



Apoidea (Hymenoptera, Apiformes and Spheciformes) of Northwestern Georgia with new records for the country

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ABSTRACT. In this survey, 116 species of 39 genera and 12 families from two sections Apiformes and Spheciformes of the superfamily Apoidea have been recorded from Georgia (Sakartvelo). Among them, one genus *Polemistus* de Saussure, 1892 and 39 species are new country records. This is just part of studied and collected material, therefore the identification continues.

Key words: Bees, distribution, fauna, list, new record, wasps, Sakartvelo

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INTRODUCTION

Hymenoptera is one of the most species divers order in the class of Insecta, with more than 150,000 described and 2400 extinct species (Huber, 2017) and this number grows every day. Based on the results given in the presented paper, estimated number of Hymenopteran species would be, at least, doubled, taking in the consideration that from most of the larger superfamilies of Parasitica, less than 10% is estimated to be described, as the vast majority of the almost 17,000 newly described species per year belongs to insects (Costello et al., 2013). More than 29,000 species of Apoidea are known worldwide (Huber, 2017). Biodiversity is an extremely important element in world legislation to select territories for conservation. Studying the biodiversity of Apoidea is very important for the better understanding species diversity in Georgia and whole Caucasus. Their participating in pollination, predating and parasitizing behavior makes them extremely crucial. A preliminary checklist of Apoidea from Georgia was given by Kirkitadze and Japoshvili (2015), which comprises 356 species. Later faunistic data increased this number to 363 species (Kirkitadze et al., 2017; Kirkitadze, 2022). Recently, 57 species were also added to this list (Japoshvili & Ljubomirov, 2021).

There are very limited studies dealing with the Hymenopterans from the Northwestern Georgia, Lechkhumi gorge, which is located in Racha-Lechkhumi branch of greater Caucasus (Japoshvili & Haris, 2022a, 2022b; Riedel & Japoshvili, 2021). Thus present study provides first attempt to give data about fauna of macrohymnoptera (Apoidea) belonging to 23 families from this region. The climate of given region is characterized with humid and warm temperate, resembling Mediterranean climate. From the

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north it's protected by greater Caucasus and from the south bordering with the Colchis Lowland which is connected to the black sea coast.

MATERIAL AND METHODS

The specimens were collected using Malaise traps (Fig. 1) in Lechkhumi (Tsageri) and upper Imereti Region (Tkibuli) (Fig. 2) during 2020–2021 growing seasons. As this was faunistic study planning to reveal of species diversity in this area we were visiting sites once in a month or so. In the Lechkhumi region following sites have been selected: **1.** Doghurashi: Katsunara, Alt 550 m, 42°40'1.722"N, 42°46'15.0096"E, an old dwelling grassland with some hazelnut, blackberries, prunus and pear trees. Near river Tskhenistskali with alder trees. Trap was set for a week just in June 2020 as the diversity was not high, due to overgrazing reasons; **2.** Dogurashi: Nalobievi, alt. 1 070 m., 42°40'11.1396"N, 42°47'7.3032"E (Fig. 1A). Meadow surrounded with forest of beech. The meadow was on the old human dwelling place, where old apple, pears and hawthorns were represented with bushes of wild rose – sweetbriers. Some young sprouts of pines also were on the meadow. Traps were operating one week in June, July and August in 2020 and additionally in May of 2021; **3.** Dogurashi: Tsablanis Gora, alt. 1470 m., 42°40'41.6748"N, 42°48'36.1908"E (Fig. 1B). Area of stripped beech forest, with dead wood remains, and covered with blackberry bushes. Traps were operating during one weeks in June and August in 2020 and in May in 2021; **4.** Doghurashi: Sakenebeli, 20–26. Jul. 2020, 1500 m, 42°41'46.1436"N, 42°48'46.674"E.



Figure 2. Malaise traps in Dogurashi. **A.** Nalobievi, Georgia, 1070 m a.s.l.; **B.** Tsablanis Gora, Georgia, 1470 m a.s.l.

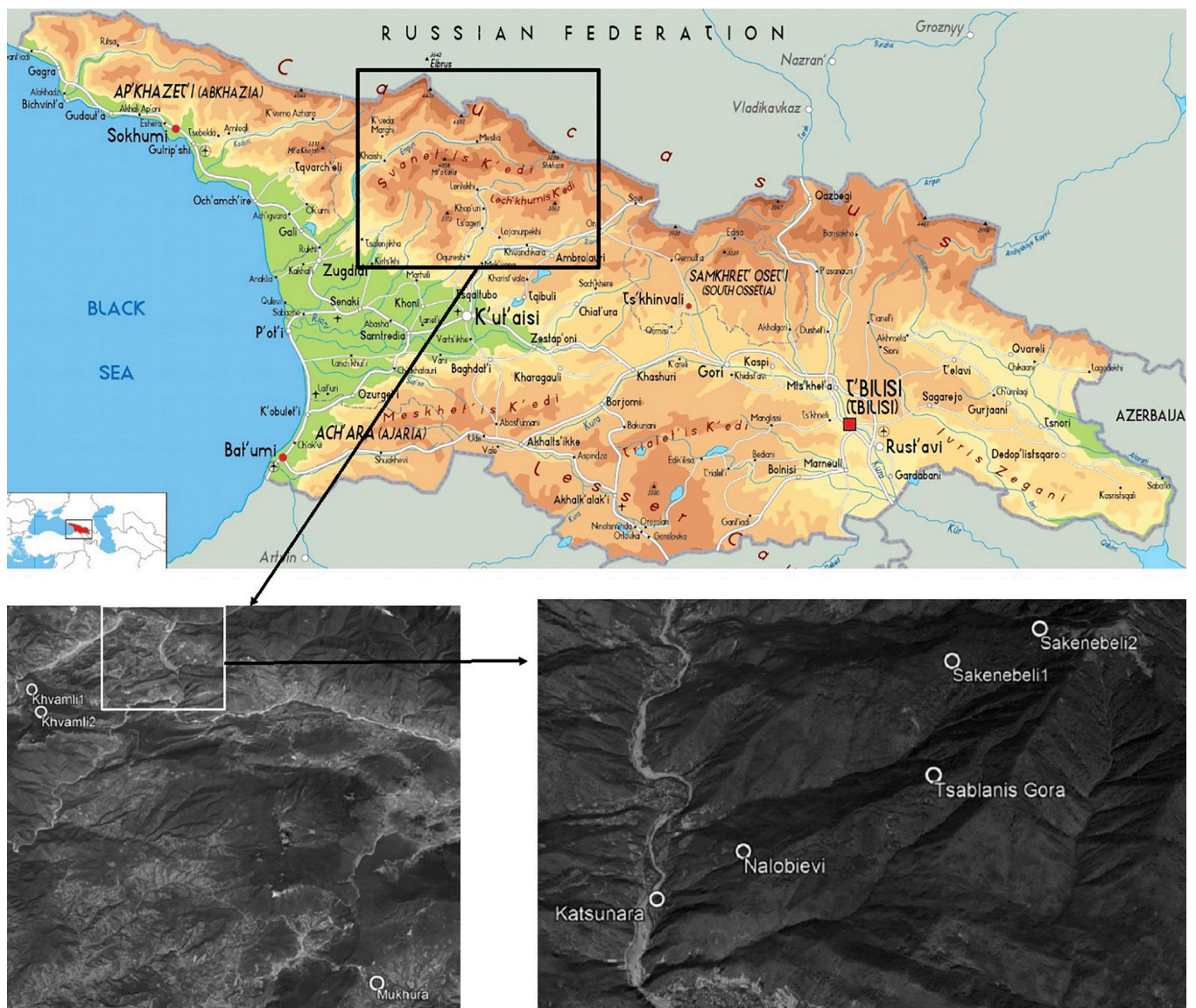


Figure 2. Map of the collecting sites in Northwestern Georgia, Lechkhumi (Tsageri) and upper Imereti Region (Tkibuli).

Small open slope of meadow, surrounded with mixed broadleaf forest trees: beach, hornbeam, goat willow and blackberry bushes; 5. Doghurashi: Sakenebeli, 20–26. Jul. 2020, 1800 m, 42°41'56.2308"N, 42°49'36.2856"E. Moist meadow with grass, previous years used for potato farming, surrounded with Beach forest with some blackberry and othr bushes; 6. Khvamli Mountains, 18–25. May 2021, alt. 997 m., 42°31'42.9528"N, E42°43'27.5232"E, Small open area in the beech forest with wild hazelnut bushes; 7. Khvamli Mountains, 18–25. May 2021, alt. 1 462 m., 42°33'20.7648"N, 42°42'19.7856"E, Wide pasture surrounded with old virgin beech forest; 8. Mukhura: Gabrichidzeebis Ubani, alt. 780 m, 42°19'9.7284"N, 43°3'40.5864"E. Trap was operating during whole June of 2020 and container was replaced weekly. Specimens used in this study are deposited in the Institute of Entomology, Agricultural University of Georgia and the Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences. New records for Georgia are marked with one asterisk (*). Zoogeographical distribution is done following GBIF (2023) and Antropov et al. (2017).

RESULTS

Taxonomic hierarchy

Class Insecta Linnaeus, 1758

Order Hymenoptera Linnaeus, 1758

Superfamily Apoidea Latreille 1802

Section A: SPHECIFORMES

I. Family Bembicidae Latreille, 1802

Genus *Harpactus* Shuckard, 1837

***Harpactus elegans* Lepeletier, 1832**

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Harpactus pulchellus* A. Costa, 1859

Material examined: 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

II. Family Crabronidae Latreille, 1802

Genus *Crossocerus* Lepeletier & Brullé, 1835

***Crossocerus acanthophorus* (Kohl, 1892)**

Material examined: 1 ♀, Mukhura, 27.vi–04.vii.2020, Leg.: G. Japoshvili.

General distribution: Mediterranean (GBIF, 2023).

***Crossocerus annulipes* (Lepeletier & Brullé, 1835) (Fig. 3A)**

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 2 ♀♀, Tsageri, Nalobievi, 5–12.vi.2020; 1 ♀, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic and Nearctic (GBIF, 2023).

***Crossocerus congener* (Dahlbom, 1844) (Fig. 3B)**

Material examined: 1 ♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Europe (GBIF, 2023).

Crossocerus ovalis* (Lepeletier & Brullé, 1835)

Material examined: 1 ♀, Mukhura, 13–20.vi.2020, Leg.: G. Japoshvili.

General distribution: Europe (GBIF, 2023).

***Crossocerus podagricus* (Vander Linden, 1829)**

Material examined: 1 ♀, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Europe (GBIF, 2023).

***Crossocerus varus* (Lepeletier & Brullé, 1835) (Fig. 3C)**

Material examined: 1 ♂, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic and Nearctic (GBIF, 2023).

Genus *Ectemnius* Dahlbom, 1845***Ectemnius lituratus* (Panzer, 1803) (Fig. 3D)**

Material examined: 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♀, Tsageri, Nalobievi, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Europe (GBIF, 2023).

Genus *Entomognathus* Dahlbom, 1844***Entomognathus brevis* (Vander Linden, 1829) (Fig. 3E)**

Material examined: 1 ♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 2 ♂♂, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 1 ♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Genus *Lestica* Billberg, 1820***Lestica clypeata* (Schreber, 1759)**

Material examined: 3 ♀♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 1 ♀, Tsageri, Nalobievi, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Genus *Lindenius* Lepeletier & Brullé, 1835***Lindenius albilabris* (Fabricius, 1793)**

Material examined: 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Lindenius panzeri* (Vander Linden, 1829)

Material examined: 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Europe (GBIF, 2023).

Genus *Nitela* Latreille, 1809***Nitela borealis* Valkeila, 1974**

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Europe (GBIF, 2023).

Nitela fallax* Kohl, 1884

Material examined: 3 ♀♀, 1 ♂, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Europe and Turkey (GBIF, 2023).

Genus *Pison* Jurine, 1808***Pison atrum* (Spinola, 1808)**

Material examined: 1 ♀, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (Antropov et al., 2017).

Genus *Rhopalum* Stephens, 1829***Rhopalum clavipes* (Linnaeus, 1758)**

Material examined: 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 1 ♀, Tsageri, Nalobievi, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (GBIF, 2023).

Genus *Tachysphex* Kohl, 1883

18. *Tachysphex ferrugineus* Puławski, 1971

Material examined: 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (Antropov et al., 2017).

Tachysphex helveticus Kohl, 1885

Material examined: 1 ♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (Antropov et al., 2017).

Tachysphex obscuripennis (Schenck, 1857)

Material examined: 4 ♀♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 3 ♂♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (Antropov et al., 2017).

Tachysphex psammobius (Kohl, 1880)

Material examined: 2 ♀♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (Antropov et al., 2017).

Genus *Tachytes* Panzer, 1806

Tachytes panzeri (Dufour, 1841)*

Material examined: 1 ♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Almost cosmopolitan (Palaearctic, Oriental and Afrotropical) (GBIF, 2023; Antropov et al., 2017).

Genus *Trypoxylon* Latreille, 1796

Trypoxylon attenuatum F. Smith, 1851

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (Antropov et al., 2017).

Trypoxylon clavicerum Lepeletier & Audinet-Serville, 1828

Material examined: 1 ♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♂, Tsageri, Nalobievi, 5–12.vi.2020; 1 ♂, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (Antropov et al., 2017).

Trypoxylon figulus (Linnaeus, 1758)*

Material examined: 1 ♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 2 ♀♀, Tsageri, Nalobievi, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (Antropov et al., 2017).

***Trypoxylon minus* de Beaumont, 1945**

Material examined: 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 1 ♀, Mukhura, 20–27.vi.2020; 1 ♂, Mukhura, 13–20.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (Antropov et al., 2017).

***Trypoxylon rubiginosum* Gussakovskij, 1936 (Fig. 3F)**

Material examined: 1 ♂, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 1 ♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Caucasus (Antropov et al., 2017).

III. Family Pemphredonidae Dahlbom, 1835**Genus *Passaloecus* Shuckard, 1837*****Passaloecus gracilis* (Curtis, 1834)**

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (Antropov et al., 2017).

Passaloecus singularis* Dahlbom, 1844

Material examined: 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 1 ♀, Mukhura, 13–20.vi.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (Antropov et al., 2017).

Genus *Pemphredon* Latreille, 1796***Pemphredon lethifer* (Shuckard, 1837)**

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♀, 1 ♂, Mukhura, 13–20.vi.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (Antropov et al., 2017).

***Pemphredon lugubris* (Fabricius, 1793)**

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (Antropov et al., 2017).

***Pemphredon rugifer* (Dahlbom, 1844)**

Material examined: 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 1 ♀, Mukhura, 13–20.vi.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (Antropov et al., 2017).

Genus *Polemistus* de Saussure, 1892****Polemistus abnormis* (Kohl, 1888)***

Material examined: 1 ♀, GEORGIA, Mukhura, 13–20.vi.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (Antropov et al., 2017).

Genus *Spilomena* Shuckard, 1838***Spilomena beata* Blüthgen, 1953**

Material examined: 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (Antropov et al., 2017).

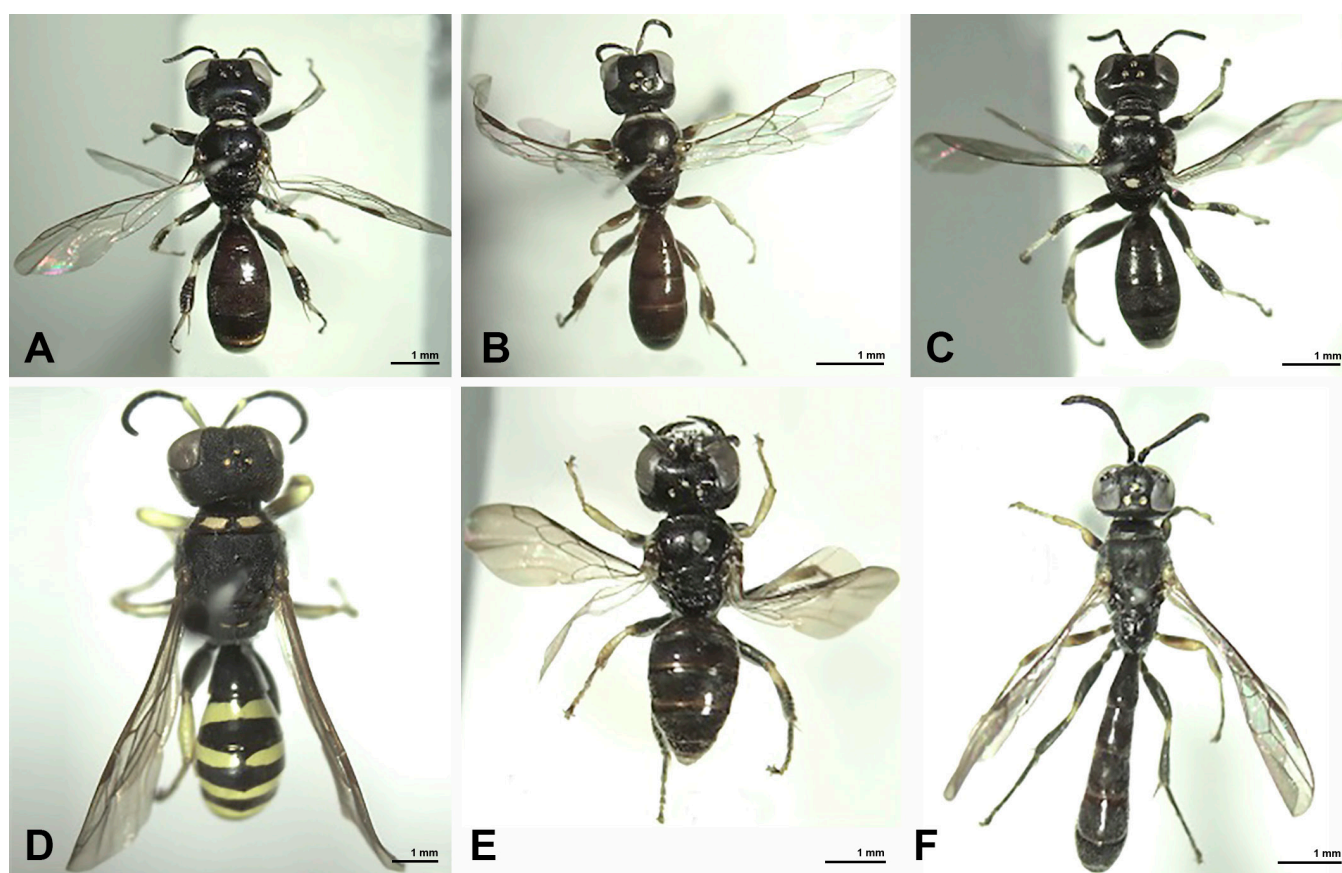


Figure 3. Some of the representative crabronids (Crabronidae Latreille, 1802) collected from Georgia (females). **A.** *Crossocerus annulipes* Lepeletier & Brulle, 1835; **B.** *C. congener* (Dahlbom, 1844); **C.** *C. varus* (Lepeletier & Brulle, 1835); **D.** *Ectemnius lituratus* (Panzer, 1803); **E.** *Enthomognathus brevis* (Vander Linden, 1829); **F.** *Trypoxylon rubiginosum* Gussakovskij, 1936

IV. Family Philanthidae Latreille, 1802

Genus *Cerceris* Latreille, 1802

Cerceris sabulosa (Panzer, 1799)

Material examined: 1 ♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (Antropov et al., 2017).

Genus *Philanthus* Fabricius, 1790

Philanthus triangulum (Fabricius, 1775)

Material examined: 1 ♀, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic and Afrotropical (Antropov et al., 2017).

V. Family Psenidae Costa, 1858

Genus *Pseneo* Malloch, 1933

Pseneo exaratus (Eversmann, 1849)

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic and Oriental (Antropov et al., 2017).

Genus *Psenulus* Kohl, 1897

***Psenulus fuscipennis* (Dahlbom, 1843)**

Material examined: 11 ♀♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020; 1 ♀, Mukhura, 20–27.vi.2020; 1 ♀, Mukhura, 27.vi–04.vii.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic and Oriental (Antropov et al., 2017).

Psenulus laevigatus* (Schenck, 1857)

Material examined: 1 ♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 2 ♂♂, Mukhura, 13–20.vi.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (Antropov et al., 2017).

***Psenulus pallipes* (Panzer, 1798)**

Material examined: 2 ♂♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 3 ♀♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 2 ♀♀, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020; 1 ♀, Tsageri, Dogurashi, Tsablanis gora, 18–24.viii.2020; 8 ♀♀, 1 ♂, Mukhura, 20–27.vi.2020; 3 ♀♀, 2 ♂♂, Mukhura, 13–20.vi.2020; 1 ♀, 1 ♂, Mukhura, 27.vi–04.vii.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (Antropov et al., 2017).

***Psenulus schencki* (Tournier, 1889)**

Material examined: 4 ♀♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 1 ♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (Antropov et al., 2017).

VI. Family Sphecidae Latreille, 1802

Genus *Ammophila* W. Kirby, 1798

***Ammophila sabulosa* (Linnaeus, 1758)**

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (Antropov et al., 2017).

Section B: APIFORMES

I. Family Andrenidae Latreille, 1802

Genus *Andrena* Fabricius, 1775

Andrena asperula* Osytshnjuk, 1977

Material examined: 1 ♂, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Europe and Azerbaijan (Antropov et al., 2017).

***Andrena bicolor* Fabricius, 1775**

Material examined: 1 ♀, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic. (Antropov et al., 2017).

Andrena labialis (W. Kirby, 1802)

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (Antropov et al., 2017).

Andrena minutula (W. Kirby, 1802)

Material examined: 1 ♀, Tsageri, Nalobievi, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (GBIF, 2023).

Andrena nana (W. Kirby, 1802)*

Material examined: 1- Male, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♂, Mukhura, 20–27.vi.2020; 2 ♂♂, Mukhura, 27.vi–04.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023, Antropov et al., 2017).

Andrena nasuta Giraud, 1863*

Material examined: 1 ♂, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Andrena propinqua Schenck, 1853*

Material examined: 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 1 ♀, Tsageri, Nalobievi, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Andrena subopaca Nylander, 1848*

Material examined: 1 ♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (GBIF, 2023).

II. Family Apidae Latreille, 1802

Genus *Apis* Linnaeus, 1758

Apis mellifera Linnaeus, 1758

Material examined: 3 ♀♀ workers, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 2 ♀♀ workers, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 1 ♀♀ workers, Tsageri, Nalobievi, 5–12.vi.2020; 11 ♀♀ workers, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Cosmopolitan (GBIF, 2023).

Genus *Bombus* Latreille, 1802

Bombus argillaceus (Scopoli, 1763)

Material examined: 5 ♀♀ workers, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 8 ♀♀ workers, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Bombus consobrinus Dahlbom, 1832*

Material examined: 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♀ worker, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♂, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (GBIF, 2023).

***Bombus lucorum* (Linnaeus, 1761)**

Material examined: 3 ♂♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (GBIF, 2023).

***Bombus pascuorum* (Scopoli, 1763)**

Material examined: 56 ♀♀ workers, 13 ♂♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 43 ♀♀ workers, 4 ♂♂, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 4 ♀♀ workers, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (GBIF, 2023).

***Bombus pratorum* (Linnaeus, 1761)**

Material examined: 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Palearctic (GBIF, 2023).

***Bombus sylvarum* (Linnaeus, 1761)**

Material examined: 1 ♀, Tsageri, Nalobievi, 5–12.vi.2020, Leg.: G. Japoshvili; 2 ♀♀ workers, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Palearctic (GBIF, 2023).

***Bombus terrestris* (Linnaeus, 1758)**

Material examined: 9 ♀♀ workers, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 5 ♀♀ workers, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Almost cosmopolitan (except Africa south of Sahara) (GBIF, 2023).

Genus *Ceratina* Latreille, 1802***Ceratina callosa* (Fabricius, 1794)**

Material examined: 1 ♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palearctic (GBIF, 2023).

***Ceratina cyanea* (W. Kirby, 1802)**

Material examined: 12 ♀♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 5 ♂♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 2 ♀♀, Tsageri, Nalobievi, 5–12.vi.2020; 2 ♂♂, Tsageri, Nalobievi, 5–12.vi.2020; 3 ♂♂, 2 ♀♀, Mukhura, 20–27.vi.2020; 1 ♀, 1 ♂, Mukhura, 27.vi–04.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palearctic (GBIF, 2023).

Genus *Eucera* Scopoli, 1770***Eucera interrupta* Baer, 1850**

Material examined: 1 ♂, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palearctic (GBIF, 2023).

Genus *Nomada* Scopoli, 1770***Nomada distinguenda* Morawitz, 1874**

Material examined: 1 ♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palearctic (GBIF, 2023).

III. Family Colletidae Lepeletier, 1841

Genus *Colletes* Latreille, 1802

Colletes similis Schenck, 1853

Material examined: 1 ♀, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Genus *Hylaeus* Fabricius, 1793

Hylaeus angustatus (Schenck, 1861)

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Hylaeus brachycephalus (F. Morawitz, 1868)*

Material examined: 1 ♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Mediterranean (GBIF, 2023).

Hylaeus brevicornis Nylander, 1852

Material examined: 6 ♀♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♀, Mukhura, 27.vi–04.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Hylaeus communis Nylander, 1852

Material examined: 1 ♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 3 ♀♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 1 ♀, Tsageri, Nalobievi, 5–12.vi.2020; 2 ♀♀, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020; 1 ♀, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Hylaeus difformis (Eversmann, 1852)

Material examined: 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 2 ♀♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Hylaeus dilatatus (W. Kirby, 1802)

Material examined: 1 ♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Hylaeus euryscapus A. Förster, 1871

Material examined: 1 ♀, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Hylaeus gibbus S. Saunders, 1850

Material examined: 1 ♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 3 ♀♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 2 ♀♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Hylaeus leptocephalus* (F. Morawitz, 1871)

Material examined: 9 ♂♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 2 ♂♂, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic and Nearctic (GBIF, 2023).

***Hylaeus lineolatus* (Schenck, 1861)**

Material examined: 1 ♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Hylaeus punctatus* (Brülle, 1833)

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western palaeartic, Nearctic and Neotropic (GBIF, 2023).

IV. Family Halictidae Thomson, 1869**Genus *Halictus* Latreille, 1804*****Halictus gavarnicus* Pérez, 1903***

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 11 ♀♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 3 ♀♀, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 9 ♂♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 3 ♀♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020, Leg.: G. Japoshvili.

General distribution: Mediterranean (GBIF, 2023).

***Halictus maculatus* Smith, 1848**

Material examined: 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

***Halictus quadricinctus* (Fabricius, 1776)**

Material examined: 31 ♂♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 12 ♂♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 7 ♀♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic and Nearctic (GBIF, 2023).

***Halictus rubicundus* (Christ, 1791)**

Material examined: 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♂, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 1 ♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic and Nearctic (GBIF, 2023).

***Halictus seladonius* (Fabricius, 1794)**

Material examined: 1 ♀, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic and Nearctic (GBIF, 2023).

***Halictus sexcinctus* Fabricius, 1775**

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 7 ♂♂, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 1 ♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

***Halictus simplex* Blüthgen, 1923**

Material examined: 18 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 31 ♀♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 9 ♀♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 18 ♂♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 6 ♀♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: European (GBIF, 2023).

Genus *Lasioglossum* Curtis, 1833***Lasioglossum albipes* (Fabricius, 1781)**

Material examined: 2 ♀♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (GBIF, 2023).

Lasioglossum buccale* (Pérez, 1903)

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

***Lasioglossum calceatum* (Scopoli, 1763)**

Material examined: 2 ♀♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 2 ♀♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (GBIF, 2023).

***Lasioglossum discum* (F. Smith, 1853)**

Material examined: 3 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic and Nearctic (GBIF, 2023).

Lasioglossum euboense* (Strand, 1909)

Material examined: 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 1 ♂, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

***Lasioglossum morio* (Fabricius, 1793)**

Material examined: 6 ♀♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 8 ♂♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 7 ♀♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♂, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 4 ♂♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 7 ♀♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 1 ♂, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020; 1 ♂, 1 ♀, Mukhura, 20–27.vi.2020; 1 ♂, Mukhura, 13–20.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Lasioglossum nigripes* (Lepeletier, 1841)

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

***Lasioglossum puncticolle* (F. Morawitz, 1872)**

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

***Lasioglossum tarsatum* (Schenck, 1869)**

Material examined: 2 ♂♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Europe and Afghanistan (GBIF, 2023).

***Lasioglossum zonulum* (F. Smith, 1848)**

Material examined: 1 ♀, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (GBIF, 2023).

Genus *Sphcodes* Latreille, 1804***Sphcodes cristatus* von Hagens, 1882***

Material examined: 1 ♀, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (GBIF, 2023).

Sphcodes croaticus* Meyer, 1922

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

***Sphcodes hyalinatus* von Hagens, 1882**

Material examined: 8 ♂♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 9 ♂♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 2 ♂♂, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020; 1 ♂, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (GBIF, 2023).

Sphcodes longulus* von Hagens, 1882

Material examined: 1 ♀, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (GBIF, 2023).

Sphcodes marginatus* von Hagens, 1882

Material examined: 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

***Sphcodes miniatus* von Hagens, 1882**

Material examined: 3 ♂♂, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (GBIF, 2023).

***Sphcodes monilicornis* (W. Kirby, 1802)**

Material examined: 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 4 ♂♂, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 1 ♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 2 ♂♂, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (GBIF, 2023).

Sphcodes niger* Hagens, 1874

Material examined: 9 ♂♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 2 ♂♂, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 13 ♂♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020; 3 ♂♂, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020; 2 ♂♂, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Sphcodes pseudofasciatus Blüthgen, 1924

Material examined: 3 ♂♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 3 ♂♂, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020; 5 ♂♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (GBIF, 2023).

Sphcodes puncticeps Thomson, 1870*

Material examined: 1 ♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (GBIF, 2023).

V. Family Megachilidae Latreille, 1802

Genus Anthidiellum Cockerell, 1904

Anthidiellum strigatum (Panzer, 1805)

Material examined: 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (Antropov et al., 2017).

Genus Chelostoma Latreille, 1809

Chelostoma distinctum (Stoeckert, 1929)*

Material examined: 3 ♀♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♂, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (Antropov et al., 2017).

Chelostoma foveolatum (F. Morawitz, 1868)

Material examined: 4 ♂♂, Tsageri, Dogurashi, Nalobievi, 19–25.vii.2020, Leg.: G. Japoshvili.

General distribution: Europe and Middle east (Antropov et al., 2017).

Genus Heriades Spinola, 1807

Heriades truncorum (Linnaeus, 1758)

Material examined: 1♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Holarctic (Antropov et al., 2017).

Genus Hoplitis Klug, 1807

Hoplitis adunca (Panzer, 1798)*

Material examined: 41 ♀♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili; 37 ♂♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♂, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020; 1 ♀, Mukhura, 20–27.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (Antropov et al., 2017).

Hoplitis leucomelana (W. Kirby, 1802)

Material examined: 7 ♀♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 3 ♂♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (Antropov et al., 2017).

Hoplitis papaveris* (Latreille, 1799)

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (Antropov et al., 2017).

Hoplitis tridentata* (Dufour et Perris, 1840)

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (Antropov et al., 2017).

Genus *Megachile* Latreille, 1802***Megachile dacica* Mocsáry, 1879***

Material examined: 1 ♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 1 ♀, Tsageri, Dogurashi, Nalobievi, 18–24.viii.2020, Leg.: G. Japoshvili.

General distribution: Europe (Antropov et al., 2017).

Megachile melanopyga* A. Costa, 1863

Material examined: 1 ♀, Tsageri, Dogurashi, Tsablanis gora, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (Antropov et al., 2017).

***Megachile octosignata* Nylander, 1852**

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020; 3 ♂♂, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Europe and Middle east (Antropov et al., 2017).

Genus *Osmia* Panzer, 1806***Osmia cephalotes* F. Morawitz, 1870***

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (Antropov et al., 2017).

Genus *Stelis* Panzer, 1806***Stelis ornatula* (Klug, 1807)***

Material examined: 3 ♀♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (Antropov et al., 2017).

Stelis signata* (Latreille, 1809)

Material examined: 1 ♀, Tsageri, Dogurashi, Katsunara, 5–12.vi.2020, Leg.: G. Japoshvili.

General distribution: Western Palaearctic (Antropov et al., 2017).

VI. Family Melittidae Schenck, 1860**Genus *Macropis* Panzer, 1809*****Macropis fulvipes* (Fabricius, 1804)**

Material examined: 1 ♂, Tsageri, Dogurashi, Nalobievi, 20–26.vii.2020, Leg.: G. Japoshvili.

General distribution: Palaearctic (Antropov et al., 2017).

DISCUSSION

Presented results are just a part of larger survey of all Hymenopterans collected by Malaise trap during 2020–2021 growing season in North Western Georgia (Sakartvelo). This data records 116 species of macrohymenopterans belonging to 12 families and 39 genera. Twenty-one genera and 42 species belonging to Speciformes and 18 genera and 74 species to Apiformes. According to the zoogeographical distribution, most of the species are Western Palaearctic (45) or Palaearctic (21). Seventeen species are characterized with Holarctic distribution. Seven species are with European distribution. Five species are with European distribution with single country records out of Europe. Seven species had Western Palaearctic and Nearctic distribution. Four species can be considered as a cosmopolitan. Only one species *Trypoxylon rubiginosum* Gussakovskij, 1936 and three species (*Halictus gavarnicus*, *Hylaeus brachycephalus*, *Crossocerus acanthophorus*) can be considered as an endemic of Caucasus and Mediterranean region respectively. One genus *Polemistus* de Saussure, 1892 and 39 species are new records for Georgia. This is just part of collected and studied material, therefore the identification continues. After summarizing the existing data about Apoidea (Kirkitadze et al., 2017; Kirkitadze, 2022; Japoshvili & Ljubomirov, 2021), their number reached to 425.

AUTHOR'S CONTRIBUTION

The authors confirm their contribution in the paper as follows: G. Japoshvili: Collecting, preparation and preliminary sorting of the material; T. Ljubomirov: identification of specimens. Both authors participated in writing the paper. The authors read and approved the final version of the manuscript.

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AVAILABILITY OF DATA AND MATERIAL

The specimens listed in this study are deposited in the collection of Entomological Institute, Agricultural University of Georgia, and are available from the curator, upon request.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

CONSENT FOR PUBLICATION

Not applicable.

CONFLICT OF INTERESTS

The authors declare that there is no conflict of interest regarding the publication of this paper.

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زنبورهای بالاخانواده (Hymenoptera, Apiformes and Spheciformes) Apoidea در شمال غرب گرجستان همراه با گزارش‌های جدید

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چکیده: طی این تحقیق، تعداد ۱۱۶ گونه از ۳۹ جنس و ۱۲ خانواده متعلق به دو زیربخش Apiformes و Spheciformes و بالاخانواده Apoidea از کشور گرجستان (ساکارتولو) گزارش شدند. در بین این موارد، وجود جنس *Polemistus* de Saussure, 1892 و ۳۹ گونه برای اولین بار از این کشور ثبت شد. این یافته‌ها مربوط به شناسایی بخشی از نمونه‌های جمع‌آوری شده بوده، و مطالعات بیشتر ادامه دارد.

واژگان کلیدی: زنبورها، پراکنش، فون، فهرست، گزارش جدید، ساکارتولو