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PRELIMINARY LIST OF SOME ACULEATA (HYMENOPTERA: CHRYSIDOIDEA, POMPILOIDEA, VESPOIDEA, APOIDEA) OF THE SHATSK NATIONAL NATURAL PARK (VOLYN REGION, UKRAINE)

Кумпаненко, О. С., Гончар, Г. Ю., Горобчишин, В. А., Проценко, Ю. В. Попередній список деяких Aculeata (Hymenoptera: Chrysididae, Pompilidae, Vespidae, Apoidea) Шацького національного природного парку (Волинська область, Україна). *Вісті Харківського ентомологічного товариства*. 2021. Т. XXIX, вип. 1. С. 8–19. DOI: 10.36016/KhESG-2021-29-1-2.

Наводиться попередній список Chrysididae, Mutillidae, Pompilidae, Vespidae, Sphecidae Crabronidae та Apoidea Шацького національного природного парку. Серед 139 зареєстрованих на цей час 56 видів уперше вказуються для території парку, 5 видів внесено до Червоних книг України, Білорусі та Польщі, а 83 види належать до охоронних категорій МСОП. Один інвазійний вид (*Isodontia mexicana*) вперше знайдений у Волинській області. 1 рис., 14 назв.

Ключові слова: список видів, охоронні категорії, риючі оси, дорожні оси, бджоли.

Кумпаненко, А. С., Гончар, А. Ю., Горобчишин, В. А., Проценко, Ю. В. Предварительный список некоторых Aculeata (Hymenoptera: Chrysididae, Pompilidae, Vespidae, Apoidea) Шацкого национального природного парка (Волинская область, Украина). *Известия Харьковского энтомологического общества*. 2021. Т. XXIX, вып. 1. С. 8–19. DOI: 10.36016/KhESG-2021-29-1-2.

Приводится предварительный список Chrysididae, Mutillidae, Pompilidae, Vespidae, Sphecidae Crabronidae и Apoidea Шацкого национального природного парка. Среди 139 зарегистрированных в настоящее время 56 видов впервые указываются для территории парка, 5 видов занесены в Красные книги Украины, Беларуси и Польши, а 83 вида относятся к охраняемым категориям МСОП. Один инвазивный вид (*Isodontia mexicana*) впервые найден в Волинской области. 1 рис., 14 назв.

Ключевые слова: список видов, охранные категории, роющие оси, дорожные оси, пчёлы.

Kumpanenko, O. S., Honchar, H. Yu., Gorobchishyn, V. A., Protsenko, Yu. V. Preliminary list of some Aculeata (Hymenoptera: Chrysididae, Pompilidae, Vespidae, Apoidea) of the Shatsk National Natural Park (Volyn Region, Ukraine). *The Kharkov Entomological Society Gazette*. 2021. Vol. XXIX, iss. 1. P. 8–19. DOI: 10.36016/KhESG-2021-29-1-2.

A preliminary checklist of Chrysididae, Mutillidae, Pompilidae, Vespidae, Sphecidae, Crabronidae, and Apoidea of the Shatsk National Natural Park are provided. Among 139 currently registered species, 56 species are recorded for the park territory for the first time, 5 species are listed in the Red Data Books of Ukraine, Belarus, and Poland, and 83 species belong to IUCN categories. One invasive species (*Isodontia mexicana*) was found in Volyn Region for the first time. 1 fig., 14 refs.

Keywords: checklist, red list, digger wasps, spider wasps, wild bees.

Introduction. The Shatsk National Natural Park was established in 1983 at the territory of Volyn Region within the Ukrainian Polissya landscape zone. The park is located in the west of one of the largest swamp-lake-forest complexes of Europe. It was included in the World Network of Biosphere Reserves in 2002, and became the basis of the Ukrainian part of the International Polish-Belarusian-Ukrainian Biosphere Reserve 'Western Polissya' since 2011. The presence of eleven types of settlements NATURA 2000 in the park highlights its great role in various aspects of environmental conservation at the European level. The area of the Shatsk National Natural Park covers 48,977 hectares; its characteristic feature is the presence of a complex of lakes of various origins (there are 23 lakes in the park) with a total area of 6,338.9 hectares. Forests occupy 52.5% of general park area, grasslands cover 12.4%, marshes occupy 2.7%, and water reservoirs cover 14.2%. The rest of the area is taken by farms and roads (Yurchuk *et al.*, 2014).

Thus, the study of biodiversity as a part of other conservation activities in the Shatsk National Natural Park is very actual. Hymenoptera, one of most taxonomically diverse order of insects, is studied in the park rather fragmentally. Thirty two species of wild bees were recorded by Osytshnjuk (1958, 1961, 1964), 25 species of bumblebees were given by Konovalova (2016), and 57 species of ants were registered by Radchenko (2009).

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Materials and methods. A total of 579 specimens of different Aculeata were collected at 9–13 September 2019. Insects were caught with an entomological net and by colored pan traps (diameter — 75 mm, height — 35 mm, colors — white, yellow, and blue), which were placed in a transect of 15 traps. All sampling sites are shown on the map at Fig. 1. The species classification follows Wahis (2006), Ascher and Pickering (2020), Pulawski (2021). All identified specimens are deposited in the collection of the Institute for Evolutionary Ecology of the National Academy of Sciences of Ukraine (Kyiv, Ukraine).

Abbreviations used in the text: BY — Red Book of the Republic of Belarus (Kachanovskiy, Nikiforov, Parfenov, 2015); PL — Red Book of Animals of Polish (Głowaciński, Nowacki, 2004); UA — Red Data Book of Ukraine (Akimov, 2009). The categories of bees' species are also given by European Red List of Bees (Nieto *et al.*, 2014): DD — data deficient, EN — endangered, LC — least concern, NT — near threatened, VU — vulnerable.

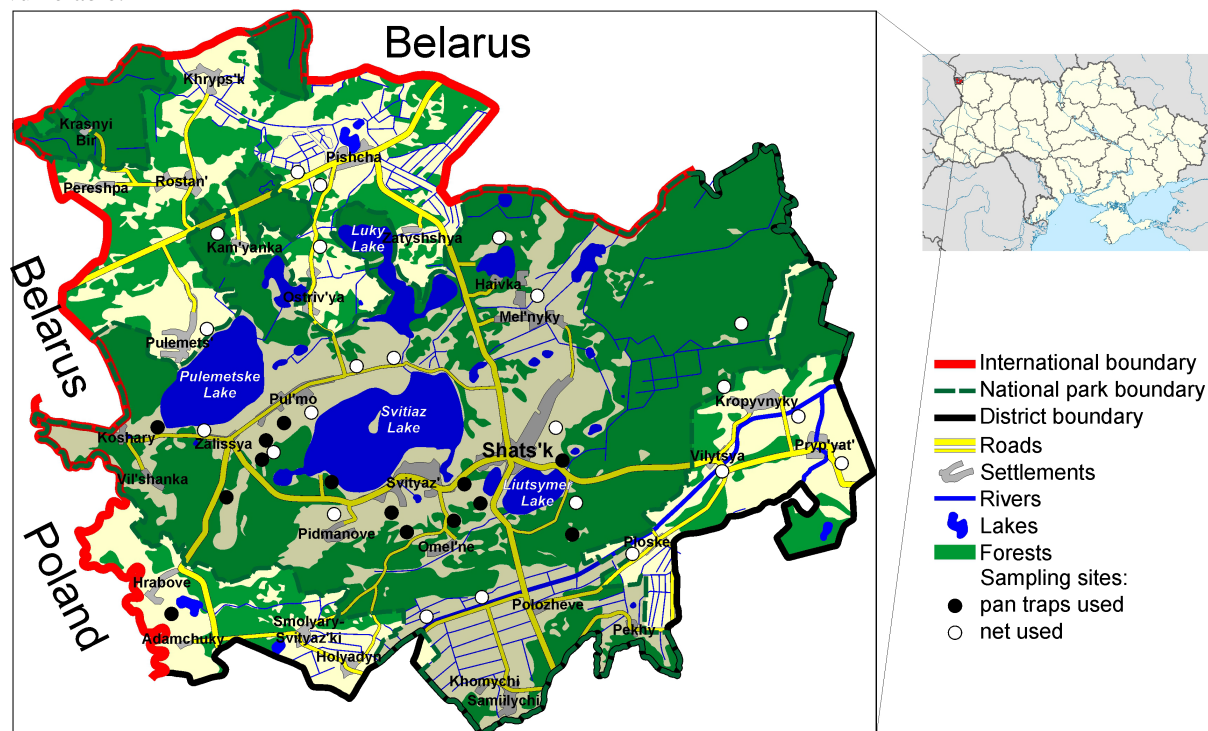


Fig. 1. The map of the Shatsk National Natural Park with sampling sites.

Results and discussion. In the present contribution we provide the first results of our study of selected groups of Hymenoptera from the territory of the Shatsk National Natural Park. Thus, 56 species of Aculeata from the families Chrysididae, Mutillidae, Pompilidae, Vespidae, Sphecidae, and Crabronidae are recorded from the park for the first time. In addition, the list of the wild bees was supplemented by 29 new records. It should be noted that our survey took place in early autumn. Therefore, some phenological groups of insects (spring and early summer species) have not been registered.

Below we give the integrated checklist comprising 139 species currently known from the Shatsk National Natural Park. Species that were not found during our investigation, but are known from the literature are marked with '*'; species recorded from the park both from our study and known from the literature are marked with '**'.

Taking into account the specifics of this group of insects, we indicate the biotopic referencing, since the territory of the park is small.

Family CHRYSIDIDAE Latreille, 1802

Subfamily CHRYSIDINAE Latreille, 1802

Genus *Chrysis* Linnaeus, 1761

Chrysis bicolor (Lepelletier, 1805)

Material. Sandy area: 1 ♀ — 9.IX.2019 (pan trap).

***Chrysis splendidula* Rossi, 1790**

Material. Sandy area: 2 ♀♀ — 9.IX.2019 (pan trap), 1 ♀ — 11.IX.2019 (pan trap), 1 ♀ — 12.IX.2019 (pan trap).

Genus *Hedychrum* Latreille, 1806

***Hedychrum niemelai* Linsenmaier, 1959**

Material. Sandy area: 35 ♀♀, 4 ♂♂ — 9–13.IX.2019 (pan trap).

Family MUTILLIDAE Latreille, 1802

Subfamily MUTILLINAE Latreille, 1802

Genus *Smicromyrme* Thomson, 1870

***Smicromyrme (Smicromyrme) rufipes* (Fabricius, 1787)**

Material. Sandy area: 1 ♀ — 9.IX.2019 (net).

Family POMPILIDAE Fabricius, 1798

Subfamily PEPSINAE Lepeletier, 1845

Genus *Caliadurgus* Pate, 1946

***Caliadurgus fasciatellus* (Spinola, 1808)**

Material. Forest and forest edge: 2 ♀♀ — 9.IX.2019 (net — 1, pan trap — 1); grassland: 1 ♀ — 11.IX.2019 (net).

Genus *Priocnemis* Schioedte, 1837

***Priocnemis (Priocnemis) exaltata* (Fabricius, 1775)**

Material. Forest and forest edge: 2 ♀♀ — 9.IX.2019 (pan trap).

***Priocnemis (Priocnemis) fennica* Haupt, 1927**

Material. Forest and forest edge: 2 ♀♀ — 9.IX.2019 (pan trap).

Subfamily POMPILINAE Latreille, 1805

Genus *Anoplius* Dufour, 1834

***Anoplius (Anoplius) concinnus* (Dahlbom, 1843)**

Material. Waterside area: 2 ♀♀, 1 ♂ — 11.IX.2019 (net); 1 ♀, 3 ♂♂ — 12.IX.2019 (net).

***Anoplius (Anoplius) nigerrimus* (Scopoli, 1763)**

Material. Grassland: 1 ♀ — 11.IX.2019 (net).

***Anoplius (Arachnophroctonus) viaticus* (Linnaeus, 1758)**

Material. Forest and forest edge: 3 ♀♀ — 12.IX.2019 (net — 2, pan trap — 1).

Genus *Arachnospila* Kincaid, 1900

***Arachnospila (Ammosphex) anceps* (Wesmael, 1851)**

Material. Grassland: 1 ♀ — 10.IX.2019 (net); sandy area: 2 ♀♀ — 9.IX.2019 (net).

***Arachnospila (Ammosphex) trivialis* (Dahlbom, 1843)**

Material. Sandy area: 1 ♀ — 13.IX.2019 (pan trap).

Genus *Episyron* Schioedte, 1837

***Episyron albonotatum* (Vander Linden, 1827)**

Material. Grassland: 1 ♀ — 10.IX.2019 (pan trap).

***Episyron rufipes* (Linnaeus, 1758)**

Material. Sandy area: 1 ♀ — 9.IX.2019 (net), 3 ♀♀ — 10.IX.2019 (net).

Genus *Evagetes* Lepeletier, 1845

***Evagetes (Evagetes) crassicornis* (Shuckard, 1837)**

Material. Grassland: 2 ♀♀ — 11.IX.2019 (net — 1, pan trap — 1); sandy area: 3 ♀♀ — 9.IX.2019 (net — 2, pan trap — 1), 1 ♀ — 13.IX.2019 (net).

***Evagetes (Evagetes) pectinipes* (Linnaeus, 1758)**

Material. Sandy area: 5 ♀♀ — 10.IX.2019 (net), 1 ♀ — 12.IX.2019 (net).

Genus *Pompilus* Fabricius, 1798

***Pompilus cinereus* (Fabricius, 1775)**

Material. Sandy area: 5 ♀♀ — 9.IX.2019 (net), 1 ♀ — 12.IX.2019 (net), 1 ♀, 1 ♂ — 13.IX.2019 (net).

Family VESPIDAE Latreille, 1802

Subfamily EUMENINAE Leach, 1815

Genus *Ancistrocerus* Wesmael, 1836

***Ancistrocerus gazella* (Panzer, 1798)**

Material. Grassland: 1 ♀ — 10.IX.2019 (net).

***Ancistrocerus trifasciatus* (Müller, 1776)**

Material. Forest and forest edge: 1 ♀ — 9.IX.2019 (pan trap), 1 ♀ — 10.IX.2019 (net).

Genus *Euodynerus* Dalla Torre, 1904

***Euodynerus notatus* (Jurine, 1807)**

Material. Forest and forest edge: 1 ♀ — 12.IX.2019 (pan trap).

Genus *Eumenes* Latreille, 1802

***Eumenes coarctatus* (Linnaeus, 1758)**

Material. Forest and forest edge: 2 ♀♀ — 9.IX.2019 (net — 1, pan trap — 1); grassland: 2 ♀♀ — 11.IX.2019 (pan trap), 1 ♀ — 13.IX.2019 (net); sandy area: 2 ♀♀ — 9.IX.2019 (pan trap), 2 ♀♀ — 13.IX.2019 (net).

***Eumenes coronatus* (Panzer, 1799)**

Material. Forest and forest edge: 1 ♀ — 9.IX.2019 (pan trap).

***Eumenes pedunculatus* (Panzer, 1799)**

Material. Forest and forest edge: 1 ♀ — 11.IX.2019 (net).

Genus *Stenodynerus* Saussure, 1863

***Stenodynerus orenburgensis* (André, 1884)**

Material. Grassland: 1 ♂ — 11.IX.2019 (pan trap).

Subfamily POLISTINAE Bequaert, 1918

Genus *Polistes* (Latreille, 1802)

***Polistes (Polistes) gallicus* (Linnaeus, 1767)^{PL}**

Material. Grassland: 1 ♀, 1 ♂ — 12.IX.2019 (net).

***Polistes (Polistes) nimpha* (Christ, 1791)**

Material. Grassland: 1 worker — 10.IX.2019 (pan trap).

Subfamily VESPINAE Latreille, 1802

Genus *Vespa* Linnaeus, 1758

***Vespa crabro* Linnaeus, 1758**

Material. Forest and forest edge: 1 worker — 9.IX.2019 (pan trap).

Family SPHECIDAЕ Latreille, 1802

Subfamily AMMOPHILINAE André, 1886

Genus *Ammophila* W. Kirby, 1798

***Ammophila campestris* Latreille, 1809**

Material. Grassland: 2 ♀♀ — 10.IX.2019 (pan trap), 3 ♀♀ — 13.IX.2019 (pan trap); sandy area: 4 ♀♀ — 11.IX.2019 (pan trap), 1 ♀ — 12.IX.2019 (net).

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

Material. Grassland: 4 ♀♀ — 10.IX.2019 (pan trap), 2 ♀♀ — 12.IX.2019 (pan trap); sandy area: 1 ♀ — 13.IX.2019 (net).

Genus *Podalonia* Fernald, 1927

***Podalonia affinis* (W. Kirby, 1798)**

Material. Grassland: 10 ♀♀ — 8–13.IX.2019 (pan trap); sandy area: 1 ♀ — 13.IX.2019 (net).

Subfamily SPHECINAE Latreille, 1802

Genus *Isodontia* (Patton, 1880)

***Isodontia mexicana* (Saussure, 1867)**

Material. Grassland: 1 ♀ — 12.IX.2019 (pan trap).

Genus *Prionyx* Vander Linden, 1827

***Prionyx nudatus* (Kohl, 1885)**

Material. Grassland: 3 ♀♀ — 12.IX.2019 (pan trap); sandy area: 1 ♀ — 12.IX.2019 (net).

Genus *Sphex* Linnaeus, 1758

***Sphex funerarius* Gussakovskij, 1934^{BY, UA}**

Material. Grassland: 3 ♀♀ — 12.IX.2019 (pan trap).

Family CRABRONIDAE Latreille, 1802

Subfamily BEMBICINAE Latreille, 1802

Genus *Didineis* Wesmael, 1852

***Didineis lunicornis* (Fabricius, 1798)**

Material. Grassland: 1 ♀ — 12.IX.2019 (net).

Genus *Gorytes* Latreille, 1804

***Gorytes quinquecinctus* (Fabricius, 1793)**

Material. Forest and forest edge: 4 ♀♀ — 13.IX.2019 (net).

Genus *Harpactus* Shuckard, 1837

***Harpactus morawitzi* Radoszkowski, 1884**

Material. Grassland: 1 ♀ — 12.IX.2019 (net).

Subfamily CRABRONINAE Latreille, 1802

Genus *Crabro* Fabricius, 1775

***Crabro scutellatus* (Scheven, 1781)**

Material. Forest and forest edge: 1 ♂ — 11.IX.2019 (net).

Genus *Crossocerus* Lepeletier et Brullé, 1835

***Crossocerus (Blepharipus) annulipes* (Lepeletier et Brullé, 1835)**

Material. Forest and forest edge: 2 ♀♀ — 13.IX.2019 (net).

Genus *Ectemnius* Dahlbom, 1845

***Ectemnius (Hypocrabro) continuus* (Fabricius, 1804)**

Material. Grassland: 1 ♀ — 10.IX.2019 (pan trap).

Genus *Lestica* Billberg, 1820

***Lestica clypeata* (Linnaeus, 1767)**

Material. Grassland: 2 ♀♀, 1 ♂ — 10.IX.2019 (pan trap), 2 ♀♀ — 12.IX.2019 (pan trap).

Genus *Lindenius* Lepeletier et Brullé, 1835

***Lindenius albilabris* (Fabricius, 1793)**

Material. Grassland: 1 ♀ — 10.IX.2019 (pan trap).

Genus *Oxybelus* Latreille, 1796

***Oxybelus quatuordecimnotatus* Jurine, 1807**

Material. Grassland: 1 ♀, 1 ♂ — 10.IX.2019 (pan trap).

***Oxybelus trispinosus* (Fabricius, 1787)**

Material. Grassland: 1 ♀ — 12. IX.2019 (pan trap).

Genus *Tachysphex* Kohl, 1883

***Tachysphex nitidior* Beaumont, 1940**

Material. Sandy area: 2 ♀♀ — 9.IX.2019 (net).

Genus *Trypoxylon* Latreille, 1796

***Trypoxylon (Trypoxylon) attenuatum* Smith, 1851**

Material. Grassland: 6 ♀♀ — 9–13.IX.2019 (pan trap).

Subfamily MELLININAE Latreille, 1802

Genus *Mellinus* Fabricius, 1790

***Mellinus arvensis* (Linnaeus, 1758)**

Material. Forest and forest edge: 2 ♀♀, 1 ♂ — 9.IX.2019 (net); grassland: 15 ♀♀ — 9–13.IX.2019 (pan trap); sandy area: 2 ♀♀ — 13.IX.2019 (net).

Subfamily PEMPREDONINAE Dahlbom, 1835

Genus *Diodontus* Curtis, 1834

***Diodontus minutus* (Fabricius, 1793)**

Material. Grassland: 2 ♀♀, 1 ♂ — 12.IX.2019 (pan trap).

Genus *Pemphredon* Latreille, 1796

***Pemphredon (Cemonus) inornata* Say, 1824**

Material. Forest and forest edge: 1 ♀ — 13.IX.2019 (net).

***Pemphredon (Pemphredon) montana* Dahlbom, 1845**

Material. Grassland: 1 ♀ — 12.IX.2019 (pan trap).

Subfamily PHILANTHINAE Latreille, 1802

Genus *Cerceris* Latreille, 1802

***Cerceris arenaria* (Linnaeus, 1758)**

Material. Grassland: 16 ♀♀, 5 ♂♂ — 9–13.IX.2019 (pan trap); sandy area: 1 ♀ — 10.IX.2019 (net), 2 ♀♀ — 13.IX.2019 (net — 1, pan trap — 2).

***Cerceris interrupta* (Panzer, 1799)**

Material. Grassland: 1 ♀ — 10.IX.2019 (pan trap).

***Cerceris quadricincta* (Villers, 1799)**

Material. Grassland: 1 ♂ — 12.IX.2019 (pan trap).

***Cerceris quinquefasciata* (Rossi, 1792)**

Material. Grassland: 1 ♀ — 11.IX.2019 (pan trap).

***Cerceris rybyensis* (Linnaeus, 1771)**

Material. Grassland: 5 ♀♀ — 9–13.IX.2019 (pan trap).

***Cerceris sabulosa* (Panzer, 1799)**

Material. Grassland: 10 ♀♀, 1 ♂ — 9–13.IX.2019 (pan trap).

Genus *Philanthus* Fabricius, 1790

***Philanthus triangulum* (Fabricius, 1775)**

Material. Grassland: 2 ♀♀, 1 ♂ — 12.IX.2019 (net).

Family COLLETIDAE Lepeletier, 1841

Subfamily COLLETINAE Lepeletier, 1841

Genus *Colletes* Latreille, 1802

**** *Colletes (Colletes) succinctus* (Linnaeus, 1758) ^{NT}**

Material. Forest, dry heaths, forest edge: 2 ♀♀ — 12.IX.2019 (net), 1 ♂ — 10.IX.2019 (net).

*** *Colletes (Simcolletes) fodiens* (Geoffroy, 1785) ^{VU}**

***Colletes (Simcolletes) similis* Schenck, 1853 ^{LC}**

Material. Grassland: 2 ♀♀ — 10.IX.2019 (net)

Subfamily HYLAEINAE Viereck, 1916

Genus *Hylaeus* Fabricius, 1793

***Hylaeus (Abrupta) cornutus* Curtis, 1831 ^{LC}**

Material. Grassland: 2 ♀♀ — 10.IX.2019 (pan trap).

***Hylaeus (Dentigera) brevicornis* Nylander, 1852 ^{LC}**

Material. Grassland: 1 ♀♀ — 09.IX.2019 (pan trap).

*** *Hylaeus (Hylaeus) angustatus* (Schenck, 1861) ^{LC}**

***Hylaeus (Hylaeus) annularis* (Kirby, 1802) ^{DD}**

Material. Grassland: 1 ♀ — 10.IX.2019 (net).

***Hylaeus (Hylaeus) communis* Nylander, 1852 ^{LC}**

Material. Grassland: 1 ♂ — 12.IX.2019 (net).

Family ANDRENIDAE Latreille, 1802

Subfamily ANDRENINAE Latreille, 1802

Genus *Andrena* Fabricius, 1775

*** *Andrena (Cnemidandrena) denticulata* (Kirby, 1802) ^{DD}**

***Andrena (Cnemidandrena) fuscipes* (Kirby, 1802) ^{DD}**

Material. Forest, dry heaths: 1 ♀ — 11.IX.2019 (net).

*** *Andrena (Hoplendrena) rosae* Panzer, 1801 ^{DD}**

*** *Andrena (Melandrena) gallica* Schmiedeknecht, 1883 ^{NT}**

Subfamily PANURGINAE Leach, 1815

Genus *Panurginus* Nylander, 1848

***Panurginus labiatus* Eversmann, 1852^{DD}**

Material. Grassland: 1 ♀ — 12.IX.2019 (pan trap).

Family HALICTIDAE Thomson, 1869

Subfamily HALICTINAE Thomson, 1869

Genus *Halictus* Latreille, 1804

****Halictus (Halictus) quadricinctus* (Fabricius, 1776)^{NT}**

***Halictus (Protohalictus) rubicundus* (Christ, 1791)^{LC}**

Material. Grassland: 1 ♀, 1 ♂ — 10.IX.2019 (net).

***Halictus (Seladonia) subauratus* (Rossi, 1792)^{LC}**

Material. Grassland: 1 ♀ — 10.IX.2019 (net), 1 ♀ — 11.IX.2019 (net); sandy area: 2 ♀♀ — 11.IX.2019 (net), 3 ♂♂ — 12.IX.2019 (pan trap).

***Halictus (Seladonia) tumulorum* (Linnaeus, 1758)^{LC}**

Material. Grassland: 1 ♀ — 9.IX.2019 (net), 2 ♀♀ — 12.IX.2019 (net); sandy area: 12 ♂♂ — 12.IX.2019 (net — 5, pan trap — 8).

Genus *Lasioglossum* Curtis, 1833

***Lasioglossum (Dialictus) leucopus* (Kirby, 1802)^{LC}**

Material. Grassland: 1 ♂ — 9.IX.2019 (net).

***Lasioglossum (Hemihalictus) lucidulum* (Schenk, 1861)^{LC}**

Material. Forest and forest edge: 2 ♂♂ — 10.IX.2019 (pan trap); grassland: 4 ♂♂ — 9.IX.2019 (net — 1, pan trap — 3), 2 ♀♀ — 11.IX.2019 (net), 5 ♂♂ — 12.IX.2019 (net — 2, pan trap — 3); sandy area: 3 ♂♂ — 11.IX.2019 (net).

*****Lasioglossum (Hemihalictus) minutissimum* (Kirby, 1802)^{LC}**

Material. Forest and forest edge: 2 ♂♂ — 10.IX.2019 (pan trap); grassland: 2 ♂♂ — 9.IX.2019 (net), 1 ♀ — 10.IX.2019 (pan trap).

****Lasioglossum (Hemihalictus) punctatissimum* (Schenck, 1853)^{LC}**

****Lasioglossum (Hemihalictus) quadrinotatum* (Schenck, 1861)^{NT}**

****Lasioglossum (Hemihalictus) semilucens* (Alfken, 1914)^{LC}**

****Lasioglossum (Hemihalictus) tarsatum* (Schenck, 1869)^{NT}**

****Lasioglossum (Lasioglossum) sexnotatum* (Kirby, 1802)^{NT}**

***Lasioglossum (Lasioglossum) discum* (Smith 1853)^{LC}**

Material. Sandy area: 1 ♀ — 12.IX.2019 (net).

***Lasioglossum (Lasioglossum) pallens* (Brullé, 1832)^{LC}**

Material. Sandy area: 1 ♀ — 13.IX.2019 (net).

****Lasioglossum (Lasioglossum) quadrinotatum* (Kirby, 1802)^{NT}**

***Lasioglossum (Leuchalictus) leucozonium* (Schrank, 1781)^{LC}**

Material. Grassland: 1 ♀ — 10.IX.2019 (pan trap), 2 ♂♂ — 13.IX.2019 (net).

***Lasioglossum (Leuchalictus) zonulum* (F. Smith, 1848)^{LC}**

Material. Grassland: 1 ♀ — 10.IX.2019 (net); sandy area: 1 ♀ — 13.IX.2019 (net).

***Lasioglossum (Sphecodogastra) albipes* (Fabricius 1781)^{LC}**

Material. Sandy area: 1 ♀ — 11.IX.2019 (pan trap).

*****Lasioglossum (Sphecodogastra) calceatum* (Scopoli, 1763)^{LC}**

Material. Sandy area: 2 ♂♂ — 09.IX.2019 (net), 1 ♀ — 10.IX.2019 (net).

* *Lasioglossum (Sphecodogastra) laeve* (Kirby, 1802)^{EN}

Lasioglossum (Sphecodogastra) malachurum (Kirby, 1802)^{LC}

Material. Sandy area: 1 ♀ — 10.IX.2019 (net), 1 ♂ — 13.IX.2019 (pan trap).

Genus *Sphecodes* Latreille, 1804

** *Sphecodes monilicornis* (Kirby, 1802)^{LC}

Material. Sandy area: 1 ♀ — 11.IX.2019 (net), 1 ♂ — 12.IX.2019 (net).

Sphecodes puncticeps Thomson, 1870^{LC}

Material. Sandy area: 1 ♀, 1 ♂ — 10.IX.2019 (net), 1 ♂ — 12.IX.2019 (pan).

* *Sphecodes reticulatus* Thomson, 1870^{LC}

* *Sphecodes rubicundus* Hagens, 1875^{NT}

Family MELITTIDAE Michener, 2000

Subfamily DASYPODAINAE Börner, 1919

Genus *Dasypoda* Latreille, 1802

Dasypoda (Dasypoda) hirtipes (Fabricius, 1793)^{LC}

Material. Grassland: 1 ♀ — 12.IX.2019 (net); sandy area: 1 ♀ — 09.IX.2019 (pan trap), 1 ♀ — 10.IX.2019 (pan trap).

Subfamily MACROPIDINAE Robertson, 1904

Genus *Macropis* Panzer, 1809

* *Macropis (Macropis) europaea* Warncke, 1973^{LC}

Subfamily MELITTINAE Schenk, 1861

Genus *Melitta* Kirby, 1802

* *Melitta (Cilissa) haemorrhoidalis* (Fabricius, 1775)^{LC}

* *Melitta (Melitta) nigricans* Alfken, 1905^{LC}

Melitta (Melitta) tricineta Kirby, 1802^{NT}

Material. Grassland: 4 ♀♀, 1 ♂ — 13.IX.2019 (net).

Family MEGACHILIDAE Latreille, 1802

Subfamily MEGACHILINAE Latreille, 1802

Genus *Anthidiellum* Cockerell, 1904

* *Anthidiellum (Anthidiellum) strigatum* (Panzer, 1805)^{LC}

Genus *Anthidium* Fabricius, 1805

Anthidium (Anthidium) manicatum (Linnaeus, 1758)^{LC}

Material. Grassland: 1 ♂ — 11.IX.2019 (net).

Anthidium (Anthidium) septemspinatum Lepeletier, 1841^{DD}

Material. Grassland: 1 ♂ — 11.IX.2019 (net).

Genus *Chelostoma* Latreille, 1809

* *Chelostoma (Chelostoma) florisomne* (Linnaeus, 1758)^{LC}

Genus *Coelioxys* Latreille, 1809

Coelioxys (Boreocoelioxys) mandibularis Nylander, 1848^{LC}

Material. Sandy area: 1 ♀, 1 ♂ — 13.IX.2019 (net).

Genus *Megachile* Latreille, 1802

* *Megachile (Megachile) alpicola* Alfken, 1924^{DD}

Megachile (Megachile) ligniseca (Kirby, 1802)^{DD}

Material. Grassland: 1 ♀ — 11.IX.2019 (net).

Megachile (Megachile) versicolor Smith, 1844^{DD}

Material. Forest and forest edge: 5 ♀♀ — 10.IX.2019 (net — 2, pan trap — 3); grassland: 7 ♀♀ — 9.IX.2019 (net — 3, pan trap — 4); sandy area: 6 ♀♀, 1 ♂ — 13.IX.2019 (net — 1, pan trap — 1).

Family APIDAE Latreille, 1802

Subfamily APINAE Latreille, 1802

Genus *Anthophora* Latreille, 1803

** *Anthophora (Clisodon) furcata* (Panzer, 1798)^{LC}

Material. Grassland: 3 ♀♀ — 11.IX.2019 (net).

Genus *Bombus* Latreille, 1802

* *Bombus (Bombias) confusus* Schenck, 1859^{VU}

** *Bombus (Bombus) lucorum* (Linnaeus, 1761)^{LC}

Material. All types of habitat: 4 ♀♀, 3 ♂♂ — 09.IX.2019 (net — 6, pan trap — 1), 3 ♀♀ — 10.IX.2019 (net), 1 ♀, 2 ♂♂ — 11.IX.2019 (net), 3 ♀♀, 6 ♂♂ — 12.IX.2019 (net), 4 ♀♀, 6 ♂♂ — 13.IX.2019 (net).

** *Bombus (Bombus) terrestris* (Linnaeus, 1758)^{LC}

Material. All types of habitat: 3 ♀♀, 3 ♂♂ — 09.IX.2019 (net), 5 ♀♀, 3 ♂♂ — 10.IX.2019 (net), 7 ♀♀, 6 ♂♂ — 11.IX.2019 (net), 3 ♀♀, 9 ♂♂ — 12.IX.2019 (net), 4 ♀♀, 2 ♂♂ — 13.IX.2019 (net).

* *Bombus (Cullumanobombus) semenoviellus* Scorikov, 1910^{LC}

* *Bombus (Kallobombus) soroensis* (Fabricius, 1776)^{LC}

** *Bombus (Megabombus) hortorum* (Linnaeus, 1761)^{LC}

Material. All types of habitat: 3 ♀♀, 4 ♂♂ — 09.IX.2019 (net — 5, pan trap — 2), 2 ♀♀ — 10.IX.2019 (net), 4 ♀♀, 2 ♂♂ — 11.IX.2019 (net), 2 ♀♀, 3 ♂♂ — 12.IX.2019 (net), 1 ♀ — 13.IX.2019 (pan trap).

Bombus (Megabombus) ruderatus (Fabricius, 1775)^{LC}

Material. Grassland: 2 ♀♀, 1 ♂ — 09.IX.2019 (net), 1 ♀ — 11.IX.2019 (net), 1 ♂ — 13.IX.2019 (net).

* *Bombus (Melanobombus) lapidarius* (Linnaeus, 1758)^{LC}

* *Bombus (Psithyrus) barbutellus* (Kirby, 1802)^{LC}

* *Bombus (Psithyrus) bohemicus* Seidl, 1837^{LC}

** *Bombus (Psithyrus) campestris* (Panzer, 1801)^{LC}

Material. Grassland: 1 ♀, 1 ♂ — 09.IX.2019 (pan trap), 4 ♂♂ — 12.IX.2019 (net — 2, pan trap — 2), 1 ♂ — 13.IX.2019 (net).

* *Bombus (Psithyrus) norvegicus* (Sparre-Schneider, 1918)^{LC}

** *Bombus (Psithyrus) rupestris* (Fabricius, 1793)^{LC}

Material. Grassland: 1 ♂ — 11.IX.2019 (pan trap).

** *Bombus (Psithyrus) sylvestris* (Lepelletier, 1832)^{LC}

Material. Grassland: 1 ♀ — 09.IX.2019 (pan trap), 2 ♀♀ — 12.IX.2019 (net — 1, pan trap — 1).

* *Bombus (Psithyrus) vestalis* (Geoffroy, 1785)^{LC}

* *Bombus (Pyrobombus) hypnorum* (Linnaeus, 1758)^{LC}

** *Bombus (Pyrobombus) jonellus* (Kirby, 1802)^{LC}

Material. Forest and forest edge: 1 ♂ — 11.IX.2019 (net).

* *Bombus (Pyrobombus) pratorum* (Linnaeus, 1761)^{LC}

* *Bombus (Subterraneobombus) distinguendus* Morawitz, 1869^{VU, BY}

* *Bombus (Subterraneobombus) subterraneus* (Linnaeus, 1758)^{LC}

Bombus (Thoracobombus) humilis Illiger, 1806^{LC}

Material. Forest and forest edge: 1 ♂ — 11.IX.2019 (net); grassland: 1 ♀ — 09.IX.2019 (net).

** *Bombus (Thoracobombus) muscorum* (Linnaeus, 1758)^{VU, BY, UA}

Material. Grassland: 2 workers — 12.IX.2019 (pan trap).

** *Bombus (Thoracobombus) pascuorum* (Scopoli, 1763)^{LC}

Material. All types of habitat: 10 ♀♀, 12 ♂♂ — 09.IX.2019 (net — 19, pan trap — 3), 12 ♀♀, 9 ♂♂ — 10.IX.2019 (net — 19, pan trap — 2), 9 ♀♀, 16 ♂♂ — 11.IX.2019 (net — 24, pan trap — 1), 16 ♀♀, 8 ♂♂ — 12.IX.2019 (net), 14 ♀♀, 2 ♂♂ — 13.IX.2019 (net — 14, pan trap — 2).

** *Bombus (Thoracobombus) ruderarius* (Müller, 1776)^{LC}

Material. Forest and forest edge: 1 ♂ — 13.IX.2019 (net); grassland: 1 ♂ — 10.IX.2019 (net).

* *Bombus (Thoracobombus) schrencki* Morawitz, 1881^{LC, BY}

** *Bombus (Thoracobombus) sylvarum* (Linnaeus, 1761)^{LC}

Material. Forest and forest edge: 2 ♂♂ — 09.IX.2019 (net — 1, pan trap — 1); grassland: 3 ♂♂ — 10.IX.2019 (net — 2, pan trap — 1).

** *Bombus (Thoracobombus) veteranus* (Fabricius, 1793)^{LC}

Material. Grassland: 1 ♂ — 10.IX.2019 (net).

Genus *Eucera* Scopoli, 1770

* *Eucera malvae* (Rossi, 1790)^{LC}

Subfamily NOMADINAE Latreille, 1802

Genus *Epeolus* Latreille, 1802

** *Epeolus cruciger* (Panzer, 1799)^{NT}

Material. Sandy area: 1 ♀ — 13.IX.2019 (net).

Epeolus variegatus (Linnaeus, 1758)^{LC}

Material. Sandy area: 1 ♀ — 12.IX.2019 (net).

Genus *Nomada* Scopoli, 1770

* *Nomada fuscicornis* Nylander, 1848^{LC}

This list comprises 139 species from twelve families of Aculeata. Among them 20 species (including seven species known only from the literature) are kleptoparasites from the genera *Chrysis*, *Hedychrum*, *Evagetes*, *Sphecodes*, *Coelioxys*, *Epeolus*, *Nomada* and the subgenus *Psithyrus*. *Isodontia mexicana*, an invasive species from North America, is recorded for this region for the first time.

About 40% of the wild bees are specialized in collecting pollen from certain plant species. The specialized species recorded at the territory of the park are: for flowers of *Calluna vulgaris* (L.) Hull (Ericaceae) — *Andrena fuscipes*, *Colletes succinctus*, for *Odontites vulgaris* Moench (Orobanchaceae) — *Melitta tricincta*, and for *Campanula* spp. (Campanulaceae) — *Melitta haemorrhoidalis*. In addition, some wild bees collect pollen from certain families: Asteraceae — *Andrena denticulata*, *Colletes fodiens*, *Colletes similis*, *Dasypoda hirtipes*, *Heriades truncorum*, *Megachile ligniseca*; Brassicaceae — *Panurginus labiatus*; Campanulaceae — *Chelostoma florissomne*; Lamiaceae — *Anthophora furcata*; Lythraceae — *Melitta nigricans*; Malvaceae — *Tetralonia malvae*; Primulaceae — *Macropis europaea* (Radchenko, Pesenko, 1994).

Conclusions. A total of 139 species from 12 families of Aculeata are currently registered from the territory of the Shatsk National Natural Park. Some species of the families Chrysididae, Mutillidae, Pompilidae, Vespidae, Sphecidae, and Crabronidae are recorded for the first time.

The list also comprises five species protected by the Red Data Books of Ukraine, Belarus, and Poland: *Bombus distinguendus* (BY), *Bombus muscorum* (BY, UA), *Bombus schrencki* (BY), *Polistes gallicus* (PL), *Sphex funerarius* (BY, UA). Among the registered 83 species, which have the IUCN categories, are those belonging to: EN — 1 species, VU — 4 species, NT — 10 species, and DD — 9 species. There are wild bees,

which are specialized to collect pollen from certain families (12 species) or only some species of flowers (4 species) too. The occurrence of rare species, and those whose population status cannot be estimated, indicates the importance of the Shatsk National Natural Park for the protection of insect diversity. In addition, one invasive species, *Isodontia mexicana*, is recorded for Volyn Region for the first time.

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