results

Genus *Gasteruptiidae*, 1797

Type species: *Ichneumon assectator* Linnaeus, 1758.

Gasteruptiidae brevicuspis Kieffer, 1911

Synonym: *Gasteruptiidae terebrelligerum* Enderlein, 1913, **syn. nov.**

Remarks. *Gasteruptiidae terebrelligerum* Enderlein was treated by Zhao et al. (2012) as a valid species, but the recent examination of the holotype of *G. brevicuspis* revealed that it concerns the same species. *Gasteruptiidae brevicuspis* has priority over *G. terebrelligerum* and, therefore, *G. terebrelligerum* has to be synonymised with *G. brevicuspis* Kieffer.

Distribution. Russia: FE (AM, PR). – China, India, Myanmar.

Gasteruptiidae diversipes (Abeille de Perrin, 1879)

Synonyms: *Gasteruptiidae distinguendum* Schletterer, 1885; *G. dusmeti* Kieffer, 1904; *G. kriechbaumeri* var. *striaticeps* Kieffer, 1904.

Material examined. RUSSIA. Volgograd Province: 1 male, 10 km S of Mikhaylovka, Medveditsa River, forest, glades, 29.VI–1.VII.2004 (S. Belokobylskij leg.). Republic of Crimea: 1 female, “Sebastopol, Tauria, 23.6.[190]1, V. Pliginski”.

Distribution. *Russia: EP (S, CR). – Europe (WE, SE, EE), Turkey.

Gasteruptiidae flavimarginatum van Achterberg, 2014

Material examined. RUSSIA. Republic of Dagestan: 1 female, near Kufa Village, 6 km NW of Rutul, 1500 m, 41.565178° N 47.362029° E, 30.VI.2018 (K. Fadeev leg.).

Distribution. *Russia: EP (NC). – Turkey, Jordan, Tajikistan, Uzbekistan, China.

***Gasteruption freyi* (Tournier, 1877)**

Synonyms: *Foenus nigripes* Tournier, 1877; *Faenus rugulosus* Abeille de Perrin, 1879; *F. nigripes* var. *annulata* Abeille de Perrin, 1879; *Gasteruption assetator* var. *nitidulum* Schletterer, 1885; *G. kohlii* Schletterer, 1885.

Material examined. RUSSIA. Republic of Crimea: 8 females, 5 males, Tarkhankut Peninsula, Bolshoy Kastel, from nests, VI.2016 (V. Zhidkov leg.); 6 females, Tarkhankut Peninsula, “Charivna Gavan” National Park, from the bee nests of *Hylaeus* sp. (Colletidae), 20, 22, 23, 25 & 26.V.2014 (V. Zhidkov leg.).

Distribution. *Russia: EP (CR). – Europe (WE, EE, SE), Morocco.

***Gasteruption goberti* (Tournier, 1877)**

Synonym: *Gasteruption sowae* Schletterer, 1901.

Material examined. RUSSIA. Republic of Dagestan: 1 female, near Talgi Village, 42.876294° N 47.440111° E, 25.VI.2018 (V. Loktionov, M. Proshchalykin, M. Mokrousov leg.).

Distribution. *Russia: EP (NC). – Europe (WE, EE, SE), Turkey, Iran.

***Gasteruption laticeps* (Tournier, 1877)**

Synonyms: *Gasteruption foveolatum* Schletterer, 1889; *G. foveolum* Szépligeti, 1903.

Material examined. RUSSIA. Republic of Crimea: 1 female, Karabi-yayla, Companula flower, 13.VII.2015 (S. Ivanov leg.); 1 female (without head), “Shuli, Simferopol’ District [= Ternovka, Sebastopol District]”, 22.VII.1905 (without collector).

Distribution. *Russia: EP (CR). – Europe (WE, EE, SE), Turkey.

***Gasteruption minutum* (Tournier, 1877)**

Synonyms: *Foenus longigena* Thomson, 1883; *Gasteruption oriplanum* Kieffer, 1911.

Material examined. RUSSIA. Karachai-Cherkess Republic: Teberda Nature Reserve, 5–18.VII.1997 (V. Gnedilov leg.).

Distribution. *Russia: EP (NC). – Europe (WE, EE, SE), Turkey, Iran, Kazakhstan, Kyrgyzstan, Mongolia, China.

***Gasteruption opacum* (Tournier, 1877)**

Synonyms: *Foenus opacus* var. *minor* Magretti, 1882; *F. vagepunctatus* Costa, 1877; ? *Gasteruption obscurum* Schletterer, 1889.

Material examined. RUSSIA. Volgograd Province: 1 male, 10 km S of Mikhaylovka, Medveditsa River, forest, glades, 29.VI–1.VII.2004 (S. Belokobylskij leg.). Krasnodar Territory: 1 male, Sochi, Lazarevskoe, terrace slopes, forest, 26.V.1976 (V. Tobias leg.). Republic of Crimea: 1 female, Sebastopol, Kazachya Bay, 10.VIII.2004 (I. Turbanov leg.).

Distribution. *Russia: EP (S, NC, CR). – Europe (WE, NE, EE, SE), Turkey, Iran.

***Gasteruption subtile* (Thomson, 1883)**

Synonyms: *Gasteruption kriechbaumeri* Schletterer, 1889; *G. sabulosum* Schletterer, 1889; *G. poecilothecum* Kieffer, 1911 (**syn. nov.**); *G. rossicum* Semenov-Tian-Shanskij et Kostylev, 1928.

Additional material examined. RUSSIA. Republic of Tuva (Tyva): 1 female, Khondergey, 19.VII.1965 (V. Yanovskiy leg.).

Distribution. Russia: EP (N, NW, CR), WS (TK, NS, AL), ES (*TU, IR, YA, ZB), FE (AM, KH, PR, SA, KA, MG). – Europe (WE, NE, NE), Azerbaijan, Kazakhstan, Mongolia, China, Japan.

Remarks. Up to very recently (e.g., van Achterberg et al., 2019) *Gasteruption poecilothecum* Kieffer was considered to be a valid species. Freshly collected specimens from China identifiable as *G. poecilothecum* (as well as the studied holotype of this species) fall within the variation range of *G. subtile*. Therefore, *G. poecilothecum* is synonymised here with the latter species.

***Gasteruption zarudnyi* Semenov-Tian-Shanskij et Kostylev, 1928**

Material examined. RUSSIA. Republic of Kalmykia: 3 males, 17 km SWW of Artezian, Kuma River, 44°56' N 046°27' E, 19–20.VII.2015 (M. Mokrousov leg.); 3 males, same locality, 19–21.VII.2015 (S. Belokobylskij leg.). Republic of Dagestan: 1 female, 9 km SSE of Kochubey, Nogayskaya steppe, 44°19' N 046°36' E, 21–22.VII.2015 (S. Belokobylskij leg.); 1 female, 13 km NE of Kochubey, 44.442994° N 46.691969° E, 18.VI.2018 (K. Fadeev leg.); 1 female, 8 km SE of

Staroterechnoe Village, Agrakhan Nature Reserve, 43.792806° N 47.527549° E, 19.VI.2018 (K. Fadeev leg.). *Republic of Crimea*: 1 female, Kerch (without data) (A. Kirichenko leg.).

Distribution. *Russia: EP (S, CR, NC). – Europe (WE, EE, SE), Turkey, Iran, Afghanistan.

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