

ОБЗОРЫ REVIEW ARTICLES

LIST OF SEVERAL FAMILIES OF DIPTERA FROM THE VOLGA UPLAND AND THE OKA-DON LOWLAND

A.B. Ruchin^{1,*}, N.E. Vikhrev², D.I. Gavryushin², M.N. Esin¹

¹*Joint Directorate of the Mordovia State Nature Reserve and Smolny National Park, Russia*

²*Zoological Museum of Moscow University, Russia*

e-mail: ^{1,*} ruchin.alexander@gmail.com, ² nikita6510@ya.ru

Received: 01.12.2022. Revised: 15.01.2023. Accepted: 01.02.2023.

Diptera is one of the most species-diverse insect orders. The paper presents data on the biodiversity of Diptera from 9 families (Tipulidae, Limoniidae, Pediciidae, Mycetophilidae, Keroplatidae, Ptychopteridae, Muscidae, Fanniidae, Sciomyzidae) inhabiting 14 regions within the Volga upland and Oka-Don lowland. The most studied fauna is in the Republic of Mordovia (399 species). The fauna of these families is least known from the Republic of Tatarstan, Lipetsk Region, Nizhny Novgorod Region, and Vladimir Region (9, 19, 20, and 21 species, respectively). A total of 545 species are known from 9 families of Diptera in the large macroregion. The largest number of species includes the families Muscidae (190) and Limoniidae (102). The biodiversity is least known in Ptychopteridae (4 species), Pediciidae (6 species) and Keroplatidae (10 species).

Key words: Tipulidae, Limoniidae, Pediciidae, Mycetophilidae, Keroplatidae, Ptychopteridae, Muscidae, Fanniidae, Sciomyzidae, European Russia

<https://dx.doi.org/10.24412/cl-31646-2686-7117-2023-32-5-67>

Introduction

Diptera is one of the most species-diverse orders among the holometabolous insects. According to Pape et al. (2011), it has approximately more than 160 000 described species. However, new species are constantly being described from different parts of the world (Nedeljković et al., 2015; Maslova et al., 2020; Grichanov, 2020, 2021; Burington, 2022; Mondal et al., 2022; Moravvej et al., 2022; Yang et al., 2022; and many others). Diptera is traditionally divided into two suborders: Nematocera and Brachycera (Pape et al., 2011), whose degree of knowledge is very uneven in different parts of the world. For example, there are up-to-date checklists of individual Diptera families from different countries (Ježek et al., 2018; Korkmaz et al., 2021; El-Hawagry et al., 2022; Kettani et al., 2022; Mukherjee et al., 2022).

There is a large variety of environments where Diptera larvae and imago occur. For example, aquatic Diptera are found in many shallow streams and puddles, in turbulent waterfalls, in tree hollows, in glacial waters and hot springs. They have been found at altitudes up to 5600 m in the Himalayas and at depths of more than 1000 m in Lake Baikal. They are also the only free-living insects that have colonised aquatic environments on absolutely all continents (Adler & Courtney, 2019). Many Diptera species are important

bioindicators of ecosystem state (Maritano & Sommaggio 2020; Youbi et al., 2020; Lychkovskaya et al., 2022). A large number of species and groups are involved in pollination, herbivory, predation, decomposition and other ecosystem processes at different stages of the life cycle. Imagoes feed on pollen and nectar of Apiaceae, Asteraceae, Ranunculaceae and Rosaceae and others (Rotheray & Gilbert, 2011; Barkalov & Khruleva, 2021; Villa et al., 2021). Phytophage larvae feed on underground and above-ground parts of living plants (Ricarte et al., 2017; Souba-Dols et al., 2020). Phytophagous larvae feed on a wide range of insects, both in the understory and above-ground parts of plants (Rojo et al., 2003; Chursina & Ruchin, 2018; Astakhov et al., 2019). Saprophagous larvae are filter feeders of bacteria and/or detritus found in decomposing materials of both animal and plant origin (Krivosheina & Krivosheina, 2019; Rotheray, 2019); within saprophages, those larvae that depend on dead wood or decomposing materials associated with tree parts are saproxial (Rotheray et al., 2001; Polevoi, 2021). This publication presents an overview of the diptera fauna of a significant macroregion in terms of area, occupying the Volga Upland and the Oka-Don Lowland.

Material and Methods

Study area

The Oka-Don Lowland lies in the European part of Russia from the Oka River (Meshchera Lowland) in the north to the Kalach Upland in the south. In the south, the plain becomes progressively narrower and it curves towards the mouths of the Khoper and Medveditsa Rivers (Volgograd Region). It is situated within the East European Plain, between the Central Russian and Volga Uplands. The relief is characterized by vast flat areas with an absolute height of 150–180 m, which alternate with wide valleys of large rivers, stretching almost meridionally (the Don, Voronezh, Bitug, Khoper, Medveditsa, Tsna, etc.). With few exceptions, only steep and high slopes of the major river valleys are intersected by gullies. Large rivers are cut into watersheds to a depth of 25–50 m. Interfluvies and gully intervals near valleys and gullies are gently sloping, while the rest of the territory is a flat plain. Swampy limestone depressions are not uncommon in the northern parts of the plain. The climate is continental with moderately cold winters and warm summers, with a pronounced continental increase compared with the Srednerusskaya Upland, situated to the west. Summers are drier and hotter and winters are colder. The Ryazan Region, Penza Region, Volgograd Region, Voronezh Region, Tambov Region, Lipetsk Region, Vladimir Region and the Republic of Mordovia are located within this lowland area.

The Volga Upland lies on the right bank of the Volga River from Nizhny Novgorod in the north to Volgograd in the south. Heights of 150–180 m prevail in the northern part of the upland. To the south, they increase and reach 200 m (in the upper reaches of the Sura River and in the Zhiguli Mountains more than 300 m). In the latitude of the Zhiguli Mountains, the upland stretches over 500 km from east to west and in the south, near Volgograd, its width does not exceed 60 km. The Volga Upland stretches in a meridional direction from north to south for about 1000 km and therefore falls into several climatic zones (Milkov, 1953). The upland is composed of relatively easily erodible rocks: sandstones, clays, marl, chalk and

opoka. In the areas of the so-called mountains (Zhiguli, Khvalynsk etc.) harder and more ancient sediments – limestone and sandstone – are outcropped. The territory is heavily ploughed up. The climate is continental, often with warm and hot summers and cold winters. There are often strong winds. There is the following pattern: as one moves from northwest to southeast, the continentality of the climate increases, as eastern and southeastern influences increase and western and northwestern ones weaken. However, in some areas this pattern is disrupted by local conditions – upland topography and vegetation. The Nizhny Novgorod Region, Republic of Mordovia, Chuvash Republic, Republic of Tatarstan, Penza Region, Ulyanovsk Region, Samara Region, Saratov Region and Volgograd Region are located within this upland area (Fig.).

Making a list

The families in the list are listed in a systematic order. Names of genera and species are listed alphabetically. Our list consists of previously published data and newly reported records. We did not include in several clearly erroneous reports from previous publications. For newly reported records, the label data (locality, date, collector) is given. Geographical coordinates are given in the Decimal Degrees format.

The list of regions and their short names are indicated as follows:

Chuvashia – Chuvash Republic;

Lipetsk – Lipetsk region;

Mordovia – Republic of Mordovia;

Nizhny Novgorod – Nizhny Novgorod region;

Penza – Penza region;

Ryazan – Ryazan region;

Samara – Samara region;

Saratov – Saratov region;

Tambov – Tambov region;

Tatarstan – Republic of Tatarstan;

Ulyanovsk – Ulyanovsk region;

Vladimir – Vladimir region

Volgograd – Volgograd region;

Voronezh – Voronezh region;

The specimens examined in this study are deposited in the following institutions:

Mordovia State Nature Reserve, Republic of Mordovia, Pushta village (those from M. Esin, A. Ruchin, G. Semishin);

ZIN – Zoological Institute, St-Petersburg, Russia;

ZMUM – Zoological Museum of Moscow University, Russia (those collected by N. Vikhrev, K. Tomkovich and M. Yanbulat).

When using a very popular in Russia term “cordon” we mean a lodge on the territory of a nature reserve where rangers or other staff may live. Abbreviations: SNR – State Nature Reserve, vill. – village.



Fig. Map of the regions from which the data for compiling the list was obtained.

Results

List of species

SUBORDER NEMATOCERA

TIPULIDAE

***Ctenophora fastuosa* Loew, 1871**

Chuvashia (Paramonov, 2018a).
Mordovia (Ruchin & Pilipenko, 2015).
Saratov (Paramonov, 2019).

***Ctenophora festiva* Meigen, 1804**

Saratov (Paramonov, 2015).

***Ctenophora flaveolata* (Fabricius, 1794)**

Chuvashia (Paramonov, 2018a).

***Ctenophora guttata* Meigen, 1818**

Samara (Rosenberg, 2007).
Ulyanovsk (Paramonov, 2006).

***Dictenidia bimaculata* (Linnaeus, 1760)**

Chuvashia (Volkova, 1934; Paramonov, 2016; Paramonov, 2017a).
Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).
Samara (Rosenberg, 2007).
Saratov (Paramonov, 2015).
Ulyanovsk (Paramonov, 2006).

***Nephrotoma aculeata* (Loew, 1871)**

Chuvashia (Paramonov, 2018a).
Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

***Nephrotoma analis* (Schummel, 1833)**

Chuvashia (Paramonov, 2018a).
Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

***Nephrotoma appendiculata* (Pierre, 1919)**

Chuvashia (Paramonov, 2016; Paramonov, 2017a).
Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).
Ulyanovsk (Paramonov, 2006).

***Nephrotoma cornicina* (Linnaeus, 1758)**

Chuvashia (Volkova, 1934; Paramonov, 2016; Paramonov, 2017a).

Mordovia (Plavilshchikov, 1964; Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).
Ulyanovsk (Paramonov, 2006).

***Nephrotoma crocata* (Linnaeus, 1758)**

Chuvashia (Volkova, 1934; Paramonov, 2016; Paramonov, 2017a).
Mordovia (Ruchin & Pilipenko, 2015).
Samara (Rosenberg, 2007).
Ulyanovsk (Paramonov, 2006).
Voronezh (Negrobov, 2005).

***Nephrotoma croceiventris lindneri* (Mannheims, 1951)**

Ulyanovsk (Paramonov, 2006).

***Nephrotoma dorsalis* (Fabricius, 1781)**

Chuvashia (Paramonov, 2017a).
Mordovia (Pilipenko et al., 2020).

***Nephrotoma lamellata* (Riedel, 1910)**

Chuvashia (Paramonov, 2017a).
Mordovia (Pilipenko et al., 2020).

***Nephrotoma lunulicornis* (Schummel, 1833)**

Ulyanovsk (Paramonov, 2006).

***Nephrotoma pratensis* (Linnaeus, 1758)**

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).
Ulyanovsk (Paramonov, 2006).
Voronezh (Negrobov, 2005).

***Nephrotoma quadrifaria* (Meigen, 1804)**

Chuvashia (Paramonov, 2018a).

***Nephrotoma quadristriata* (Schummel, 1833)**

Mordovia (Pilipenko et al., 2020).

***Nephrotoma rossica* (Riedel, 1910)**

Chuvashia (Paramonov, 2017a).
Ulyanovsk (Paramonov, 2006).

***Nephrotoma scalaris* (Meigen, 1818)**

Chuvashia (Egorov & Podshivalina, 2014; Paramonov, 2016; Paramonov, 2017a).
Mordovia (Pilipenko et al., 2020).

Ulyanovsk (Paramonov, 2006).
Saratov (Paramonov, 2019).

***Nephrotoma scurra* (Meigen, 1818)**

Chuvashia (Paramonov, 2016; Paramonov, 2017a).
Mordovia (Plavilshchikov, 1964; Antsiferova, Dobrosmyslov 1966; Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

***Nephrotoma tenuipes* (Riedel, 1910)**

Chuvashia (Paramonov, 2018a).
Mordovia (Pilipenko et al., 2020).

***Nigrotipula nigra* (Linnaeus, 1758)**

Chuvashia (Paramonov, 2016; Paramonov, 2017a).
Mordovia (Pilipenko et al., 2020).
Saratov (Paramonov, 2015).

***Prionocera pubescens* Loew, 1844**

Ulyanovsk (Paramonov, 2006).

***Prionocera subsericornis* (Zetterstedt, 1851)**

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

***Prionocera turcica* (Fabricius, 1787)**

Mordovia (Ruchin & Pilipenko, 2015).
Voronezh (Negrobov, 2005).

***Tanyptera atrata* (Linnaeus, 1758)**

Chuvashia (Paramonov, 2016; Paramonov, 2017a).
Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).
Samara (Rosenberg, 2007).
Saratov (Paramonov, 2018b).
Ulyanovsk (Paramonov, 2006).

***Tanyptera nigricornis* (Meigen, 1818)**

Ulyanovsk (Paramonov, 2006).

***Tipula fulvipennis* De Geer, 1776**

Chuvashia (Paramonov, 2018a).
Mordovia (Ruchin & Pilipenko, 2015).
Saratov (Paramonov, 2015).
Ulyanovsk (Paramonov, 2006).

***Tipula luna* Westhoff, 1879**

Chuvashia (Paramonov, 2018a).
Mordovia (Pilipenko et al., 2020).
Saratov (Paramonov, 2015).

***Tipula maxima* Poda, 1761**

Chuvashia (Paramonov, 2018a).
Saratov (Paramonov, 2019).
Ulyanovsk (Paramonov, 2006).

***Tipula unca* Wiedemann, 1817**

Chuvashia (Paramonov, 2018a).

***Tipula flavolineata* Meigen, 1804**

Chuvashia (Paramonov, 2017a).

***Tipula affinis* Schummel, 1833**

Mordovia (Pilipenko et al., 2020).
Ulyanovsk (Paramonov, 2006).

***Tipula fascipennis* Meigen, 1818**

Chuvashia (Paramonov, 2016; Paramonov, 2017a).
Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).
Samara (Rosenberg, 2007).

***Tipula laetabilis* Zetterstedt, 1838**

Saratov (Paramonov, 2015).

***Tipula lunata* Linnaeus, 1758**

Chuvashia (Paramonov, 2018a).
Mordovia (Ruchin, 2008; Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).
Samara (Rosenberg, 2007).
Saratov (Paramonov, 2015).
Ulyanovsk (Paramonov, 2006).

***Tipula mellea* Schummel, 1833**

Chuvashia (Paramonov, 2018a).
Mordovia (Pilipenko et al., 2020).
Saratov (Paramonov, 2015).
Ulyanovsk (Paramonov, 2006).

***Tipula peliostigma* Schummel, 1833**

Samara (Rosenberg, 2007).
Saratov (Paramonov, 2018b).

***Tipula recticornis* Schummel, 1833**

Mordovia (Ruchin & Pilipenko, 2015).

***Tipula selene* Meigen, 1830**

Saratov (Paramonov, 2015).

***Tipula soosi* Mannheims, 1954**

Saratov (Paramonov, 2015, 2018b).

***Tipula vernalis* Meigen, 1804**

Chuvashia (Paramonov, 2017a).

Mordovia (Plavilshchikov, 1964; Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

***Tipula nodicornis* Meigen, 1818**

Chuvashia (Paramonov, 2018a).

***Tipula autumnalis* Loew, 1864**

Mordovia (Pilipenko et al., 2020).

***Tipula luteipennis* Meigen, 1830**

Chuvashia (Paramonov, 2017a).

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

***Tipula jutlandica* Nielsen, 1947**

Mordovia (Pilipenko et al., 2020).

***Tipula laetibasis* Alexander, 1934**

Mordovia (Pilipenko et al., 2020).

***Tipula pseudovariipennis* Czizek, 1912**

Chuvashia (Paramonov, 2018a).

Mordovia (Ruchin & Pilipenko, 2015).

***Tipula submarmorata* Schummel, 1833**

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

***Tipula varipennis* Meigen, 1818**

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

***Tipula winthemi* Lackschewitz, 1932**

Mordovia (Pilipenko et al., 2020).

***Tipula obsoleta* Meigen, 1818**

Chuvashia (Paramonov, 2018a).

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

***Tipula variicornis* Schummel, 1833**

Chuvashia (Paramonov, 2017a).

***Tipula paludosa* Meigen, 1830**

Mordovia (Plavilshchikov, 1964; Ruchin, 2008; Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

Ulyanovsk (Paramonov, 2006).

Voronezh (Negrobov, 2005).

***Tipula subcunctans* Alexander, 1921**

Chuvashia (Paramonov, 2018a).

Mordovia (Pilipenko 2009; Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

Saratov (Paramonov, 2018b).

***Tipula hortorum* Linnaeus, 1758**

Chuvashia (Paramonov, 2018a).

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

***Tipula nubeculosa* Meigen, 1804**

Chuvashia (Paramonov, 2017a).

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

Ulyanovsk (Paramonov, 2006).

***Tipula scripta* Meigen, 1830**

Chuvashia (Paramonov, 2016; Paramonov, 2017a).

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

Samara (Rosenberg, 2007).

Saratov (Paramonov, 2015).

Ulyanovsk (Paramonov, 2006).

***Tipula caesia* Schummel, 1833**

Saratov (Paramonov, 2015).

***Tipula coerulescens* Lackschewitz, 1923**

Ulyanovsk (Paramonov, 2006).

***Tipula couckeii* Tonnoir, 1921**

Mordovia (Ruchin & Pilipenko, 2015).

Saratov (Paramonov, 2015).

Ulyanovsk (Paramonov, 2006).

***Tipula lateralis* Meigen, 1804**

Chuvashia (Paramonov, 2018a).

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

Saratov (Paramonov, 2015).

Ulyanovsk (Paramonov, 2006).

***Tipula lucifera* Savchenko, 1954**

Chuvashia (Paramonov, 2017a).

***Tipula pierrei* Tonnoir, 1921**

Mordovia (Pilipenko et al., 2020).

Saratov (Paramonov, 2015).

Ulyanovsk (Paramonov, 2006).

LIMONIIDAE

***Achyrolimonia decemmaculata* (Loew, 1873)**

Chuvashia (Paramonov, 2018a).

Mordovia (Esin et al., 2023).

***Achyrolimonia neonebulosa* (Alexander, 1924)**

Mordovia (Pilipenko et al., 2020; Dvořák et al., 2020).

***Arctoconopa melampodia* (Loew, 1873)**

Mordovia (Esin et al., 2023).

***Atypophthalmus inustus* (Meigen, 1818)**

Mordovia (Esin et al., 2023).

Saratov (Paramonov, 2015).

***Austrolimnophila unica* (Osten Sacken, 1869)**

Mordovia (Esin et al., 2023).

***Cheilotrichia imbuta* (Meigen, 1818)**

Mordovia (Esin et al., 2023).

Ryazan, Kasimov env., 54.94° N 41.34° E, N. Vikhrev, 17–19.06.2013, 1 ♂.

***Cheilotrichia cinerascens* (Meigen, 1804)**

Mordovia (Esin et al., 2023).

***Cheilotrichia neglecta* (Lackschewitz, 1927)**

Mordovia (Pilipenko et al., 2020).

***Chionea araneoides* Dalman, 1816**

Vladimir (Pavlov, 2017).

***Chionea lutescens* Lundstrom, 1907**

Chuvashia (Paramonov, 2016, 2017b).

Vladimir (Pavlov, 2006).

***Dicranomyia autumnalis* (Staeger, 1840)**

Mordovia (Pilipenko et al., 2020).

***Dicranomyia consimilis* (Zetterstedt, 1838)**

Mordovia (Pilipenko et al., 2020).

***Dicranomyia danica* Kuntze, 1919**

Mordovia (Pilipenko et al., 2020).

Voronezh, Khoper SNR, Varvarino, 51.207° N, 41.719° E, on light, K. Tomkovich, 9–13.08.2022, 1 ♂.

***Dicranomyia frontalis* (Staeger, 1840)**

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

Ryazan, Kasimov env., 54.94° N 41.34° E, N. Vikhrev, 17–19.06.2013, 1 ♀. 21–26.07.2013, 1 ♂. Kasimov env., Oka River, 54.94° N, 41.34° E, N. Vikhrev, 21–24.07.2013, 2 ♂, 2 ♀. Tuma env., 55.143° N, 40.616° E, N. Vikhrev, 21.07.2013, 1 ♀.

***Dicranomyia halterata* Osten Sacken, 1869**

Saratov (Paramonov, 2018b).

***Dicranomyia longipennis* (Schummel, 1829)**

Tambov, Tambov env., 52.677° N, 41.330° E, N. Vikhrev, 06.06.2012, 1 ♀.

***Dicranomyia modesta* (Meigen, 1818)**

Chuvashia (Paramonov, 2017a).

Mordovia (Pilipenko et al., 2020).

Penza, Poim env., 53.0° N, 43.2° E, 27.07.2022, N. Vikhrev, 1 ♂.

Ryazan, Kasimov env., 54.94° N, 41.34° E, N. Vikhrev, 17–19.06.2013, 3 ♂. Kasimov env., Oka River, 54.94° N, 41.34° E, N. Vikhrev, 21–24.07.2013, 1 ♂. Tuma env., 55.143° N, 40.616° E, N. Vikhrev, 21.07.2013, 1 ♂.

Tambov, Tambov env., 52.677° N, 41.330° E, N. Vikhrev, 06.06.2012, 4 ♂.

Volgograd, Mikhaylovka urban distr., Starosele env., 50.000° N, 43.235° E, N. Vikhrev, 07.06.2012, 1 ♂.

***Dicranomyia morio* (Fabricius, 1787)**

Ryazan, Kasimov distr., Zalesnoe vill., 54.969° N, 41.327° E, N. Vikhrev, 21–26.07.2013, 2 ♂.

***Dicranomyia omissinervis* de Meijere, 1918**

Mordovia (Pilipenko et al., 2020).

***Dicranophragma nemorale* (Meigen, 1818)**

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

***Dicranomyia schineriana* (Alexander, 1964)**

Chuvashia (Paramonov, 2017a).

Mordovia (Pilipenko et al., 2020).

Saratov (Paramonov, 2015).

***Dicranophragma separatum* (Walker, 1848)**

Chuvashia (Paramonov, 2017a).

Mordovia (Esin et al., 2023).

***Dicranomyia tristis* (Schummel, 1829)**

Mordovia (Pilipenko et al., 2020).

Saratov (Paramonov, 2018b).

Lipetsk, Stanovoe distr., Palenka vill., 52.887° N, 38.319° E, Quercetum,
K. Tomkovich, 19.07.2014, 1 ♀.

***Dicranomyia ventralis* (Schummel, 1829)**

Mordovia (Pilipenko et al., 2020).

***Dicranoptycha fuscescens* (Schummel, 1829)**

Chuvashia (Paramonov, 2017a).

Mordovia (Pilipenko et al., 2020).

Ryazan, Kasimov distr., Zalesnoe vill., 54.969° N, 41.327° E, N. Vikhrev,
21–26.07.2013, 1 ♀.

Saratov (Paramonov, 2015).

***Discobola annulata* (Linnaeus, 1758)**

Saratov (Paramonov, 2018b).

***Discobola caesarea* (Osten Sacken, 1854)**

Chuvashia (Paramonov, 2018a).

***Discobola parvispinula* (Alexander, 1947)**

Chuvashia (Paramonov, 2017a).

Mordovia (Pilipenko et al., 2020; Dvořák et al., 2020).

***Elephantomyia krivosheinae* Savchenko, 1976**

Chuvashia (Paramonov, 2018a).

Mordovia (Pilipenko et al., 2020).

***Eloeophila maculata* (Meigen, 1804)**

Mordovia (Pilipenko et al., 2020).

Ryazan, Kasimov distr., Zalesnoe vill., 54.969° N, 41.327° E, N. Vikhrev, 21–26.07.2013, 1 ♂.

***Epiphragma ocellare* (Linnaeus, 1760)**

Chuvashia (Paramonov, 2017a).

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

Samara (Rosenberg, 2007).

Saratov (Paramonov, 2018b).

***Erioconopa trivialis* (Meigen, 1818)**

Mordovia (Plavilshchikov, 1964; Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

Tambov, Tambov env., 52.677° N, 41.330° E, N. Vikhrev, 06.06.2012, 4 ♂.

***Erioptera distinguenda* Stary, 1983**

Tambov, Tambov env., 52.677° N, 41.330° E, N. Vikhrev, 06.06.2012, 1 ♂.

***Erioptera flavata* (Westhoff, 1882)**

Mordovia (Esin et al., 2023).

***Erioptera fuscipennis* Meigen, 1818**

Mordovia (Ruchin & Pilipenko, 2015).

***Erioptera fusculeta* Edwards, 1938**

Tambov, Tambov env., 52.677° N, 41.330° E, N. Vikhrev, 6.06.2012, 4 ♂.

***Erioptera griseipennis* Meigen, 1838**

Mordovia (Esin et al., 2023).

***Erioptera lutea* Meigen, 1804**

Chuvashia (Paramonov, 2016).

Mordovia (Ruchin & Pilipenko, 2015).

Volgograd, Serafimovich env., 49.57° N, 42.60° E, N. Vikhrev, 28–29.04.2013, 1 ♀.

***Erioptera squalida* Loew, 1871**

Mordovia (Esin et al., 2023).

***Erioptera bivittata* (Loew, 1873)**

Volgograd, Volgograd env., 48.572° N, 44.427° E, N. Vikhrev, 08.06.2012, 1 ♂, 1 ♀.

***Erioptera fossarum* (Loew, 1873)**

Volgograd, Novoanninskiy distr., Gulyaevskiy env., 50.418° N, 42.760° E, N. Vikhrev, 07.06.2012, 2 ♂.

***Euphylidorea phaeostigma* (Schummel, 1829)**

Mordovia (Pilipenko et al., 2020).

***Eutonia barbipes* (Meigen, 1804)**

Chuvashia (Paramonov, 2017a).

Saratov (Paramonov, 2018b).

Ulyanovsk (Paramonov, 2006).

***Eutonia barbipes* (Meigen, 1804)**

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

***Gnophomyia viridipennis* (Gimmerthal, 1847)**

Mordovia (Esin et al., 2023).

***Gonomyia abscondita* Lackschewitz, 1935**

Mordovia (Esin et al., 2023).

***Gonomyia bifida* Tonnoir, 1920**

Tambov, Tambov env., 52.677° N, 41.330° E, Vikhrev, 06.06.2012, 2 ♂

***Gonomyia lucidula* de Meijere, 1920**

Mordovia (Esin et al., 2023).

***Gonomyia subtenella* Savchenko, 1972**

Mordovia, Mordovia SNR, Novenkiy cordon, 54.709° N, 43.214° E, on light, K. Tomkovich, 15–19.08.2022, 16–19.08.2022, 1 ♂, 3 ♂.

Ryazan, Kasimov distr., Zalesnoe vill., 54.969° N, 41.327° E, N. Vikhrev, 21–26.07.2013, 6 ♂, 2 ♀.

***Gonomyia abbreviata* Loew, 1873**

Mordovia (Esin et al., 2023).

***Helius flavus* (Walker, 1856)**

Chuvashia (Paramonov, 2017a).

Tambov, Tambov env., 52.677° N, 41.330° E, N. Vikhrev, 06.06.2012, 1 ♂, 1 ♀.

***Helius longirostris* (Meigen, 1818)**

Lipetsk, Lipetsk, 52.64° N, 39.70° E, Voronezh River, N. Vikhrev, 26.07.2022, 1 ♂.

Mordovia (Pilipenko et al., 2020).

Ryazan, Kasimov distr., Zalesnoe vill., 54.969° N, 41.327° E, N. Vikhrev, 21–26.07.2013, 3 ♂, 2 ♀. Tuma env., 55.143° N, 40.616° E, N. Vikhrev, 21.07.2013, 4 ♂. Saratov (Paramonov, 2018b).

***Hexatoma fuscipennis* (Curtis, 1836)**

Mordovia (Pilipenko et al., 2020).

***Hexatoma nubeculosa* (Burmeister, 1829)**

Chuvashia (Paramonov, 2018a).

***Hoplolabis vicina* (Tonnoir, 1920)**

Ryazan, Kasimov distr., Zalesnoe vill., 54.969° N, 41.327° E, N. Vikhrev, 21–26.07.2013, 2 ♂, 2 ♀.

***Hoplolabis yezoana* (Alexander, 1924)**

Chuvashia (Paramonov, 2017a).

***Idioptera linnei* Oosterbroek, 1992**

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

***Idioptera pulchella* (Meigen, 1830)**

Mordovia (Ruchin & Pilipenko, 2015).

***Ilisia maculata* (Meigen, 1804)**

Saratov (Paramonov, 2015).

***Libnotes ladogensis* (Lackschewitz, 1940)**

Mordovia (Esin et al., 2023).

***Limnophila pictipennis* (Meigen, 1818)**

Mordovia (Ruchin & Pilipenko, 2015).

***Limnophila schranki* Oosterbroek, 1992**

Chuvashia (Paramonov, 2018a).

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

Ulyanovsk (Paramonov, 2006).

Volgograd, Serafimovich env., Don River, 49.6° N, 42.6° E, N. Vikhrev, 28.04.2013, 4 ♂. Serafimovich env., 49.57° N, 42.60° E, N. Vikhrev, 28–29.04.2013, 4 ♂.

***Limonia albifrons* (Meigen, 1818)**

Mordovia (Ruchin & Pilipenko, 2015).

***Limonia macrostigma* (Schummel, 1829)**

Mordovia (Pilipenko et al., 2020; Dvořák et al., 2020).

Ryazan, Kasimov distr., Zalesnoe vill., 54.969° N, 41.327° E, N. Vikhrev, 17–19.06.2013, 1 ♂. Kasimov env., 54.94° N, 41.34° E, N. Vikhrev, 21–26.07.2013, 1 ♂, 1 ♀. Saratov (Paramonov, 2015).

***Limonia nigropunctata* (Schummel, 1829)**

Chuvashia (Paramonov, 2016; Paramonov, 2017a).

Mordovia (Pilipenko et al., 2020).

***Limonia phragmitidis* (Schrank, 1781)**

Chuvashia (Paramonov, 2017a).

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

Ryazan, Kasimov distr., Zalesnoe vill., 54.969° N, 41.327° E, N. Vikhrev, 21–26.07.2013, 1 ♀. Kasimov env., 54.94° N, 41.34° E, N. Vikhrev, 17–19.06.2013, 1 ♂, 1 ♀. Ranovo River, 53.72° N, 39.93° E, N. Vikhrev, 06.06.2012, 1 ♂.

Saratov (Paramonov, 2015).

***Limonia trivittata* (Schummel, 1829)**

Lipetsk, Stanovoe distr., Palenka vill., 52.887° N, 38.319° E, Quercetum, K. Tomkovich, 19.07.2014, 1 ♀.

Mordovia (Ruchin & Pilipenko, 2015).

***Metalimnobia bifasciata* (Schrank, 1781)**

Chuvashia (Paramonov, 2016; Paramonov, 2017a).

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020; Dvořák et al., 2020).

Nizhny Novgorod (Dvořák et al., 2022).

Ryazan, Tuma env., 55.143° N, 40.616° E, N. Vikhrev, 21.07.2013, 1 ♂.

Samara (Rosenberg, 2007).

Saratov (Paramonov, 2015).

Ulyanovsk (Paramonov, 2006; Dvořák et al., 2022).

***Metalimnobia charlesi* Salmela and Stary, 2009**

Chuvashia (Paramonov, 2018a).

***Metalimnobia quadrimaculata* (Linnaeus, 1760)**

Chuvashia (Paramonov, 2016; Paramonov, 2017a).

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020; Dvořák et al., 2020).

Nizhny Novgorod (Dvořák et al., 2022).

Saratov (Paramonov, 2015; Dvořák et al., 2022).

Ulyanovsk (Paramonov, 2006; Dvořák et al., 2022).

***Metalimnobia quadrinotata* (Meigen, 1818)**

Chuvashia (Paramonov, 2016; Paramonov, 2017a).

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).
Ryazan, Ranovo River, 53.72° N, 39.93° E, N. Vikhrev, 06.06.2012, 1 ♀.

***Metalimnobia tenua* Savchenko, 1976**
Chuvashia (Paramonov, 2016; Paramonov, 2017a).

***Molophilus appendiculatus* (Staeger, 1840)**
Mordovia (Esin et al., 2023).

***Molophilus ater* (Meigen, 1804)**
Mordovia (Esin et al., 2023).

***Molophilus bifidus* Goetghebuer, 1920**
Saratov (Paramonov, 2015).

***Molophilus bihamatus* de Meijere, 1918**
Mordovia (Esin et al., 2023).

***Molophilus crassipygus* de Meijere, 1918**
Mordovia (Esin et al., 2023).
Saratov (Paramonov, 2015).

***Molophilus griseus* (Meigen, 1804)**
Lipetsk, Lipetsk, 52.64° N, 39.70° E, Voronezh River, N. Vikhrev, 26.07.2022, 1 ♂.
Ryazan, Kasimov env., Syntul Lake, 54.94° N, 41.34° E, N. Vikhrev, 25.07.2013, 2 ♂.

***Molophilus ochraceus* (Meigen, 1818)**
Mordovia (Ruchin & Pilipenko, 2015).

***Molophilus propinquus* (Egger, 1863)**
Mordovia (Ruchin & Pilipenko, 2015).
Ryazan, Kasimov env., Syntul Lake, 54.94° N, 41.34° E, N. Vikhrev, 25.07.2013, 1 ♂.

***Molophilus pullus* Lackschewitz, 1927**
Ulyanovsk, Radishchevo distr., Vyazovka env., 52.82° N, 48.35° E, 95–130 m a.s.l.,
Corydalis, K. Tomkovich, 2–5.05.2011, 2 ♂, 2 ♀.
Volgograd, Serafimovich env., 49.57° N, 42.60° E, N. Vikhrev, 28–29.04.2013, 2 ♂, 2 ♀.

***Molophilus serpentiger* Edwards, 1938**
Mordovia (Esin et al., 2023).

***Ormosia depilata* Edwards, 1938**
Mordovia (Esin et al., 2023).

***Ormosia lineata* (Meigen, 1804)**

Mordovia (Esin et al., 2023).

***Phylidorea fulvonervosa* (Schummel, 1829)**

Chuvashia (Paramonov, 2018a).

Mordovia (Pilipenko et al., 2020).

***Phylidorea abdominalis* (Staeger, 1840)**

Mordovia (Esin et al., 2023).

***Phylidorea bicolor* (Meigen, 1804)**

Mordovia (Pilipenko et al., 2020).

***Phylidorea ferruginea* (Meigen, 1818)**

Chuvashia (Paramonov, 2018a).

Mordovia (Pilipenko et al., 2020).

Tambov, Tambov env., 52.677° N, 41.330° E, N. Vikhrev, 06.06.2012, 1 ♂.

***Phylidorea longicornis* (Schummel, 1829)**

Mordovia (Esin et al., 2023).

***Phylidorea squalens* (Zetterstedt, 1838)**

Mordovia (Pilipenko et al., 2020).

***Pilaria nigropunctata* (Agrell, 1945)**

Mordovia (Esin et al., 2023).

***Pilaria discicollis* (Meigen, 1818)**

Mordovia (Pilipenko et al., 2020).

Ryazan, Kasimov distr., Zalesnoe vill., 54.969° N, 41.327° E, N. Vikhrev, 21–26.07.2013, 1 ♂, 1 ♀.

***Pilaria fuscipennis* (Meigen, 1818)**

Mordovia (Pilipenko et al., 2020).

***Pseudolimnophila lucorum* (Meigen, 1818)**

Chuvashia (Paramonov, 2017a).

Mordovia (Esin et al., 2023).

Saratov (Paramonov, 2015).

Tambov, Tambov env., 52.677° N, 41.330° E, N. Vikhrev, 6.06.2012, 1 ♂.

***Pseudolimnophila sepium* (Verrall, 1886)**

Mordovia (Esin et al., 2023).

Volgograd, Volgograd env., 48.572° N, 44.427° E, N. Vikhrev, 8.06.2012, 1 ♂.

***Rhabdomastix japonica* Alexander, 1924**

Mordovia (Esin et al., 2023).

***Rhipidia maculata* Meigen, 1818**

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

Ulyanovsk (Paramonov, 2006).

***Rhipidia uniseriata* Schiner, 1864**

Ulyanovsk (Dvořák et al., 2022).

Mordovia (Esin et al., 2023).

***Symplecta hybrida* (Meigen, 1804)**

Chuvashia (Paramonov, 2017a).

Mordovia (Ruchin & Pilipenko, 2015; Pilipenko et al., 2020).

Ryazan, Kasimov env., 54.94° N, 41.34° E, N. Vikhrev, 17–19.06.2013, 1 ♀. Kasimov env., Oka River, 54.94° N, 41.34° E, N. Vikhrev, 21–24.07.2013, 1 ♀.

Saratov (Paramonov, 2015).

Tambov, Tambov env., 52.677° N, 41.330° E, N. Vikhrev, 06.06.2012, 1 ♂.

Voronezh, Khoper SNR, Varvarino, 51.207° N, 41.719° E, on light, K. Tomkovich, 9–13.08.2022, 1 ♂.

Ulyanovsk (Paramonov, 2006).

Volgograd, Volgograd env., 48.572° N, 44.427° E, N. Vikhrev, 08.06.2012, 1 ♂.

***Symplecta pilipes* (Fabricius, 1787)**

Saratov (Paramonov, 2018b).

Tambov, Tambov env., 52.677° N, 41.330° E, N. Vikhrev, 06.06.2012, 1 ♂.

***Tricyphona immaculata* (Meigen, 1804)**

Mordovia (Esin et al., 2023).

***Tricyphona unicolor* (Schummel, 1829)**

Mordovia (Esin et al., 2023).

PEDICIIDAE

***Dicranota gracilipes* Wahlgren, 1905**

Mordovia (Pilipenko et al., 2020).

***Pedicia rivosa* (Linnaeus, 1758)**

Mordovia (Pilipenko et al., 2020).

Ulyanovsk (Paramonov, 2006).

***Tricyphona immaculata* (Meigen, 1804)**

Mordovia (Pilipenko et al., 2020).

***Tricyphona unicolor* (Schummel, 1829)**

Mordovia (Pilipenko et al., 2020).

***Ula bolitophila* Loew, 1869**

Mordovia (Pilipenko et al., 2020).

Ryazan, Kasimov distr., Zalesnoe vill., 54.969° N, 41.327° E, N. Vikhrev, 21–26.07.2013, 1♀.

***Ula sylvatica* (Meigen, 1818)**

Mordovia (Esin et al., 2023).

MYCETOPHILIDAE

***Acnemia nitidicollis* (Meigen, 1818)**

Voronezh, Khoper River. x P22 road, 51.36° N, 42.04° E, N. Vikhrev, 27.04.2022, 2 ♂.

***Allodia alternans* (Zetterstedt, 1838)**

Ulyanovsk, Radishchevo distr., Vjazovka env., 52.82° N, 48.35° E, 33–170 m a.s.l., K. Tomkovich, 1–9.05.2011, 1 ♂.

***Allodia ornaticollis* (Meigen, 1818)**

Chuvashia (Borisova et al., 2018).

***Allodia neglecta* Edwards, 1925**

Mordovia (Esin et al., 2023).

***Allodiopsis domestica* (Meigen, 1830)**

Mordovia (Esin et al., 2023).

***Allodia silvatica* (Landrock, 1912)**

Mordovia (Esin et al., 2023).

***Anatella unguigera* Edwards, 1921**

Mordovia (Esin et al., 2023).

***Boletina anderschi* (Stannius, 1831)**

Ulyanovsk, Radishchevo distr., Vjazovka env., 52.82° N, 48.35° E, 33–170 m a.s.l., K. Tomkovich, 2–8.05.2011, 5 ♂.

***Boletina basalis* (Meigen, 1818)**

Mordovia (Esin et al., 2023).

***Boletina cincticornis* (Walker, 1848)**

Mordovia (Esin et al., 2023).

***Boletina dispecta* Dziedzicki, 1885**

Mordovia (Esin et al., 2023).

***Boletina dubia* (Meigen, 1804)**

Mordovia (Esin et al., 2023).

***Boletina gripha* Dziedzicki, 1885**

Mordovia (Esin et al., 2023).

Ulyanovsk, Radishchevo distr., Vjazovka env., 52.82° N, 48.35° E, 33–170 m a.s.l.,
K. Tomkovich, 02–08.05.2011, 1 ♂.

Voronezh, Khoper River. x P22 road, 51.36° N, 42.04° E, N. Vikhrev, 27.04.2022,
16 ♂.

***Boletina moravica* Landrock, 1912**

Mordovia (Esin et al., 2023).

***Boletina nigricoxa* Staeger, 1840**

Mordovia (Esin et al., 2023).

***Boletina trivittata* (Meigen, 1818)**

Mordovia (Esin et al., 2023).

***Brevicornu fuscipenne* (Stæger, 1840)**

Mordovia (Esin et al., 2023).

***Brevicornu sericoma* (Meigen, 1830)**

Mordovia (Esin et al., 2023).

***Cordyla brevicornis* (Stæger, 1840)**

Mordovia (Esin et al., 2023).

***Cordyla crassicornis* Meigen, 1818**

Mordovia (Esin et al., 2023).

***Cordyla fasciata* Meigen, 1830**

Mordovia (Esin et al., 2023).

***Cordyla flaviceps* (Stæger, 1840)**

Mordovia (Esin et al., 2023).

***Cordyla fusca* Meigen, 1804**

Mordovia (Esin et al., 2023).

***Cordyla insons* Lastovka & Matile, 1974**

Mordovia (Esin et al., 2023).

***Cordyla murina* Winnertz, 1863**

Mordovia (Esin et al., 2023).

***Cordyla nitidula* Edwards, 1925**

Mordovia (Esin et al., 2023).

***Cordyla sixi* (Barendrecht, 1938)**

Mordovia (Esin et al., 2023).

***Dynatosoma thoracicum* (Zetterstedt, 1838)**

Mordovia (Esin et al., 2023).

***Epicypta aterrima* (Zetterstedt, 1852)**

Mordovia (Esin et al., 2023).

***Exechia dorsalis* (Stæger, 1840)**

Mordovia (Esin et al., 2023).

***Epicypta fumigata* (Dziedzicki, 1923)**

Mordovia (Esin et al., 2023).

***Exechia fusca* (Meigen, 1804)**

Mordovia (Esin et al., 2023).

***Exechia nigroscutellata* Landrock, 1912**

Chuvashia (Borisova et al., 2018).

***Exechia repanda* Johannsen, 1912**

Mordovia (Esin et al., 2023).

***Exechia separata* Lundstrom, 1912**

Mordovia (Esin et al., 2023).

***Greenomyia mongolica* Lastovka & Matile, 1974**

Mordovia (Esin et al., 2023).

***Leia bimaculata* (Meigen, 1804)**
Voronezh, Khoper River. x P22 road, 51.36° N, 42.04° E, N. Vikhrev, 27.04.2022,
1 ♂.

***Leia fascipennis* Meigen, 1818**
Mordovia (Esin et al., 2023).

***Mycetophila alea* Laffoon, 1965**
Mordovia (Esin et al., 2023).

***Mycetophila attonsa* Laffoon, 1957**
Mordovia (Esin et al., 2023).

***Mycetophila fungorum* (De Geer, 1776)**
Chuvashia (Borisova et al., 2018).
Mordovia (Plavilshchikov, 1964, as *Fungivora fungorum*).

***Mycetophila luctuosa* Meigen, 1830**
Chuvashia (Borisova et al., 2018).

***Mycetophila marginata* Winnertz, 1863**
Chuvashia (Borisova et al., 2018).

***Mycetophila sepulta* (Laffoon, 1957)**
Mordovia (Esin et al., 2023).

***Mycetophila sigillata* Dziedzicki, 1884**
Voronezh, Khoper River. x P22 road, 51.36° N, 42.04° E, N. Vikhrev, 27.04.2022, 1 ♂.

***Mycetophila signata* Meigen, 1830**
Mordovia (Esin et al., 2023).

***Mycetophila stolidus* Walker, 1856**
Mordovia (Esin et al., 2023).

***Mycetophila strigatoides* Landrock, 1927**
Mordovia (Esin et al., 2023).

***Mycetophila triangulata* Dziedzicki, 1884**
Mordovia (Esin et al., 2023).

***Mycetophila unipunctata* Meigen, 1818**
Mordovia (Esin et al., 2023).

***Mycomya annulata* (Meigen, 1818)**

Mordovia (Esin et al., 2023).

***Mycomya occultans* (Winnertz, 1863)**

Mordovia (Esin et al., 2023).

***Mycomya tridens* (Lundstrom, 1911)**

Ulyanovsk, Radishchevo distr., Vjazovka env., 52.82° N, 48.35° E, 33–170 m a.s.l.,
K. Tomkovich, 2–8.05.2011, 1 ♂.

***Neoempheria brevilineata* Okada, 1939**

Mordovia (Esin et al., 2023).

***Neoempheria pictipennis* (Haliday, 1833)**

Mordovia (Esin et al., 2023).

***Platurocypta testata* (Edwards, 1925)**

Mordovia (Esin et al., 2023).

***Rondaniella dimidiata* (Meigen, 1804)**

Mordovia (Esin et al., 2023).

***Rymosia signatipes* (van der Wulp, 1859)**

Mordovia (Esin et al., 2023).

***Sceptonia costata* (van der Wulp, 1859)**

Mordovia (Esin et al., 2023).

***Sceptonia demeijerei* Bechev, 1997**

Mordovia (Esin et al., 2023).

***Sceptonia fumipes* Edwards, 1925**

Mordovia (Esin et al., 2023).

***Sceptonia nigra* (Meigen, 1804)**

Mordovia (Esin et al., 2023).

***Synplasta dulcia* (Dziedzicki, 1910)**

Mordovia (Esin et al., 2023).

***Synplasta exclusa* (Dziedzicki, 1910)**

Mordovia (Esin et al., 2023).

***Synplasta rufilatera* (Edwards, 1941)**

Ulyanovsk, Radishchevo distr., Vjazovka env., 52.82° N, 48.35° E, 33–170 m a.s.l., K. Tomkovich, 1–9.05.2011, 1 ♂.

***Trichonta atricauda* (Zetterstedt, 1852)**

Voronezh, Khoper River. x P22 road, 51.36° N, 42.04° E, N. Vikhrev, 27.04.2022, 1 ♂.

***Zygomyia notata* (Stannius, 1831)**

Mordovia (Esin et al., 2023).

***Zygomyia pictipennis* (Stæger, 1840)**

Mordovia (Esin et al., 2023).

***Zygomyia valida* Winnertz, 1863**

Mordovia (Esin et al., 2023).

KEROPLATIDAE

***Isoneuromyia semirufa* (Meigen, 1818)**

Mordovia (Esin et al., 2023).

***Keroplatus testaceus* Dalman, 1818**

Mordovia (Esin et al., 2023).

***Keroplatus tipuloides* Bosc, 1792**

Mordovia (Esin et al., 2023).

***Macrocera centralis* Meigen, 1818**

Mordovia (Esin et al., 2023).

***Monocentrotia lundstromi* Edwards, 1925**

Mordovia (Esin et al., 2023).

***Neoplatyura flava* (Macquart, 1826)**

Mordovia (Esin et al., 2023).

***Neoplatyura modesta* (Winnertz, 1863)**

Mordovia (Esin et al., 2023).

***Orfelia fasciata* (Meigen, 1804)**

Volgograd, Volgograd env., 48.572° N, 44.427° E, saltish pond edge, K. Tomkovich, 08.06.2012, 1 ♂, 1 ♀.

***Orfelia lugubris* (Zetterstedt, 1851)**

Mordovia (Esin et al., 2023).

***Pyratula zonata* (Zetterstedt, 1855)**

Mordovia (Esin et al., 2023).

PTYCHOPTERIDAE

***Ptychoptera albimana* Fabricius, 1781**

Mordovia (Esin et al., 2023).

Saratov (Paramonov, 2004)

***Ptychoptera contaminata* (Linnaeus, 1758)**

Lipetsk, Voronezh River, 52.64° N, 39.7° E, N. Vikhrev, 26.07.2022, 1 ♂.

Mordovia (Feoktistov, 2011).

Saratov (Paramonov, 2004).

Voronezh, Khoper SNR, Varvarino, 51.207° N, 41.719° E, floodplain, K. Tomkovich, 9–13.08.2022, 1 ♂, 1 ♀.

***Ptychoptera lacustris* Meigen, 1830**

Saratov (Paramonov, 2004).

Tatarstan (Paramonov, 2010).

Volgograd (Paramonov, 2004).

***Ptychoptera scutellaris* Meigen, 1818**

Tatarstan (Paramonov, 2014).

SUBORDER BRACHYCERA

MUSCIDAE

***Achanthiptera rohrelliformis* Robineau-Desvoidy, 1830**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2016a).

***Azelia aterrima* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 4–5.08.2022, 1 ♂.

***Azelia cilipes* Haliday, 1838**

Mordovia (Vikhrev et al., 2020).

Penza (Lyubvina, 2016b).

Tatarstan (Yuzekaeva, 2019).

***Azelia gibbera* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

***Azelia monodactyla* Loew, 1874**

Mordovia (Vikhrev et al., 2020).

***Azelia nebulosa* Robineau-Desvoidy, 1830**

Mordovia (Vikhrev et al., 2020).

***Azelia spinosa* Vikhrev, 2015**

Volgograd (Vikhrev, 2015a).

***Azelia trigonica* Hennig, 1956**

Mordovia (Vikhrev et al., 2020).

***Azelia zetterstedtii* Rondani, 1866**

Mordovia (Vikhrev et al., 2020).

Tatarstan (Yuzekaeva, 2019).

***Coenosia agromyzina* Fallen, 1825**

Mordovia (Vikhrev et al., 2020).

Ryazan, Kasimov env., 54.94° N, 41.34° E, N. Vikhrev, 17–19.07.2013, 3♂, 1♀.

Samara (Lyubvina, 2016a).

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 13.08.2022, 1♂.

***Coenosia ambulans* Meigen, 1826**

Samara (Lyubvina, 2016a).

***Coenosia atra* Meigen, 1830**

Mordovia (Vikhrev et al., 2020).

***Coenosia humilis* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

***Coenosia lineatipes* Zetterstedt, 1845**

Mordovia, Krasnoslobodsk distr., Selischi, 54.481° N, 43.522° E, forest edge, YPT, 1–4.08.2020, K. Tomkovich, M. Esin, 1♂, identified by V. Sorokina.

***Coenosia mollicula* Fallen, 1825**

Mordovia (Vikhrev et al., 2020).

Nizhny Novgorod, W of Nizhny Novgorod (56.28° N, 43.70° E), birch-pin forest, 12.07.2009, N. Vikhrev, 2♀.

Ryazan, Tuma env., 55.143° N, 40.616° E, N. Vikhrev, 21.07.2013, 2♂.

Samara (Lyubvina, 2016a).

Ulyanovsk, Staroe Eryomkino (54.32° N, 49.28° E), V.B. Isaeva, 24.07.1998, 1 ♀.

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 4–5.08.2022, 1 ♂.

***Coenosia paludis* Tiensuu, 1939**

Samara (Lyubvina, 2016a).

***Coenosia pudorosa* Collin, 1953**

Mordovia (Vikhrev et al., 2020).

***Coenosia pumila* Fallen, 1825**

Mordovia (Vikhrev et al., 2020).

Nizhny Novgorod, Dzerzhinsk env., 56.21° N, 43.62° E, 15.08.2009, N. Vikhrev, 4 ♂.

Penza, Poim env., 53.0° N, 43.2° E, 27.07.2022, N. Vikhrev, 2 ♂.

Samara (Lyubvina, 2016a).

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 13.08.2022, 1 ♂.

***Coenosia pygmaea* Zetterstedt, 1845**

Mordovia (Vikhrev et al., 2020).

***Coenosia rufipalpis* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2016a).

***Coenosia strigipes* Stein, 1916**

Mordovia (Vikhrev et al., 2020).

Penza (Lyubvina, 2016b).

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 13.08.2022, 1 ♂.

***Coenosia testacea* Robineau-Desvoidy, 1830**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2016a).

Tambov, W of Kirsanov, 52.65° N, 42.62° E, 27–28.07.2022, N. Vikhrev, 1 ♂.

***Coenosia tigrina* Fabricius, 1775**

Volgograd, saltish pond, 48.572° N, 44.427° E, 8.06.2012, N. Vikhrev, 1 ♂.

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 4–5.08.2022, 2 ♀.

***Coenosia trilineela* Zetterstedt, 1838**

Mordovia (Vikhrev et al., 2020).

***Coenosia verralli* Collin, 1953**

Mordovia (Vikhrev et al., 2020).

Nizhny Novgorod, Dzerzhinsk env., 56.21° N, 43.62° E, 16–18.08.2009, N. Vikhrev, 4 ♂.

Samara (Lyubvina, 2016a).

***Drymeia vicana* Harris, 1780**

Mordovia (Vikhrev et al., 2020).

Samara (Rosenberg, 2007).

Voronezh (Negrobov, 2005).

***Eginia ocypterata* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

Nizhny Novgorod, W of Nizhny Novgorod, 56.28° N 43.70° E, birch-pin forest,
12.07.2009, N. Vikhrev, 4 ♂.

Samara (Rosenberg, 2007).

***Eudasyphora cyanicolor* Zetterstedt, 1845**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2016a).

Voronezh, Khoper SNR, Dubovaya Khata, 51.25° N, 41.78° E, K. Tomkovich,
6.08.2022, 2 ♀.

***Graphomya maculata* Scopoli, 1763**

Mordovia (Vikhrev et al., 2020).

Nizhny Novgorod (Vikhrev, 2011a).

Penza (Lyubvina, 2016b).

Samara (Vikhrev, 2011a).

Tambov, W of Kirsanov, 52.65° N, 42.62° E, 27–28.07.2022, N. Vikhrev, 1 ♀.

Ulyanovsk (Vikhrev, 2011a).

Voronezh (Negrobov, 2005).

***Gymnodia humilis* Zetterstedt, 1860**

Mordovia (Vikhrev et al., 2020).

***Gymnodia polystigma* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

***Haematobia irritans* Linnaeus, 1758**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2016a).

Tambov (Molev et al., 1967).

Voronezh (Negrobov, 2005).

***Haematobosca stimulans* Meigen, 1824**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2016a).

Voronezh (Negrobov, 2005).

***Haematobia titillans* Bezzi, 1907**

Tambov, Borschevka vill. (52.6° N, 41.3° E), pasture, calf, 27.08.1964, G. Veselkin, 1 ♂, 2 ♀.

***Hebecnema umbratica* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

***Hebecnema vespertina* Fallen, 1823**

Mordovia (Vikhrev et al., 2020).

***Helina allotalla* (Meigen, 1830)**

Samara (Lyubvina, 2016a).

***Helina cilipes* (Schnabl, 1889)**

Penza (Lyubvina, 2016b).

***Helina ciliatocosta* (Zetterstedt, 1845)**

Penza (Lyubvina, 2016b).

Samara (Rosenberg, 2007).

***Helina confinis* Fallen, 1825**

Mordovia (Vikhrev et al., 2020).

Lipetsk, Lipetsk, 52.64° N, 39.70° E, Voronezh River, N. Vikhrev, 26.07.2022, 1 ♀.

Penza (Lyubvina, 2016b).

Samara (Lyubvina, 2016a).

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 4–5.08.2022, 2 ♂.

***Helina cothurnata* Rondani, 1866**

Mordovia (Vikhrev et al., 2020).

***Helina evecta* Harris, 1780**

Mordovia (Vikhrev et al., 2020).

Samara, Enduraykino vill., 53.8° N 51.38° E, 12.08.22, A. Kuzovenko, 2 ♂, 2 ♀.

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 4–5.08.2022,
1 ♂, 1 ♀.

***Helina depuncta* Fallen, 1825**

Mordovia (Vikhrev et al., 2020).

Lipetsk, Lipetsk, 52.64° N, 39.70° E, Voronezh River, N. Vikhrev, 26.07.2022, 1 ♂.
Samara (Rosenberg, 2007).

***Helina impuncta* Fallen, 1825**

Mordovia (Vikhrev et al., 2020).

Penza (Lyubvina, 2016b).

Samara (Rosenberg, 2007).

Voronezh, Khoper SNR, Dubovaya Khata, 51.25° N, 41.78° E, K. Tomkovich,
6.08.2022, 1 ♀.

***Helina laxifrons* (Zetterstedt, 1860)**

Penza (Lyubvina, 2016b).

Samara (Lyubvina, 2016a).

Vladimir (Pavlov, 2006).

***Helina maculipennis* Zetterstedt, 1845**

Mordovia (Vikhrev et al., 2020).

***Helina moedlingensis* (Schnabl 1911)**

Penza (Lyubvina, 2016b).

Samara (Lyubvina, 2016a).

***Helina obscurata* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

Penza (Lyubvina, 2016b).

Samara (Lyubvina, 2016a).

***Helina parcepilosa* (Stein, 1907)**

Penza (Lyubvina, 2016b).

Samara (Lyubvina, 2016a).

***Helina pertusa* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

***Helina pubescens* (Stein, 1893)**

Penza (Lyubvina, 2016b).

***Helina quadrum* (Fabricius, 1805)**

Samara (Lyubvina, 2016a).

***Helina quadrinotata* (Meigen, 1826)**

Penza (Lyubvina, 2016b).

***Helina reversio* (Harris, 1780)**

Samara (Lyubvina, 2016a).

***Helina setiventris* Ringdahl, 1924**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2016a).

***Helina sexmaculata* Preyssler, 1791**

Mordovia (Vikhrev et al., 2020).

Samara, Enduraykino vill., 53.8° N 51.38° E, 12.08.2022, A. Kuzovenko, 1 ♂.

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 9–13.08.2022,
1 ♂, 1 ♀.

***Helina spinicosta* (Zetterstedt, 1845)**

Samara (Lyubvina, 2016a).

***Helina tetrastigma* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

Penza (Lyubvina, 2016b).

***Helina trivittata* Zetterstedt, 1860**

Mordovia (Vikhrev et al., 2020).

Samara, Enduraykino vill., 53.8° N 51.38° E, 12.08.22, A. Kuzovenko, 1 ♀.

***Hydrotaea aenescens* Wiedemann, 1830**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 15.07.2009, 1 ♂.

Mordovia (Vikhrev et al., 2020).

Ulyanovsk, Shilovka vill. env., 52.82° N, 48.35° E, 1–3.09.2010, K. Tomkovich, 3 ♂, 1 ♀.

***Hydrotaea albipuncta* Zetterstedt, 1845**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 13.07.2009, 2 ♂.

Samara (Lyubvina, 2016a).

***Hydrotaea armipes* Fallen, 1825**

Mordovia (Vikhrev et al., 2020).

Penza (Lyubvina, 2016b).

***Hydrotaea basdeni* Collin, 1939**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 13.07.2009, 1 ♂, 1 ♀.

***Hydrotaea borussica* Stein, 1899**

Mordovia (Vikhrev et al., 2020).

***Hydrotaea capensis* Wiedemann, 1818**

Mordovia (Vikhrev et al., 2020).

***Hydrotaea cyrtoneurina* Zetterstedt, 1845**

Mordovia (Vikhrev et al., 2020).

Vladimir, S of Vladimir, 56.06° N, 40.46° E, 5.06.2011, N. Vikhrev, 1 ♂.

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 9–13.08.2022, 2 ♂.

***Hydrotaea dentipes* Fabricius, 1805**

Mordovia (Vikhrev et al., 2020).

Lipetsk, Lipetsk, 52.64° N, 39.70° E, Voronezh River, N. Vikhrev, 26.07.2022, 1 ♂.

Penza (Levkovich & Levkovich, 1979).

Samara (Lyubvina, 2016a).

Tambov, W of Kirsanov, 52.65° N, 42.62° E, 27–28.07.2022, N. Vikhrev, 1 ♂.

***Hydrotaea diabolus* Harris, 1780**

Mordovia (Vikhrev et al., 2020).

***Hydrotaea floccosa* Macquart, 1835**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 13.07.2009, 2 ♂.

Mordovia (Vikhrev et al., 2020).

***Hydrotaea glabricula* Fallen, 1825**

Mordovia (Vikhrev et al., 2020).

***Hydrotaea ignava* Harris, 1780**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 13.07.2009, 1 ♀.

Mordovia (Vikhrev et al., 2020).

Penza (Levkovich & Levkovich, 1979).

Ryazan, Kasimov env., 54.94° N, 41.34° E, N. Vikhrev, 17–19.07.2013, 1 ♀.

Samara (Rosenberg, 2007).

Voronezh, Khoper SNR, Dubovaya Khata, 51.25° N, 41.78° E, K. Tomkovich, 6–8.08.2022, 1 ♀.

***Hydrotaea irritans* Fallen, 1823**

Mordovia (Vikhrev et al., 2020).

Ryazan (Vikhrev, 2013).

Samara (Lyubvina, 2016a).

***Hydrotaea meteorica* Linnaeus, 1758**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2016a).

***Hydrotaea militaris* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

***Hydrotaea nidicola* Malloch, 1925**

Voronezh (Tewelde, Gaponov, 2019).

***Hydrotaea palaestrica* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

Penza (Lyubvina, 2016b).

***Hydrotaea pandellei* Stein, 1899**

Mordovia (Vikhrev et al., 2020).

***Hydrotaea parva* Meade, 1889**

Mordovia (Vikhrev et al., 2020).

***Hydrotaea pellucens* Porchinskiy, 1879**

Mordovia (Vikhrev et al., 2020).

Voronezh (Negrobov, 2005).

***Hydrotaea pilipes* Stein, 1903**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 15.07.2009, 1 ♀.

Mordovia (Vikhrev et al., 2020).

Ryazan, Kasimov env., Zelenoe, 54.94° N, 41.34° E, N. Vikhrev, 17–19.07.2013, 1 ♀.

***Hydrotaea similis* Meade, 1887**

Mordovia (Vikhrev et al., 2020).

***Hydrotaea tuberculata* Rondani, 1866**

Mordovia (Vikhrev et al., 2020).

Vladimir reg., S of Vladimir, 56.06° N, 40.46° E, 5.06.2011, N. Vikhrev, 1 ♂.

***Hydrotaea unispinosa* Stein, 1898**

Mordovia (Esin et al., 2023).

***Hydrotaea velutina* Robineau-Desvoidy, 1830**

Mordovia (Vikhrev et al., 2020).

Tambov, W of Tambov, 52.677° N, 41.330° E, N. Vikhrev, 6.06.2012, 1 ♂, 1 ♀.

***Limnophora maculosa* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2016a).

Voronezh (Negrobov, 2005).

***Limnophora nigripes* Robineau-Desvoidy, 1830**

Mordovia (Esin et al., 2023).

***Limnophora pollinifrons* Stein, 1916**

Chuvashia, Yadrin env., 55.925° N, 46.288° E, Sura River, N. Vikhrev, 15.07.2009, 5 ♂, 3 ♀.
Mordovia (Vikhrev et al., 2020).

Nizhny Novgorod, Dzerzhinsk env., 56.21° N, 43.62° E, 18.08.2009, N. Vikhrev, 2 ♂.
Saratov, Saratov, Zakhvatkin, 27.07.1931, 1 ♂.

Ulyanovsk, Shilovka vill. env., 52.82° N, 48.35° E, 1–3.09.2010, K. Tomkovich, 4 ♂, 4 ♀.

***Limnophora riparia* Fallen, 1824**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 15.07.2009, 4 ♂, 1 ♀.
Mordovia (Vikhrev et al., 2020).

Vladimir, S of Vladimir, 56.055° N, 40.404° E, 5.06.2011, N. Vikhrev, 3 ♂, 3 ♀.

***Limnophora rufimana* Strobl, 1893**

Volgograd, (Medveditsa R.) 50.00° N, 43.235° E, N. Vikhrev, 7.06.2012, 2 ♂.

***Limnophora tigrina* Am Stein, 1860**

Mordovia (Vikhrev et al., 2020).

Nizhny Novgorod, Dzerzhinsk env., 56.21° N, 43.62° E, 18–19.08.2009, N. Vikhrev, 4 ♂, 2 ♀.

Ulyanovsk, Shilovka vill. env., 52.82° N, 48.35° E, 1–3.09.2010, K. Tomkovich, 1 ♂, 1 ♀.

Voronezh, 20 km W of Liski (51.00° N, 39.2° E), K. Tomkovich, 8–9.07.2012, 1 ♀.

***Limnophora triangula* Fallen, 1825**

Mordovia (Vikhrev et al., 2020).

Nizhny Novgorod, Dzerzhinsk env., 56.21° N, 43.62° E, 18.08.2009, N. Vikhrev, 1 ♀.

***Lispe brunnica* Becker, 1904**

Volgograd (Vikhrev 2012a).

***Lispe caesia* Meigen, 1826**

Volgograd (Vikhrev, 2016).

***Lispe consanguinea* Loew, 1858**

Chuvashia (Vikhrev, 2011b).

Mordovia (Vikhrev et al., 2020).

Nizhny Novgorod (Vikhrev, 2011b).

Ryazan (Vikhrev, 2014).

Samara (Rosenberg, 2007).

Saratov (Vikhrev, 2014).

Ulyanovsk (Vikhrev, 2011b).

Vladimir (Vikhrev, 2014).
Volgograd (Vikhrev, 2014).
Voronezh (Vikhrev, 2014).

***Lispe hebeiensis* Ma & Tian, 1993**

Volgograd (Vikhrev, 2015b).

***Lispe loewi* Ringdahl, 1922**

Volgograd (Vikhrev, 2015b).

***Lispe longicollis* Meigen 1826**

Saratov (Vikhrev, 2012b).
Volgograd (Vikhrev, 2012b).

***Lispe melaleuca* Loew, 1847**

Mordovia (Vikhrev et al., 2020).
Ryazan (Vikhrev, 2015b).
Saratov (Vikhrev, 2015b).
Volgograd (Vikhrev, 2015b).

***Lispe nana* Macquart, 1835**

Chuvashia (Vikhrev, 2014).
Mordovia (Vikhrev et al., 2020).
Ryazan (Vikhrev, 2014).

***Lispe neimongola* Tian & Ma, 2000**

Volgograd (Vikhrev, 2015b).

***Lispe nubilipennis* Loew, 1873**

Volgograd (Vikhrev, 2014).

***Lispe odessae* Becker, 1904**

Volgograd (Vikhrev, 2016).

***Lispe pygmaea* Fallen, 1825**

Mordovia (Vikhrev et al., 2020).
Nizhny Novgorod (Vikhrev, 2016).
Samara (Rosenberg, 2007).
Volgograd (Vikhrev, 2016).
Voronezh (Vikhrev, 2016).
Ulyanovsk (Vikhrev, 2016).

***Lispe parcespinosa bohémica* Becker, 1904**

Chuvashia (Vikhrev, 2015b).
Nizhnyi Novgorod (Vikhrev, 2015b).
Ryazan (Vikhrev, 2015b).

***Lispe uliginosa* (Fallén, 1825)**

Samara (Rosenberg, 2007).

***Lispe superciliosa* Loew, 1861**

Mordovia (Vikhrev et al., 2020).
Saratov (Vikhrev, 2015b).
Tambov (Vikhrev, 2015b).
Ulyanovsk (Vikhrev, 2015b).
Volgograd (Vikhrev, 2015b).

***Lispe tentaculata* De Geer, 1776**

Chuvashia (Vikhrev, 2011b).
Mordovia (Vikhrev et al., 2020).
Nizhnyi Novgorod (Vikhrev, 2011b).
Vladimir (Vikhrev, 2011b).
Voronezh (Negrobov, 2005).
Ulyanovsk (Vikhrev, 2011b).

***Lispocephala alma* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).
Vladimir (Pavlov, 2006).

***Lispocephala erythroceras* Robineau-Desvoidy, 1830**

Mordovia (Vikhrev et al., 2020).
Lipetsk, Lipetsk, 52.64° N, 39.70° E, Voronezh River, N. Vikhrev, 26.07.2022, 1 ♂.
Ryazan reg., Ranova River, 53.72° N, 39.93° E, N. Vikhrev, 6.06.2012, 5 ♂, 2 ♀.
Samara (Lyubvina, 2016a).
Tambov, W of Kirsanov, 52.65° N, 42.62° E, 27–28.7.2022, N. Vikhrev, 1 ♂.
Ulyanovsk, Ulyanovsk, Sviyaga River, 54.33° N, 48.34° E, 25.04.2011,
K. Tomkovich, 1 ♂, 1 ♀.
Vladimir (Pavlov, 2006).
Volgograd reg., Kalach-na-Donu env., 48.65° N, 43.60° E, 30.04.2013, N. Vikhrev, 1 ♂, 2 ♀.

***Lispocephala verna* Fabricius, 1794**

Mordovia (Vikhrev et al., 2020).

***Macrorchis meditata* Fallen, 1825**

Vladimir, S of Vladimir, 56.055° N, 40.404° E, 15.08.2009, N. Vikhrev, 2 ♂.

***Mesembrina meridiana* Linnaeus, 1758**

Mordovia (Vikhrev et al., 2020).
Penza (Lyubvina, 2016b).
Samara (Lyubvina, 2016a).
Voronezh (Negrobov, 2005).

***Mesembrina mystacea* Linnaeus, 1758**

Mordovia (Vikhrev et al., 2020).
Samara (Lyubvina, 2016a).

***Morellia aenescens* Robineau-Desvoidy, 1830**

Mordovia (Vikhrev et al., 2020).
Voronezh (Negrobov, 2005).

***Morellia hortorum* Fallen, 1817**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 13.07.2009, 1 ♂.
Penza (Lyubvina, 2016b).
Samara (Rosenberg, 2007).
Ulyanovsk, Sura distr., Nikitio, 54.46° N, 47.07° E, 19.07.2001, 1 ♂.
Voronezh (Negrobov, 2005).

***Morellia podagrica* Loew, 1857**

Mordovia (Vikhrev et al., 2020).
Samara (Rosenberg, 2007).

***Morellia simplex* Loew, 1857**

Lipetsk, Donskoe (52.61° N, 38.99° E) env., 23–28.08.1999, K. Tomkovich, 1 ♂.
Samara (Rosenberg, 2007).
Voronezh (Negrobov, 2005).

***Musca autumnalis* De Geer, 1776**

Mordovia (Vikhrev et al., 2020).
Penza (Lyubvina, 2016b).
Samara (Rosenberg, 2007).
Voronezh (Negrobov, 2005).

***Musca domestica* Linnaeus, 1758**

Mordovia (Vikhrev et al., 2020).
Penza (Levkovich & Levkovich, 1979).
Samara (Rosenberg, 2007).
Voronezh (Negrobov, 2005).

***Musca larvipara* Porchinskiy, 1910**

Penza (Lyubvina, 2016b).

Samara (Rosenberg, 2007).

Voronezh (Negrobov, 2005).

***Musca osiris* (Wiedemann, 1830)**

Samara (Lyubvina, 2016a).

***Musca tempestiva* Fallen, 1817**

Mordovia (Vikhrev et al., 2020).

Voronezh (Negrobov, 2005).

***Muscina angustifrons* Loew, 1858**

Mordovia (Esin et al., 2023).

***Muscina levida* Harris, 1780**

Lipetsk, Lipetsk, 52.64° N, 39.70° E, Voronezh River, N. Vikhrev, 26.07.2022, 1 ♂.

Mordovia (Vikhrev et al., 2020).

Penza (Lyubvina, 2016b).

Nizhny Novgorod, Dzerzhinsk env., 56.21° N, 43.62° E, 18.08.2009, N. Vikhrev, 2 ♂.

Samara (Rosenberg, 2007).

Tambov, W of Kirsanov, 52.65° N, 42.62° E, 27–28.07.2022, N. Vikhrev, 2 ♂.

Tatarstan (Yuzekaeva, 2019).

Voronezh (Negrobov, 2005).

***Muscina pascuorum* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

Samara, Shiryaevo env., 53.40° N 50.05° E, I. Melnik, 13.07.2012, 1 ♂.

Tatarstan (Yuzekaeva, 2019).

***Muscina prolapsa* (Harris, [1780])**

Samara (Lyubvina, 2016a).

***Muscina stabulans* Fallen, 1817**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 13–15.07.2009, 2 ♂.

Mordovia (Vikhrev et al., 2020).

Penza, Poim env., 53.0° N, 43.2° E, 27.07.2022, N. Vikhrev, 2 ♂.

Samara (Lyubvina, 2016a).

Tambov, W of Kirsanov, 52.65° N, 42.62° E, 27–28.07.2022, N. Vikhrev, 2 ♂.

Tatarstan (Yuzekaeva, 2020).

Voronezh, Khoper SNR, Dubovaya Khata, 51.25° N, 41.78° E, K. Tomkovich, 6.08.2022, 1 ♂.

***Mydaea affinis* Meade, 1891**

Mordovia (Vikhrev et al., 2020).

***Mydaea ancilla* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

***Mydaea corni* Scopoli, 1763**

Mordovia (Vikhrev et al., 2020).

Samara (Rosenberg, 2007).

***Mydaea electa* Zetterstedt, 1860**

Mordovia (Vikhrev et al., 2020).

***Mydaea humeralis* Robineau-Desvoidy, 1830**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2016a).

***Mydaea nebulosa* Stein, 1893**

Mordovia (Vikhrev et al., 2020).

***Mydaea nubila* Stein, 1916**

Mordovia (Vikhrev et al., 2020).

***Mydaea orthonevra* Macquart, 1835**

Mordovia (Vikhrev et al., 2020).

***Mydaea palpalis* Stein, 1916**

Penza (Lyubvina, 2016b).

***Mydaea setifemur* Ringdahl, 1924**

Mordovia (Vikhrev et al., 2020).

Samara (Rosenberg, 2007).

***Mydaea urbana* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

Tambov, W of Kirsanov, 52.65° N, 42.62° E, 27–28.07.2022, N. Vikhrev, 3♀.

Voronezh, Khoper SNR, Dubovaya Khata, 51.25° N, 41.78° E, K. Tomkovich, 6.08.2022, 1 ♀.

***Myospila meditabunda* Fabricius, 1781**

Mordovia (Vikhrev et al., 2020).

Penza (Lyubvina, 2016b).

Samara (Lyubvina, 2016a).

Volgograd, Serafimovich env., 49.57° N, 42.60° E, 28–29.04.2013, N. Vikhrev, 2 ♂.
Voronezh (Negrobov, 2005).

Neomyia cornicina Fabricius, 1781

Mordovia (Vikhrev et al., 2020).

Penza (Lyubvina, 2016b).

Samara (Rosenberg, 2007).

Voronezh (Negrobov, 2005).

Neomyia viridescens Robineau-Desvoidy, 1830

Mordovia (Vikhrev et al., 2020).

Voronezh (Negrobov, 2005).

Phaonia aeneiventris Zetterstedt, 1845

Mordovia (Vikhrev et al., 2020).

Phaonia angelicae Scopoli, 1763

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 13.07.2009, 1 ♀.

Mordovia (Vikhrev et al., 2020).

Ryazan, Tuma env., 55.143° N, 40.616° E, N. Vikhrev, 21.07.2013, 1 ♀.

Samara (Lyubvina, 2011).

Vladimir, S of Vladimir, 56.05 ° N, 40.41° E, 15.08.2009, N. Vikhrev, 1 ♀.

Voronezh (Negrobov, 2005).

Phaonia boleticola Rondani, 1866

Tambov, W of Kirsanov, 52.65° N, 42.62° E, 27–28.07.2022, N. Vikhrev, 1 ♀.

Samara, Enduraykino vill., 53.8° N 51.38° E, 12.08.22, A. Kuzovenko, 3 ♂, 5 ♀.

Ulyanovsk, Shilovka vill. env., 52.82° N, 48.35° E, 1–3.09.2010, K. Tomkovich, 3 ♀.

Voronezh (Negrobov, 2005).

Phaonia canescens Stein, 1916

Mordovia (Vikhrev et al., 2020).

Phaonia cincta Zetterstedt, 1846

Mordovia (Vikhrev et al., 2020)

Phaonia errans Meigen 1826

Mordovia (Vikhrev et al., 2020).

Penza (Lyubvina, 2016b).

Phaonia falleni Michelsen, 1977

Mordovia (Vikhrev et al., 2020).

Lipetsk, Lipetsk, 52.64° N, 39.70° E, Voronezh River, N. Vikhrev, 26.07.2022, 1 ♀.

***Phaonia fugax* Tiensuu, 1946**

Voronezh (Negrobov, 2005).

***Phaonia fuscata* Fallen, 1825**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2016a).

***Phaonia gobertii* Mik, 1881**

Mordovia (Vikhrev et al., 2020).

***Phaonia gracilis* Stein, 1916**

Samara (Rosenberg, 2007).

***Phaonia incana* Wiedemann, 1817**

Mordovia (Vikhrev et al., 2020).

Tambov, W of Kirsanov, 52.65° N, 42.62° E, 27–28.07.2022, N. Vikhrev, 2 ♀.

***Phaonia kowarzii* Schnabl, 1887**

Mordovia (Vikhrev et al., 2020).

***Phaonia laeta* Fallen, 1823**

Mordovia (Vikhrev et al., 2020).

***Phaonia lugubris* (Meigen, 1826)**

Samara (Lyubvina, 2016a).

***Phaonia magnicornis* Zetterstedt, 1845**

Mordovia (Vikhrev et al., 2020).

***Phaonia nymphaearum* Robineau-Desvoidy, 1830**

Mordovia (Vikhrev et al., 2020).

***Phaonia pallida* Fabricius, 1787**

Mordovia (Vikhrev et al., 2020).

Nizhny Novgorod (Vikhrev & Erofeeva, 2018).

Penza (Lyubvina, 2016b).

Saratov (Vikhrev & Erofeeva, 2018).

Samara (Lyubvina, 2016a).

Tambov, W of Kirsanov, 52.65° N, 42.62° E, 27–28.07.2022, N. Vikhrev, 2 ♀.

Volgograd (Vikhrev & Erofeeva, 2018).

Voronezh (Negrobov, 2005).

***Phaonia palpata* Stein, 1897**

Mordovia (Vikhrev et al., 2020).

Nizhny Novgorod, Vetluzhsky env., 57.2° N, 45.1° E, 11–18.09.2019, A. Matyukhin, 1 ♀.

Ryazan (Vikhrev & Erofeeva 2017).

Samara (Lyubvina, 2016a).

***Phaonia rufiventris* Scopoli, 1763**

Mordovia (Vikhrev et al., 2020).

Vladimir (Vikhrev & Erofeeva, 2018).

***Phaonia serva* Meigen, 1826**

Mordovia (Vikhrev et al., 2020).

Penza (Lyubvina, 2016b).

Vladimir, S of Vladimir, 56.05 ° N, 40.41° E, 16.06.2013, N. Vikhrev, 1 ♀.

***Phaonia subventa* Harris, 1780**

Mordovia (Vikhrev et al., 2020).

Ryazan (Vikhrev & Erofeeva, 2018).

***Phaonia tiefii* Schnabl, 1888**

Mordovia (Vikhrev et al., 2020).

Penza, Poim env., 53.0° N, 43.2° E, 27.07.2022, N. Vikhrev, 1 ♂.

***Phaonia tuguriorum* Scopoli, 1763**

Mordovia (Vikhrev et al., 2020).

Voronezh (Negrobov, 2005).

***Phaonia valida* Harris, 1780**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2016a).

Voronezh, 20 km W of Liski (51.00° N, 39.2° E), K. Tomkovich, 8–9.07.2012, 1 ♀.

***Phaonia zugmayeriae* Schnabl, 1888**

Mordovia (Vikhrev et al., 2020).

***Polietes domitor* Harris, 1780**

Mordovia (Vikhrev et al., 2020).

Voronezh (Negrobov, 2005).

***Polietes lardarius* Fabricius, 1781**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2016a).

Voronezh (Negrobov, 2005).

***Polietes steinii* Ringdahl, 1913**

Mordovia (Vikhrev et al., 2020).

***Potamia littoralis* Robineau-Desvoidy, 1830**

Mordovia (Vikhrev et al., 2020).

***Pyrellia rapax* Harris, 1780**

Mordovia (Vikhrev et al., 2020).

Samara (Rosenberg, 2007).

Voronezh (Negrobov, 2005).

***Pyrellia secunda* Zimin, 1951**

Samara (Lyubvina, 2016a).

***Pyrellia vivida* Robineau-Desvoidy, 1830**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2016a).

Voronezh (Negrobov, 2005).

***Schoenomyza litorella* Fallen, 1823**

Mordovia (Vikhrev et al., 2020).

Ryazan, Kasimov env., 54.94° N, 41.34° E, N. Vikhrev, 17–19.07.2013, 1 ♀.

***Spilogona aerea* Fallen, 1825**

Mordovia (Vikhrev et al., 2020).

***Spilogona contractifrons* Zetterstedt, 1838**

Mordovia (Vikhrev et al., 2020).

***Spilogona depressula* Zetterstedt, 1845**

Mordovia (Vikhrev et al., 2020).

***Spilogona pacifica* (Meigen, 1826)**

Samara (Lyubvina, 2016a).

***Spilogona surda* Zetterstedt, 1845**

Mordovia (Vikhrev et al., 2020).

***Stomoxys calcitrans* Linnaeus, 1758**

Lipetsk, railway station 265th km (52.62° N, 39.47° E), K. Tomkovich, 22.08.1999, 1 ♀.

Mordovia (Vikhrev et al., 2020).

Penza (Lyubvina, 2016b).

Samara (Rosenberg, 2007).

Tambov (Molev et al., 1967).
Voronezh (Negrobov, 2005).

***Thricops cunctans* Meigen, 1826**
Mordovia (Vikhrev et al., 2020).

***Thricops diaphanus* (Wiedemann, 1817)**
Samara (Lyubvina, 2016a).

***Thricops lividiventris* (Zetterstedt, 1845)**
Samara (Lyubvina, 2016a).

***Thricops longipes* (Zetterstedt, 1845)**
Ulyanovsk (Vikhrev, 2010).

***Thricops nigrifrons* Robineau-Desvoidy, 1830**
Mordovia (Vikhrev et al., 2020).
Vladimir (Vikhrev, 2010).

***Thricops nigritellus* Zetterstedt, 1838**
Mordovia (Vikhrev et al., 2020).
Samara (Rosenberg, 2007).

***Thricops semicinereus* Wiedemann, 1817**
Mordovia (Vikhrev et al., 2020).
Nizhny Novgorod (Vikhrev & Sorokina 2009).
Samara (Rosenberg, 2007).

***Thricops simplex* Wiedemann, 1817**
Mordovia (Vikhrev et al., 2020).
Nizhny Novgorod (Vikhrev & Sorokina, 2009).
Samara (Rosenberg, 2007).
Tambov, W of Kirsanov, 52.65° N, 42.62° E, 27–28.07.2022, N. Vikhrev, 1 ♂.

***Thricops sudeticus* Schnabl, 1888**
Mordovia (Vikhrev et al., 2020).

FANNIIDAE

***Fannia aequilineata* Ringdahl, 1945**
Voronezh (Negrobov, 2005).

***Fannia armata* (Meigen, 1826)**

Chuvashia (Vikhrev, 2018).
Mordovia (Vikhrev et al., 2020).
Samara (Lyubvina, 2017).

***Fannia barbata* Stein, 1892**

Mordovia (Esin et al., 2023).
Samara (Lyubvina, 2017).

***Fannia canicularis* Linnaeus, 1761**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 13.07.2009, 2 ♂.
Lipetsk, Lipetsk, 52.64° N, 39.70° E, Voronezh River, N. Vikhrev, 26.06.2022, 1 ♂.
Mordovia (Vikhrev et al., 2020).
Penza (Levkovich & Levkovich, 1979).
Samara (Rosenberg, 2007; Lyubvina, 2017).
Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 4–5.08.2022, 1 ♂.

***Fannia carbonaria* (Meigen, 1826)**

Samara (Lyubvina, 2017).

***Fannia carbonella* (Stein, 1895)**

Samara (Lyubvina, 2017).

***Fannia corvina* Verrall, 1892**

Mordovia (Vikhrev et al., 2020).
Samara (Lyubvina, 2017).

***Fannia difficilis* (Stein, 1895)**

Samara (Lyubvina, 2017).

***Fannia fuscula* (Fallen, 1825)**

Mordovia (Vikhrev et al., 2020).
Tambov, W of Kirsanov, 52.65° N, 42.62° E, 27–28.07.2022, N. Vikhrev, 1 ♂.
Samara (Lyubvina, 2017).
Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 4–5.08.2022, 1 ♂.

***Fannia genualis* (Stein, 1895)**

Mordovia (Vikhrev et al., 2020).

***Fannia hirticeps* (Stein, 1892)**

Mordovia (Esin et al., 2023).
Samara (Lyubvina, 2017).

***Fannia incisurata* Zetterstedt, 1838**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 14–15.07.2009, 3♂.
Mordovia (Vikhrev et al., 2020).

***Fannia latipalpis* (Stein, 1892)**

Penza (Lyubvina, 2016b).

***Fannia lineata* (Stein, 1895)**

Voronezh (Tewelde, Gaponov, 2019).

***Fannia lucidula* (Zetterstedt, 1860) (= *F. glaucescens*)**

Nizhny Novgorod, Dzerzhinsk env., 56.21° N, 43.62° E, 16.08.2009, N. Vikhrev, 1♂, 1♀.
Ryazan, Kasimov env., Oka River, 54.94° N, 41.34° E, N. Vikhrev, 21–24.07.2013, 1♂.
Oka, 1♂. Ranova River, 53.72° N, 39.93° E, N. Vikhrev, 6.06.2012, 1♂.

***Fannia lustrator* (Harris, 1780)**

Mordovia (Vikhrev et al., 2020).
Voronezh, Borisoglebsk (51.4° N, 42.0° E), G. Viktorov, 23.06.1955, 1♀.
Samara (Lyubvina, 2017).

***Fannia manicata* (Meigen, 1826)**

Mordovia (Vikhrev et al., 2020).

***Fannia metallipennis* Zetterstedt, 1838**

Mordovia (Vikhrev et al., 2020).

***Fannia minutipalpis* (Stein, 1895)**

Samara (Lyubvina, 2017).

***Fannia monilis* Haliday, 1838**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 14–15.07.2009, 5♂.
Mordovia (Vikhrev et al., 2020).

***Fannia ornata* (Meigen, 1826)**

Samara (Lyubvina, 2017).
Voronezh, Khoper SNR, Dubovaya Khata, 51.25° N, 41.78° E, K. Tomkovich,
8.08.2022, 1♂.

***Fannia pallitibia* (Rondani, 1866)**

Tatarstan (Yuzekaeva, 2019).

***Fannia parva* (Stein, 1895)**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2017).

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 14.08.2022,
1 ♂, 1 ♀.

***Fannia pauli* Pont, 1997**

Mordovia (Vikhrev et al., 2020).

***Fannia polychaeta* (Stein, 1895)**

Mordovia (Vikhrev et al., 2020).

Tambov, W of Kirsanov, 52.65° N, 42.62° E, 27–28.07.2022, N. Vikhrev, 1 ♂.

Samara (Lyubvina, 2017).

***Fannia posticata* (Meigen, 1826)**

Mordovia (Vikhrev et al., 2020).

***Fannia rondanii* (Strobl, 1893)**

Mordovia (Vikhrev et al., 2020).

***Fannia scalaris* (Fabricius, 1794)**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 14–15.07.2009, 5 ♂.

Lipetsk, Lipetsk, 52.64° N, 39.70° E, Voronezh River, N. Vikhrev, 26.06.2022, 1 ♂.

Mordovia (Vikhrev et al., 2020).

Penza (Levkovich & Levkovich, 1979).

Samara (Lyubvina, 2017).

Tambov, W of Kirsanov, 52.65° N, 42.62° E, 27–28.07.2022, N. Vikhrev, 1 ♂.

Tatarstan (Yuzekaeva, 2019).

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich,
9–13.08.2022, 1 ♂.

***Fannia serena* (Fallen, 1825)**

Mordovia (Vikhrev et al., 2020).

Chuvashia, Yadrin env. 55.924° N, 46.213° E, N. Vikhrev, 15.07.2009, 1 ♂.

***Fannia similis* (Stein, 1895)**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 13.07.2009, 2 ♂.

Mordovia (Vikhrev et al., 2020).

Ryazan, Kasimov env., Oka River, 54.94° N, 41.34° E, N. Vikhrev, 21–24.07.2013, 1 ♂.

Samara (Lyubvina, 2017).

***Fannia sociella* (Zetterstedt, 1845)**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2017).

***Fannia spathiophora* Malloch, 1918**

Mordovia (Vikhrev et al., 2020).

***Fannia umbrosa* (Stein, 1895)**

Mordovia (Vikhrev et al., 2020).

Samara (Lyubvina, 2017).

***Fannia vespertilionis* Ringdahl, 1934**

Mordovia (Vikhrev et al., 2020).

***Piezura graminicola* (Zetterstedt, 1846)**

Mordovia (Vikhrev et al., 2020).

***Piezura pardalina* (Rondani, 1866)**

Mordovia (Esin et al., 2023).

SCIOMYZIDAE

***Anticheta analis* Meigen, 1830**

Samara, Samara River, Formalny, 53.1° N 50.7° E, 30.07.2020, A. Kuzovenko, 4 ♂, 1 ♀.
Voronezh (Negrobov, 2005).

***Anticheta atriseta* Loew, 1849**

Mordovia (Vikhrev et al., 2020).

Samara, Enduraykino vill., 53.8° N 51.38° E, 12.08.22, A. Kuzovenko, 1 ♂.
Voronezh (Gaponov, 2016).

***Anticheta brevipennis* (Zetterstadt, 1846)**

Voronezh (Gaponov, 2016).

***Anticheta nigra* (Karl, 1921)**

Samara (Rosenberg, 2007).

***Colobaea bifasciella* Fallen, 1820**

Mordovia (Vikhrev et al., 2020).

Ryazan, Kasimov env., Zelenoe, 54.94N 41.34E, N. Vikhrev, 17–19.06.2013, 1 ♂.
Samara, 8 km SE of Kinel, 53.1° N 50.7° E, A. Kuzovenko, 30.07.2020, 1 ♂, 1 ♀.
Tambov, Uvarovo env., Vorona river, YPT, M. Esin, 4–6.07.2022, 1 ♀.
Voronezh (Negrobov, 2005; Gaponov, 2016).

***Colobaea distincta* Meigen, 1830**

Mordovia (Vikhrev et al., 2020).

Samara, 8 km SE of Kinel, 53.1° N 50.7° E, A. Kuzovenko, 30.07.2020, 1 ♂.

Volgograd, Tinguta (48.3° N, 44.3° E), 5.07.1953, G. Viktorov, 1 ♀.
Voronezh, near Khoper River, 51.36° N, 42.05° E, 7.06.2012, N. Vikhrev, 1 ♂.

***Colobaea pectoralis* (Zetterstedt, 1847)**

Voronezh (Gaponov, 2016).

***Colobaea punctata* Lundbeck, 1923**

Samara, 8 km SE of Kinel, 53.1° N 50.7° E, A. Kuzovenko, 30.07.2020, 3 ♂.
Voronezh (Negrobov, 2005).

***Coremacera catenata* Loew, 1847**

Samara, Zhiguli (53.4° N, 49.3° E), Novoderzhkin, 3.07.1938, 1 ♂. Chistovsky, 3.08.1950, 1 ♀ (ZIN); Rosenberg, 2007.
Voronezh (Gaponov, 2016).

***Coremacera marginata* (Fabricius, 1775)**

Lipetsk, railway station 265th km, 52.62° N, 39.47° E, K. Tomkovich, 22.08.1999, 1 ♂.
Mordovia (Vikhrev et al., 2020).
Ryazan, Kasimov env., Zelenoe, 54.969° N, 41.327° E, N. Vikhrev, 21–26.07.2013, 1 ♀.
Samara (Rosenberg, 2007).
Volgograd, Sarepta, 48.52° N, 44.51° E, T. Bekker, 1868, 1 ♂, 2 ♀ (ZIN).
Voronezh (Negrobov, 2005).

***Dichetophora finlandica* Verbeke, 1964**

Mordovia (Vikhrev et al., 2020).
Penza (Lyubvina, 2016b).
Voronezh (Negrobov, 2005).

***Dictya umbrarum* (Linnaeus, 1758)**

Voronezh (Negrobov, 2005).

***Ditaeniella grisescens* Meigen, 1830**

Ulyanovsk (Vikhrev & Murphy, 2022).
Voronezh (Gaponov, 2016).

***Elgiva cucularia* (Linnaeus, 1767)**

Mordovia (Vikhrev et al., 2020).
Vladimir (Pavlov, 2006).
Voronezh (Negrobov, 2005; Vikhrev & Yanbulat 2021).

***Elgiva sollicita* (Harris, 1780)**

Mordovia (Vikhrev et al., 2020).

Penza, Poim env., 53.0° N, 43.2° E, 27.07.2022, N. Vikhrev, 1 ♂, 1 ♀.

Vladimir (Pavlov, 2006).

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 9–13.08.2022, 3 ♂.

***Euthycera chaerophylli* Fabricius, 1798**

Mordovia (Dvořák et al., 2020).

Nizhny Novgorod (Dvořák et al., 2022).

Voronezh (Gaponov, 2016).

***Euthycera stictica* (Fabricius, 1805)**

Voronezh (Gaponov, 2016).

***Hydromya dorsalis* (Fabricius, 1775)**

Vladimir (Pavlov, 2006).

Voronezh (Gaponov, 2016).

***Ilione albiseta* Scopoli, 1763**

Ryazan, Khrapovo, 54.61° N, 39.62° E, V. Kovalev, 6.07.1975, 2 ♂.

Samara, Samara, Bostanjoglo, 13.08.1910, 2 ♀.

Voronezh, Shilovsky forest, 51.58° N, 39.18° E, 7.09.1965, O. Negrobov, 1 ♀ (ZIN).
Ramon, 51.92° N, 39.35° E, A. Shatalkin; 12–15.09.1978, 1 ♂, 1 ♀. Voronezh, Khoper SNR, Dubovaya Khata, 51.25° N, 41.78° E, K. Tomkovich, 6.08.2022, 1 ♂.

***Ilione lineata* Fallen, 1820**

Mordovia (Vikhrev et al., 2020).

Voronezh (Gaponov, 2016).

***Ilione rossica* Mayer, 1953**

Ryazan, Ranova River, 53.72° N, 39.93° E, N. Vikhrev, 6.06.2012, 2 ♂.

Samara, Samara, Bostanjoglo, 13.08.1910, 1 ♀.

Volgograd, Sarepta, 48.52° N, 44.51° E, T. Bekker, 1868, 1 ♂, 1 ♀ (ZIN).

Voronezh, Ramon, 51.92° N, 39.35° E, A. Shatalkin; 12.09.1978, 6 ♂, 2 ♀.
Borisoglebsk, 51.37° N, 42.04° E, V. Kovalev, 3.08.1964, 1 ♀.

***Limnia paludicola* Elberg, 1965**

Voronezh (Gaponov, 2016).

***Limnia unguicornis* Scopoli, 1763**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 14.07.2009, 1 ♀.

Lipetsk, Lipetsk, 52.64° N, 39.70° E, Voronezh River, N. Vikhrev, 26.07.2022, 2 ♂.

Mordovia (Vikhrev et al., 2020).

- Nizhny Novgorod, Kstov distr., Royka vill., N. Khrustaleva, 18.06.1980, 1 ♂.
Penza (Lyubvina, 2016b).
1 ♀. Tambov, Kirsanov env., Vorona River, 52.61° N, 42.8° E, 28.07.2022, N. Vikhrev,
1 ♂. Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 14.08.2022,

***Pelidnoptera nigripennis* Fabricius, 1794**

- Samara (Rosenberg, 2007).
Volgograd: Scherbakovskaya balka (50.49° N, 45.71° E), T. Galinskaya, 25.06.2007,
1 ♂. Kamyshin (50.1° N, 45.4° E) env., balka, Ig. Melnik, 4.06.2009, 1 ♂. Kamyshin (50.1°
N, 45.4° E) env., balka, G. Viktorov, 17.06.1949, 1 ♂.

***Pherbellia albocostata* Fallen, 1820**

- Mordovia (Vikhrev et al., 2020).
Voronezh (Gaponov, 2016).

***Pherbellia argyra* Verbeke, 1967**

- Lipetsk, Ryazanka vill., 53.5° N, 39.58° E, A. Yakovlev, 1881, 1 ♀ (ZIN).
Mordovia (Vikhrev et al., 2020).
Voronezh, Ramon, 51.92° N, 39.35° E, A. Shatalkin, 12.09.1978, 1 ♂, 1 ♀.
Vladimir, S of Vladimir, 56.06° N, 40.46° E, 5.06.2011, N. Vikhrev, 1 ♂.

***Pherbellia austera* Meigen, 1830**

- Mordovia (Vikhrev et al., 2020).

***Pherbellia brunnipes* Meigen, 1838**

- Mordovia (Vikhrev et al., 2020).
Voronezh (Vikhrev et al., 2020).

***Pherbellia cinerella* Fallen, 1820**

- Mordovia (Vikhrev et al., 2020)
Ryazan, Gremyachka, 53.92° N, 39.53° E, Danki uyezd = Skopin distr., A. Semenov,
07.1890, 1 ♂ (ZIN). Ranova River, 53.72° N, 39.93° E, N. Vikhrev, 6.06.2012, 1 ♀.
Voronezh, Ramon, 51.92° N, 39.35° E, A. Shatalkin, 12.09.1978, 1 ♂.
Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 15.07.2009, 2 ♂.

***Pherbellia clathrata* Loew, 1874**

- Samara, Zhiguli, 53.4° N 49.3° E, Novoderzhkin, 4.09.1948, 1 ♂, 1 ♀ (ZIN).
Volgograd, Elton Lake, mouth of Samaroda River, 49.12N 46.80E, D. Astakhov,
17.07.2012, 1 ♂ (ZIN).
Ulyanovsk, Vyazovka env., 52.82° N, 48.35° E, 2–8.05.2011, K. Tomkovich, 1 ♀.

***Pherbellia dorsata* (Zetterstadt, 1846)**

Voronezh (Gaponov, 2016).

***Pherbellia dubia* (Fallen, 1820)**

Mordovia (Vikhrev et al., 2020).

Voronezh (Gaponov, 2016).

***Pherbellia griseola* (Fallen, 1820)**

Lipetsk, Lipetsk, 52.64° N, 39.70° E, Voronezh River, N. Vikhrev, 26.06.2022, 1 ♂.

Mordovia (Vikhrev et al., 2020).

Ryazan, Kasimov env., Zalesnoe, 54.969° N, 41.327° E, N. Vikhrev, 21–26.07.2013, 4 ♂, 1 ♀.

Voronezh, Ramon (51.92° N, 39.35° E), A. Shatalkin, 12.09.1978, 2 ♂, 4 ♀.

***Pherbellia nana* (Fallén, 1820)**

Samara (Rosenberg, 2007).

Voronezh (Gaponov, 2016).

***Pherbellia obtusa* (Fallen, 1820)**

Mordovia (Vikhrev et al., 2020)

Voronezh, Ramon (51.92° N, 39.35° E), A. Shatalkin, 12.09.1978, 2 ♂, 4 ♀.

Volgograd, Kalach-na-Donu env., 48.65° N, 43.60° E, 30.04.2013, N. Vikhrev, 1 ♂.

***Pherbellia pallidiventris* (Fallén, 1820)**

Samara (Rosenberg, 2007).

Ulyanovsk (Dvořák et al., 2022).

Voronezh (Gaponov, 2016).

***Pherbellia pilosa* Hendel, 1902**

Chuvashia (Borisova et al., 2018).

Mordovia (Vikhrev et al., 2020).

Ryazan (Vikhrev & Murphy, 2022).

Tambov, Kirsanov env., Vorona River, 52.61° N, 42.8° E, 28.07.2022, N. Vikhrev, 1 ♂. W of Kirsanov, 52.65° N, 42.62° E, 27–28.07.2022, N. Vikhrev, 1 ♂.

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 14.08.2022, 1 ♀. Khoper SNR, Dubovaya Khata, 51.25° N, 41.78° E, K. Tomkovich, 6.08.2022, 2 ♀.

***Pherbellia schoenherri* (Fallen, 1826)**

Mordovia (Vikhrev et al., 2020).

Ulyanovsk, Radishchevo distr., 52.836N 48.367E, pond, K. Tomkovich, 7–9.05.2011, 1 ♂.

Vladimir (Pavlov, 2006).

Volgograd, Gulyayevsky, 50.418° N, 42.760° E, N. Vikhrev, 7.07.2012, 2 ♂.
Voronezh, Ramon, 51.92° N, 39.35° E, A. Shatalkin; 12–15.09.1978, 2 ♂, 1 ♀.

***Pherbellia scutellaris* von Roser, 1840**

Mordovia (Vikhrev et al., 2020).

Voronezh (Gaponov, 2016).

***Pherbellia sordida* Hendel, 1902**

Mordovia (Vikhrev et al., 2020).

***Pherbina coryleti* Scopoli, 1763**

Mordovia (Vikhrev et al., 2020).

Ryazan, Gremyachka, 53.92° N, 39.53° E, Danki uyezd = Skopin distr., A. Semenov:
19.06.1883, 1 ♂. 8.06.1890, 1 ♀. 31.05.1908, 1 ♂ (ZIN).

Volgograd, Sarepta, 48.52° N, 44.51° E, T. Bekker, 1868, 1 ♂, 1 ♀ (ZIN).

Voronezh, Ramon, 51.92° N, 39.35° E, A. Shatalkin; 12.09.1978, 1 ♂.

***Pherbina intermedia* Verbeke, 1848**

Voronezh (Gaponov, 2016).

***Psacadina vittigera* Schiner, 1864 (= *Psacadina verbekei* Rozkošný, 1975)**

Mordovia (Vikhrev et al., 2020).

Voronezh (Gaponov, 2016).

***Psacadina zernyi* Mayer, 1953**

Mordovia (Vikhrev et al., 2020).

Ulyanovsk Vyazovka env., 52.82° N, 48.35° E, 2–8.05.2011, K. Tomkovich, 1 ♂.

Vladimir (Pavlov, 2006).

Volgograd, Kalach-na-Donu env., 48.65° N, 43.60° E, 30.04.2013, N. Vikhrev, 1 ♂.

Voronezh, Khoper SNR, Dubovaya Khata, 51.25° N, 41.78° E, K. Tomkovich,
6.08.2022, 1 ♀.

***Pteromicra angustipennis* (Staeger, 1845)**

Voronezh (Gaponov, 2016).

***Pteromicra glabricula* (Fallen, 1820)**

Mordovia (Vikhrev et al., 2020).

Ryazan, Kasimov env., Zalesnoe, 54.969° N, 41.327° E, N. Vikhrev, 21–26.07.2013, 1 ♂.

Samara (Rosenberg, 2007).

Voronezh (Gaponov, 2016).

***Pteromicra leucopeza* (Meigen, 1838)**

Mordovia (Vikhrev et al., 2020).

Ulyanovsk, Shilovka vill. env., 52.82° N, 48.35° E, 1–3.09.2010, K. Tomkovich, 1 ♂.
Voronezh (Gaponov, 2016).

***Pteromicra oldenbergi* (Hendel, 1902)**

Voronezh (Gaponov, 2016).

***Renocera pallida* Fallen, 1820**

Mordovia (Vikhrev et al., 2020).

Penza (Lyubvina, 2016b).

Ryazan, Kasimov env, Zalesnoe, 54.969° N, 41.327° E, 21–26.07.2013, N. Vikhrev, 1 ♂.
Voronezh (Negrobov, 2005).

***Sciomyza dryomyzina* Zetterstedt, 1846 (= *Sciomyza lucida* (Hendel, 1902)**

Chuvashia, Yadrin env., 55.88° N, 46.29° E, N. Vikhrev, 14.07.2009, 1 ♀.

Voronezh (Negrobov, 2005; Gaponov, 2016).

***Sciomyza simplex* Fallén, 1820**

Voronezh (Negrobov, 2005).

***Sciomyza testacea* Macquart, 1835**

Ryazan, Kasimov env., Zelenoe, 54.969° N, 41.327° E, N. Vikhrev, 21–26.07.2013,
12 ♂, 9 ♀.

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 4–5.08.2022, 1 ♂.

***Sepedon sphegea* Fabricius, 1775**

Mordovia (Vikhrev et al., 2020).

Ryazan (Vikhrev & Yanbulat, 2019).

Samara (Vikhrev & Yanbulat, 2019).

Volgograd (Vikhrev & Yanbulat, 2019).

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 9–13.08.2022,
2 ♀.

***Sepedon spinipes* Scopoli, 1763**

Mordovia (Vikhrev et al., 2020).

Saratov (Vikhrev & Yanbulat, 2019).

Tambov, Kirsanov env., Vorona River, 52.61° N, 42.8° E, 28.07.2022, N. Vikhrev, 2 ♂, 1 ♀.

Volgograd (Vikhrev & Yanbulat, 2019).

Voronezh, Khoper SNR, Varvarino, 51.21° N, 41.72° E, K. Tomkovich, 4–5.08.2022,
1 ♂, 1 ♀.

***Tetanocera arrogans* Meigen, 1830**

Mordovia (Vikhrev et al., 2020).

Voronezh, Ramon, 51.92° N, 39.35° E, A. Shatalkin; 12.09.1978, 1 ♀.

***Tetanocera elata* Fabricius, 1781**

Mordovia (Vikhrev et al., 2020).

Voronezh (Negrobov, 2005).

***Tetanocera ferruginea* Fallen, 1820**

Mordovia (Vikhrev et al., 2020).

Ryazan, Kasimov env., Oka River, 54.94° N, 41.34° E, N. Vikhrev, 21–24.07.2013,
1 ♂.

Voronezh (Negrobov, 2005).

***Tetanocera fuscinervis* (Zetterstedt, 1838)**

Chuvashia, Yadrin env., 55.924° N, 46.213° E, N. Vikhrev, 15.07.2009, 1 ♂.

***Tetanocera hyalipennis* von Roser, 1840**

Mordovia (Vikhrev et al., 2020).

***Tetanocera montana* Day, 1881**

Chuvashia, ≈ Yadrin, 55.924° N, 46.213° E, willow bush near Sura River, N. Vikhrev,
14.07.2009, 1 ♂.

Voronezh, Ramon, 51.92° N, 39.35° E, A. Shatalkin; 12–15.09.1978, 3 ♂.

***Tetanocera punctifrons* Rondani, 1868**

Tambov, W of Tambov, 52.677° N, 41.330° E, N. Vikhrev, 6.06.2012, 1 ♂.

***Tetanocera robusta* Loew, 1847**

Mordovia (Vikhrev et al., 2020).

Voronezh (Negrobov, 2005).

***Trypetolimnia rossica* Mayer, 1953**

Samara (Rosenberg, 2007).

***Trypetoptera punctulata* Scopoli, 1763**

Lipetsk, SNR Galichya Gora, A. Shatalkin, 16.09.1978, 1 ♀.

Mordovia (Vikhrev et al., 2020).

Nizhny Novgorod, W of Nizhny Novgorod, 56.28° N, 43.70° E, birch-pin forest,
12.07.2009, N. Vikhrev, 1 ♂, 1 ♀.

Penza (Lyubvina, 2016b).

Ryazan, Gremyachka, 53.92° N, 39.53° E, Danki uyezd = Skopin distr., A. Semenov:
13.06.1890, 1 ♀ (ZIN). Kasimov env., Zalesnoe, 54.969° N, 41.327° E, N. Vikhrev,
21–26.07.2013, 1 ♀.

Samara, Zhiguli, 53.4° N, 49.3° E, Chistovsky, 3–10.08.1948, 1 ♂, 1 ♀ (ZIN).

Volgograd, Sarepta, 48.52° N, 44.51° E, T. Bekker, 1868, 1 ♂, 1 ♀ (ZIN)

Voronezh, Kalach, 50.4° N, 41.0° E, I. Gudim, 4.07.1933, 1 ♂ (ZIN). Voronezh SNR, 51.9° N, 39.4° E, Keleynikova, 12–24.06.1957, 1 ♂, 1 ♀. Borisoglebsk, 51.4° N, 42.0° E, G. Viktorov, 21.06.1955, 1 ♂.

Discussion

The table presents information on biodiversity of Diptera from 9 families (Tipulidae, Limoniidae, Pediciidae, Mycetophilidae, Keroplatidae, Ptychopteridae, Muscidae, Fanniidae, Sciomyzidae) inhabiting the territory of 14 regions. The most studied and diverse fauna is in the Republic of Mordovia. It is represented by 399 species. The fauna of these families is least known from the Republic of Tatarstan, Lipetsk Region, Nizhny Novgorod Region and Vladimir Region (respectively, 9, 19, 20 and 21 species).

Table. The number of species of different families of diptera in individual regions

Regions	Tipulidae	Limoniidae	Pediciidae	Mycetophilidae	Keroplatidae	Ptychopteridae	Muscidae	Fanniidae	Sciomyzidae	Total
Chuvashia	37	27	0	5	0	0	14	7	5	95
Lipetsk	0	4	0	0	0	1	7	2	5	19
Mordovia	43	77	6	51	9	2	144	26	35	399
Nizhny Novgorod	0	2	0	0	0	0	14	1	3	20
Penza	0	1	0	0	0	0	35	3	5	44
Ryazan	0	17	1	0	0	0	14	2	14	48
Samara	8	2	0	0	0	0	76	18	18	122
Saratov	21	19	0	0	0	3	6	0	1	50
Tambov	0	11	0	0	0	0	16	3	5	35
Tatarstan	0	0	0	0	0	2	5	2	0	9
Ulyanovsk	25	8	1	5	0	0	13	0	6	58
Vladimir	0	2	0	0	0	0	13	0	6	21
Volgograd	0	8	0	1	1	1	18	0	12	40
Voronezh	4	2	0	5	0	1	50	8	55	125
Total	64	102	6	69	10	4	190	36	64	545

A total of 545 species are known from 9 families of Diptera in the large macroregion (Volga Upland and Oka-Don Plain). The largest number of species include Muscidae (190) and Limoniidae (102). The least known biodiversity includes Ptychopteridae (4 species), Pediciidae (6 species) and Keroplatidae (10 species).

Conclusion

The fauna of these Diptera families is poorly studied in the vast majority out of the 14 regions located within the Volga Upland and Oka-Don Lowland. It is assumed that the fauna of considered families is far from being fully studied. This publication serves as a starting point for further research into the biodiversity of the macroregion.

Acknowledgement

M.O. Yanbulat provided important assistance in compiling the list of Sciomyzidae. The authors are grateful for providing a map of the territories to A.A. Khapugin (Tyumen). This research was funded by the Russian Science Foundation, grant number 22-14-00026. We thank Olga Ovchinnikova and Galina Suleymanova (Saint Petersburg) for the opportunity to examine the important material in ZIN.

References

- Adler P.H., Courtney G.W. 2019. Ecological and societal services of aquatic Diptera // *Insects*. Vol. 10. P. 70. <https://dx.doi.org/10.3390/insects10030070>
- Astakhov D.M., Ruchin A.B., Romadina O.D., Pristrem I.M. 2019. To robber flies fauna (Diptera: Asilidae) of Mordovia, Russia // *Biodiversitas*. Vol. 20. No. 4. P. 994–1005. <https://dx.doi.org/10.13057/biodiv/d200409>
- Barkalov A.V., Khruleva O.A. 2021. Hoverflies (Diptera, Syrphidae) of Wrangel Island (Chukotka Autonomous Okrug, Russia) // *Nature Conservation Research*. Vol. 6(1). P. 78–87. <https://dx.doi.org/10.24189/ncr.2021.013>
- Borisova N.V., Woźnica A.J., Soszyńska-Maj A. 2018. Some data about the winter active Diptera (Insecta) of the Chuvash Republic // *Scientific Proceedings of the State Nature Reserve Prisursky*. Vol. 33. P. 91–97. [In Russian]
- Burington Z.L. 2022. A taxonomic revision of the *Eucelatoria ferox* species group (Diptera: Tachinidae) // *Zootaxa*. Vol. 5143. P. 1–104. <https://dx.doi.org/10.11646/zootaxa.5143.1.1>
- Chursina M.A., Ruchin A.B. 2018. A checklist of Bombyliidae (Diptera) from Mordovia, Russia and variation of wing shape in *Bombylius* species // *Biodiversitas*. Vol. 19(6). P. 2147–2156. <https://dx.doi.org/10.13057/biodiv/d190622>
- Dvořák L., Dvořáková K., Oboňa J., Ruchin A.B. 2020. Selected Diptera families caught with beer traps in the Republic of Mordovia (Russia) // *Nature Conservation Research*. Vol. 5(4). P. 65–77. <https://dx.doi.org/10.24189/ncr.2020.057>
- Dvořák L., Dvořáková K., Oboňa J., Ruchin A.B. 2022. Some Diptera families from beer traps in the Volga region (Russia) // *Caucasian Entomological Bulletin*. Vol. 18. P. 130–138. <https://dx.doi.org/10.23885/181433262022181-130138>
- Egorov L.V., Podshivalina V.N. 2014. Materials for the knowledge of the fauna of invertebrates of the state Nature Reserve "Prisursky". Part 2 // *Scientific Proceedings of the State Nature Reserve Prisursky*. Vol. 29. P. 80–86. [In Russian]
- Esin M.N., Ruchin A.B., Gavryushin D.I., Xi Y.Q., Dvořák L., Dvořáková K. 2023. New records of Diptera from the Republic of Mordovia, Russia // *Nature Conservation Research*. Vol. 8(2). <https://dx.doi.org/10.24189/ncr.2023.011>
- El-Hawagry M.S.A., Boulaouad B.A., Soliman A.M., Ebrahim A.M., Al Dhafer H.M. 2022. New records and an annotated checklist of the thick-headed flies from Algeria (Conopidae, Brachycera, Diptera) // *Egyptian Journal Biological Pest Control*. Vol. 32. P. 100. <https://dx.doi.org/10.1186/s41938-022-00597-5>
- Gaponov S.P. 2016. Fauna and bioecology of snail-killing flies (Diptera Sciomyzidae) in the Central Black Soil Region of Russia // *Proceedings of Voronezh State University Series Law*. No. 1. P. 54–63. [In Russian]
- Grichanov I.Ya. 2020. A new species of *Pseudoparaclius* (Diptera: Dolichopodidae) from South Africa // *Nature Conservation Research*. Vol. 5(2). P. 103–108. <https://dx.doi.org/10.24189/ncr.2020.012>
- Grichanov I.Ya. 2021. A new species of *Epithalassius* (Diptera: Dolichopodidae) from Brittany, France // *Nature Conservation Research*. Vol. 6(2). P. 93–97. <https://dx.doi.org/10.24189/ncr.2021.021>
- Feoktistov V.F. 2011. List of insect species first recorded in the Mordovia reserve and adjacent territories // *Mordovia University Bulletin*. No. 4. P. 83–89. [In Russian]
- Ježek J., Manko P., Oboňa J. 2018. Checklist of known moth flies and sand flies (Diptera, Psychodidae) from Armenia and Azerbaijan // *ZooKeys*. Vol. 798. P. 109–133. <https://dx.doi.org/10.3897/zookeys.798.26543>

Kettani K., Ebejer M.J., Ackland D.M., Bächli G., Barraclough D., Barták M., Carles-Tolrá M., Černý M., Cerretti P., Chandler P., Dakki M., Daugeron C., De Jong H., Dils J., Disney H., Droz B., Evenhuis N., Gatt P., Gracioli G., Grichanov I.Y., Haenni J.-P., Hauser M., Himmi O., MacGowan I., Mathieu B., Mouna M., Munari L., Nartshuk E.P., Negrobov O.P., Oosterbroek P., Pape T., Pont A.C., Popov G.V., Rognes K., Skuhrová M., Skuhrový V., Speight M., Tomasovic G., Trari B., Tschorsnig H.-P., Vala J.-C., von Tschirnhaus M., Wagner R., Whitmore D., Woźnica A.J., Zatwarnicki T., Zwick P. 2022. Catalogue of the Diptera (Insecta) of Morocco – an annotated checklist, with distributions and a bibliography // ZooKeys. Vol. 1094. P. 1–466. <https://dx.doi.org/10.3897/zookeys.1094.62644>

Korkmaz C., Alten B., Deniz A. 2021. Updated checklist of Culicoides Latreille (Diptera: Ceratopogonidae) of Turkey with ten new records // Journal Vector Ecology. Vol. 46(2). P. 124–136. <https://dx.doi.org/10.52707/1081-1710-46.2.124>

Krivosheina N.P., Krivosheina M.G. 2019. Saproxylic Diptera (Insecta) of the Lazovsky State Nature Reserve (Russia) // Nature Conservation Research. Vol. 4(3). P. 78–92. <http://dx.doi.org/10.24189/ncr.2019.052> [In Russian]

Levkovich V.G., Levkovich N.A. 1979. Wintering of some species of synanthropic flies in Penza // Ecological and faunal studies in the Non-Chernozem zone of the European part of the USSR. Issue 1. Saransk: Mordovia University Press. P. 55–61. [In Russian]

Lychkovskaya I.Yu., Babkina N.G., Terekhina A.A., Khomutov D.P. 2022. Preliminary assessment of the macrozoobenthos state of some reservoirs of Ryazan city and its environs // Proceedings of the Mordovia State Nature Reserve. Vol. 30. P. 157–168. <https://dx.doi.org/10.24412/cl-31646-2686-7117-2022-30-157-168>. [In Russian]

Lyubvina I.V. 2011. Diptera of the Racheysky and Muranka pine forests in the Samara region // Bulletin of the V.N. Tatishchev Volga State University. No. 12. P. 63–67. [In Russian]

Lyubvina I.V. 2016a. On the fauna of house flies (Diptera, Muscidae) of Samara region // Samara Scientific Bulletin. 2016. No. 1(14). P. 38–41. [In Russian]

Lyubvina I.V. 2016b. To the fauna of Diptera (Diptera, Brachycera) of the Penza Region // Modern concepts of biosystem ecology and their role in solving problems of nature conservation and nature management. Penza: PSU Publishing House. P. 124–126. [In Russian]

Lyubvina I.V. 2017. On the fauna of flies Fanniidae (Diptera, Brachycera) of Samara region // XV Congress of the Russian Entomological Society. Russia, Novosibirsk. Materials of the Congress. Novosibirsk. P. 303–304. [In Russian]

Molev E.V., Pastukhova L., Moleva R. 1967. Blood-sucking diptera in the Michurinsky district of the Tambov region // Materials of the III Zoological Conference of Pedagogical Institutes of the RSFSR. Volgograd. P. 213–215. [In Russian]

Mukherjee A., Naskar A., Kar O., Pramanik D., Banerjee D. 2022. A checklist of black flies (Diptera, Simuliidae) from India // ZooKeys. Vol. 1118. P. 111–118. <https://dx.doi.org/10.3897/zookeys.1118.84686>

Nedeljković Z., Ačanski J., Đan M., Obreht-Vidaković D., Ricarte A., Vujić A. 2015. An integrated approach to delimiting species borders in the genus *Chrysotoxum* Meigen, 1803 (Diptera: Syrphidae), with description of two new species // Contributions to Zoology. Vol. 84(4). P. 285–304.

Negrobov O.P. (ed.) 2005. Cadastre of Invertebrates of the Voronezh Region. Voronezh, 825 p. [In Russian]

Maritano U., Sommaggio D. 2020. Hoverfly diversity in Mareschi alluvial alder forest (Piedmont, Italy), and “Syrph the Net” ecological analysis (Diptera: Syrphidae) // Fragmenta entomologica. Vol. 52(1). P. 101–112.

Maslova O.O., Negrobov O.P., Selivanova O.V. 2020. New records of *Rhaphium* (Dolichopodidae, Diptera) from Russian Protected Areas // Nature Conservation Research. Vol. 5(3). P. 139–144. <https://dx.doi.org/10.24189/ncr.2020.037> [In Russian]

Milkov F.N. 1953. Middle Volga region. Physical and geographical description. Moscow: Publishing House of the USSR Academy of Sciences. 262 p. [In Russian]

- Mondal D., Mukherjee T., Hazra N. 2022. On a new species of the genus *Zavreliomyia* Fittkau, 1962 (Diptera: Chironomidae) from India with cladistic relationship and a world key to the known males // Zootaxa. Vol. 5154(3). P. 365–379.
- Moravvej G., Heidari Latibari M., Ghafouri Moghaddam M. 2022. New record of black fungus gnat (Diptera: Sciaroidea, Sciaridae) from Iran, with a first record for the fauna of the Middle East // Journal of Insect Biodiversity and Systematics. Vol. 8(2). P. 207–218.
- Pape T., Blagoderov V., Mostovski M.B. 2011. Order Diptera Linnaeus, 1758. In: Zhang, Z.-Q. (ed.) Animal biodiversity: An outline of higher-level classification and survey of taxonomic richness // Zootaxa. Vol. 3148. P. 222–229. <https://dx.doi.org/10.11646/zootaxa.3148.1.42>
- Paramonov N.M. 2004. To the fauna of the Ptychopteridae (Diptera) Lower Volga Region // Entomological and Parasitological Research in Volga Region. Vol. 3. P. 171.
- Paramonov N.M. 2006. To learn the fauna of tipuloid (Tipuloidea: Diptera) in Ulyanovsk Province // The Nature of Simbirsk Part of Volga Region. Iss. 7. P. 148–153. [In Russian]
- Paramonov N.M. 2010. Ptychopteridae (Diptera: Nematocera) – new family to the fauna of Tatarstan Republic // Entomological and Parasitological Research in Volga Region. Vol. 8. P. 117–118.
- Paramonov N.M. 2014. Revision of Ptychopteridae family (Diptera: Nematocera) flies from E.A. Eversmann collection // Entomological and Parasitological Research in Volga Region. Vol. 11. P. 143–145. [In Russian]
- Paramonov N.M. 2015. Annotated checklist of the Tipuloidea (Diptera) of the Saratov province // Entomological and Parasitological Research in Volga Region. Vol. 12. P. 68–70. [In Russian]
- Paramonov N.M. 2016. Annotated checklist of the Tipuloidea (Diptera) of the Chuvashia Republic // Scientific Proceedings of the State Nature Reserve Prisursky. Vol. 31. P. 130–132. [In Russian]
- Paramonov N.M. 2017a. Annotated checklist of the Tipuloidea (Diptera) of the Chuvashia Republic. Part II // Scientific Proceedings of the State Nature Reserve Prisursky. Vol. 32. P. 171–174. [In Russian]
- Paramonov N.M. 2017b. On the inclusion of the species *Chionea lutescens* (Diptera: Limoniidae) in the Red Book of the Chuvashia Republic // Scientific Proceedings of the State Nature Reserve Prisursky. Vol. 32. P. 174–175. [In Russian]
- Paramonov N.M. 2018a. Annotated checklist of the Tipuloidea (Diptera) of the Chuvash Republic. Part III // Scientific Proceedings of the State Nature Reserve Prisursky. Vol. 33. P. 182–186. [In Russian]
- Paramonov N.M. 2018b. Annotated checklist of the Tipuloidea (Diptera) of the Saratov province (Part II) // Entomological and Parasitological Research in Volga Region. Vol. 15. P. 60–63. [In Russian]
- Paramonov N.M. 2019. Addition to checklist of Tipuloidea (Diptera) of the Saratov province // Entomological and Parasitological Research in Volga Region. Vol. 16. P. 102–103. [In Russian]
- Pavlov A.V. 2006. About structures of specieses and conditions of collection of dipterans from snow in biotopes of Northern Meshchera (Vladimir Area) // Eversmannia. No. 6. P. 56–61. [In Russian]
- Pavlov A.V. 2017. Observations on crane flies of the genus *Chionea* Dalman, 1816 (Diptera, Limoniidae) in the Vladimir region // XV Congress of the Russian Entomological Society. Russia, Novosibirsk. Materials of the Congress. Novosibirsk. P. 174–176. [In Russian]
- Pilipenko V.E., Ruchin A.B., Semishin G.B. 2020. Crane fly fauna (Diptera: Limoniidae, Pediciidae, Tipulidae) of the Republic of Mordovia, Russia // Biodiversitas. Vol. 21(1). P. 355–369.
- Plavilshchikov N.N. 1964. A list of insect species found in the Mordovia State Nature Reserve // Proceedings of the Mordovia State Nature Reserve. Vol. 2. P. 105–134. [In Russian]
- Polevoi A.V. 2021. Fungus gnats (Diptera: Bolitophilidae, Diadocidiidae, Keroplatidae, Mycetophilidae) in the Kostomuksha State Nature Reserve, Russia // Nature Conservation Research. Vol. 6(Suppl. 1). P. 5–16. <https://dx.doi.org/10.24189/ncr.2021.001>
- Ricarte A., Souba-Dols G.J., Hauser M., Marcos-García M.A. 2017. A review of the early stages and host plants of the genera *Eumerus* and *Merodon* (Diptera: Syrphidae), with new data on four species // PLoS ONE. Vol. 12: e0189852.
- Rojo S., Gilbert F., Marcos-García M.A., Nieto J.M., Mier M.P. 2003. A world review of predatory hoverflies (Diptera, Syrphidae: Syrphinae) and their prey. CIBIO Ediciones, Alicante. 530 p.

- Rosenberg G.S. (ed.) 2007. Cadastre of Invertebrates of Samarskaya Luka. Samara: Tutorial. 471 p. [In Russian]
- Rotheray G.E. 2019. Ecomorphology of cyclorrhaphan larvae (Diptera) // Zoological monographs. Vol. 4. Springer, Heidelberg. 506 p.
- Rotheray G.E., Gilbert F.S. 2011. The natural history of hoverflies. Forrest Text, Cardigan. 360 p.
- Rotheray G.E., Hancock G., Hewitt S., Horsfield D., MacGowman I. 2001. The biodiversity and conservation of saproxylic Diptera in Scotland // Journal of Insect Conservation. Vol. 5. P. 77–85.
- Ruchin A.B., Pilipenko V.E. 2015. Preliminary checklist of the Tipuloidea (Diptera: Limoniidae, Tipulidae) of the Mordovia Republic // Eversmannia. No. 41. P. 57–60.
- Souba-Dols G.J., Ricarte A., Hauser M., Speight M., Marcos-García M.Á. 2020. What do *Eumerus* Meigen larvae feed on? New immature stages of three species (Diptera: Syrphidae) breeding in different plants // Organisms Diversity & Evolution. Vol. 20. P. 267–284. <https://dx.doi.org/10.1007/s13127-020-00437-0>
- Tewelde T.R., Gaponov S.P. 2019. Non-parasitic Diptera inhabiting nests of passerine birds in Voronezh // Modern problems of zoology, parasitology and hydrobiology. Voronezh: Digital printing. P. 104–108.
- Vikhrev N. 2010. Revision of the key characters for the *Thricops nigrifrons* species-group (Diptera, Muscidae) // ZooKeys. Vol. 71. P. 15–22. <https://dx.doi.org/10.3897/zookeys.71.788>
- Vikhrev N.E. 2011a. Notes on synonymy of two species of the genus *Graphomya* Robineau-Desvoidy, 1830 (Diptera, Muscidae) // Far Eastern Entomologist. Vol. 231. P. 5–12.
- Vikhrev N.E. 2011b. Review of the Palaearctic members of the *Lispe tentaculata* species-group (Diptera, Muscidae): revised key, synonymy and notes on ecology // ZooKeys. Vol. 84. P. 59–70
- Vikhrev N.E. 2012a. Four new species of *Lispe* Latreille, 1796 (Diptera, Muscidae) with taxonomic notes on related species // Russian Entomological Journal. Vol. 21(4). P. 423–433.
- Vikhrev N.E. 2012b. Revision of the *Lispe longicollis*-group (Diptera, Muscidae) // ZooKeys. Vol. 235. P. 23–39.
- Vikhrev N.E. 2013. Taxonomic notes on the *Hydrotaea irritans* species-group (Diptera, Muscidae) // Amurian zoological journal. Vol. V(3). P. 283–287.
- Vikhrev N.E. 2014. Taxonomic notes on *Lispe* (Diptera, Muscidae). Parts 1–9 // Amurian zoological journal. Vol. VI(2). P. 147–170.
- Vikhrev N.E. 2015a. Review of the World fauna of the genus *Azelia* (Diptera, Muscidae) // Amurian Zoological Journal. Vol. VII. No. 1. P. 33–42.
- Vikhrev N.E. 2015b. Taxonomic notes on *Lispe* (Diptera, Muscidae), Parts 10–12 // Amurian zoological journal. Vol. VII(3). P. 228–247.
- Vikhrev N.E. 2016. *Lispe* (Diptera: Muscidae) of Dominican Republic // Russian Entomological Journal. Vol. 25(2). P. 181–183.
- Vikhrev N.E. 2018. New species of *Fannia* Robineau-Desvoidy, 1830 (Diptera: Fanniidae) from Nepal // Russian Entomological Journal. Vol. 27(2). P. 207–209.
- Vikhrev N.E., Sorokina V.S. 2009. Faunistic records of *Thricops Rondani* (Diptera, Muscidae) from Russia with description of two new species // Euroasian Entomological Journal. Vol. 8(3). P. 341–350.
- Vikhrev N.E., Erofeeva E.A. 2017. Notes on Phaoniini (Diptera: Muscidae) from Bali Island // Russian Entomological Journal. Vol. 26(4). P. 361–363.
- Vikhrev N.E., Erofeeva E.A. 2018. Review of the *Phaonia pallida* group (Diptera: Muscidae) // Russian Entomological Journal. Vol. 27(3). P. 315–322.
- Vikhrev N.E., Esin M.N., Yanbulat M.O., Ruchin A.B. 2020. A list of the Sciomyzidae, Fanniidae and Muscidae (Diptera) of Mordovia // Amurian Zoological Journal. Vol. XII. No. 4. P. 444–459. <https://dx.doi.org/10.33910/26869519-2020-12-4-444-459>
- Vikhrev N.E., Murphy W.L. 2022. Notes on the taxonomy of species of Sciomyzini with a predominantly setulose anepisternum (Diptera, Sciomyzidae) // Amurian Zoological Journal. Vol. XIV. No. 2. P. 281–298. <https://dx.doi.org/10.33910/2686-9519-2022-14-2-281-298>

Vikhrev N., Yanbulat M. 2019. *Sepedon* Latreille, 1804 (Diptera, Sciomyzidae): Review of Asian fauna and notes on taxonomy of Asian and Nearctic species // Dipteron. Vol. 35. P. 42–63. <https://dx.doi.org/10.5281/zenodo.3252595>

Vikhrev N.E., Yanbulat M.O. 2021. Notes on genus *Elgiva* Meigen, 1838 (Diptera, Sciomyzidae) // Amurian Zoological Journal. Vol. XIII. No. 2. P. 257–264. <https://dx.doi.org/10.33910/2686-9519-2021-13-2-257-264>

Vikhrev N.E., Ying-Qiang G., Dong Z. 2016. On taxonomy of the *Lispe caesia*-group (Diptera: Muscidae) // Russian Entomological Journal. Vol. 25(4). P. 407–410.

Villa M., Santos S.A.P., López-Sáez J.A., Pinheiro L., Marrão R., Aguiar C., Pereira J.A. 2021. Pollen feeding by syrphids varies across seasons in a Mediterranean landscape dominated by the olive orchard // Biological Control. Vol. 156. P. 104556. <https://dx.doi.org/10.1016/j.biocontrol.2021.104556>

Volkova M.I. 1934. Diptera of the Chuvash Republic according to the zoological expedition for 1926–1929 // Scientific notes of Kazan State University. Vol. 94. Bk. 4. Issue 2 (Zoology). P. 70–103.

Yang K., Xue W., Tong, Y. 2022. A new genus and two new species of Azeliinae from China (Diptera: Muscidae) // Zootaxa. Vol. 5154(3). P. 393–400.

Youbi A., Zerguine K., Houilia A., Farfar K., Soumati B., Berrebbah H., Djebar M.R., Souiki L. 2020. Potential use of morphological deformities in *Chironomus* (Diptera: Chironomidae) as a bioindicator of heavy metals pollution in North-East Algeria // Environmental Science and Pollution Research. Vol. 27. P. 8611–8620. <https://dx.doi.org/10.1007/s11356-019-07459-y>

Yuzekaeva R.R. 2019. To The fauna of the diptera-necrophages of the Raifa Site of the Volga-Kama State Natural Biosphere Reserve // Bulletin of the Tula State University. Vol. 10. P. 256–259. [In Russian]

Yuzekaeva R.R. 2020. Anthropogenic influence to the fauna of necrophages Diptera (Insecta) on the example of Kazan and its Suburb, Russia // XI All-Russian Dipterological Symposium (with international participation), Voronezh, 24–29 August 2020: materials. St.-Petersburg: Russian entomological society: «“LEMA” Publishers». P. 263–265. [In Russian]

СПИСОК НЕКОТОРЫХ МАЛОИССЛЕДОВАННЫХ СЕМЕЙСТВ DIPTERA ИЗ РЕГИОНОВ ПРИВОЛЖСКОЙ ВОЗВЫШЕННОСТИ И ОКСКО-ДОНСКОЙ НИЗМЕННОСТИ

А.Б. Ручин^{1,*}, Н.Е. Вихрев², Д.И. Гаврюшин², М.Н. Есин¹

¹Объединенная дирекция Мордовского государственного природного заповедника имени П. Г. Смидовича и национального парка «Смольный», Россия

²Зоологический музей МГУ им. М.В. Ломоносова, Россия

e-mail: ^{1,*}ruchin.alexander@gmail.com, ²nikita6510@ya.ru

Diptera – это один из наиболее разнообразных по числу видов отряд среди насекомых. В статье представлены сведения о биоразнообразии Diptera из 9 семейств (Tipulidae, Limoniidae, Pediciidae, Mycetophilidae, Keroplatidae, Ptychopteridae, Muscidae, Fanniidae, Sciomyzidae), обитающих на территории 14 регионов, находящихся в пределах Приволжской возвышенности и Окско-Донской низменности. Наиболее изученная и разнообразная фауна в Республике Мордовия (399 видов). Наименее известна фауна этих семейств из Республики Татарстан, Липецкой области, Нижегородской области и Владимирской области (соответственно, 9, 19, 20 и 21 вид). В общей сложности на территории большого макрорегиона из 9 семейств Diptera известно 545 вида. Наибольшее число видов включают семейства Muscidae (191) и Limoniidae (102). Наименее известно биоразнообразие Ptychopteridae (4 вида), Pediciidae (6 видов) и Keroplatidae (10 видов).

Ключевые слова: Tipulidae, Limoniidae, Pediciidae, Mycetophilidae, Keroplatidae, Ptychopteridae, Muscidae, Fanniidae, Sciomyzidae, Европейская Россия