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Cranefly fauna (Diptera: Limoniidae, Pediciidae, Tipulidae) of the Republic of Mordovia, Russia

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Abstract. *Pilipenko VE, Ruchin AB, Semishin GB. 2020. Cranefly fauna (Diptera: Limoniidae, Pediciidae, Tipulidae) of the Republic of Mordovia, Russia. Biodiversitas 21: 355-369.* The paper summarizes the Tipuloidea fauna of the Republic of Mordovia, Russia, for the first time. Among the 94 species, 29 species of Limoniidae and 14 species of Tipulidae have not been previously recorded from the region. The family Pediciidae, with five species, is also recorded for the first time. Six species are recorded from Central European Russia for the first time: *Hexatoma (Hexatoma) fuscipennis* (Curtis, 1836), *Phylidorea (Phylidorea) bicolor* (Meigen, 1804), *Dicranomyia (Dicranomyia) omissinervis* de Meijere, 1918, *Limonia macrostigma* (Schummel, 1829), *Tricyphona (Tricyphona) unicolor* (Schummel, 1829), and *Ula (Ula) bolitophila* Loew, 1869.

Keywords: Craneflies, Diptera, distribution, Limoniidae, Pediciidae, new records, Tipulidae, Mordovia, Russia

Abbreviations: Rep.: republic; MSNR: Mordovia State Nature Reserve; NPS: National Park «Smolny»; RUN: North European Russia; RUW: Northwest European Russia; RUC: Central European Russia; RUE: East European Russia; RUS: South European Russia; WS: West Siberia; ES: East Siberia; FE: Far East.

INTRODUCTION

Craneflies (Tipuloidea) comprise the families Cylindrotomidae, Limoniidae, Pediciidae and Tipulidae. The superfamily is represented by more than 16000 species in the world fauna and about 1000 in Russia (Oosterbroek 2019). Data on the cranefly fauna of European Russia are available in the works of Savchenko (Savchenko 1961, 1964, 1972, 1983, 1986, 1989). However, many common species are characterized there as "widespread in the European part," without specific regions given. Cranefly has been intensively studied recently in the European part and in other regions of Russia (Barkalov and Saaya 2014; Krivosheina 2009; Krivosheina and Krivosheina 2010, 2019; Lantsov 2009a, 2009b, 2009c, 2011a, 2011b, 2011c, 2012a, 2012b, 2012c, 2014a, 2014b, 2014c, 2015a, 2015b, 2016, 2017a, 2017b, 2017c, 2018, 2019; Lantsov and Bibin 2019; Paramonov 2006, 2011, 2012, 2014, 2016, 2017, 2018; Pilipenko 2008, 2009; Paramonov and Klepikov 2014; Paramonov and Pilipenko 2016; Polevoi and Salmela 2014; Polevoi and Pilipenko 2016; Polevoi et al. 2018; Przhiboro 2003, 2009, 2017). Craneflies of Central European Russia comprise about 200 species. The insect fauna of the Republic of Mordovia has also been intensively studied in recent years (Ruchin and Artaev 2016; Ruchin and Makarkin 2017; Ruchin and Egorov 2017, 2018a, 2018b; Ruchin 2018; Ruchin and Grishutkin 2018; Ruchin and Mikhailenko 2018; Ruchin et al. 2018; 2019a, 2019b; Tomaszewska et al. 2018; Ruchin and Antropov 2019), including dipterans (Budaeva and Ruchin 2014; Chursina and Ruchin 2018a; 2018b; Astakhov et al. 2019). However, the fauna of Tipuloidea of Mordovia is still poorly studied. It includes only 46 species from the families Limoniidae and Tipulidae (Plavilshchikov 1964; Ruchin and Pilipenko 2015). This study significantly expands the Tipuloidea species list of Mordovia.

MATERIALS AND METHODS

Study area

The Republic of Mordovia is located in Central European Russia between 42°11' and 46°45' E and 53°38 ' and 55°11' N in the southwestern periphery of the Volga River basin between the rivers Moksha and Sura. The area includes forest and forest-steppe zones. It borders on the Chuvashia, Ryazan region, Nizhniy Novgorod region, Ulyanovsk region and Penza region (Figure 1). The eastern part of Mordovia is located in the northwest of the Volga Upland and its western part in the Oka-Don lowland. Consequently, varieties of habitats are present in the study area. In the west, north-west, and north of the country there are common boreal coniferous and mixed forests under protection of the Mordovia State Nature Reserve. Broadleaved forests cover the central and eastern parts. Forest-steppe landscapes predominate in the east and south-east (Yamashkin 1998).

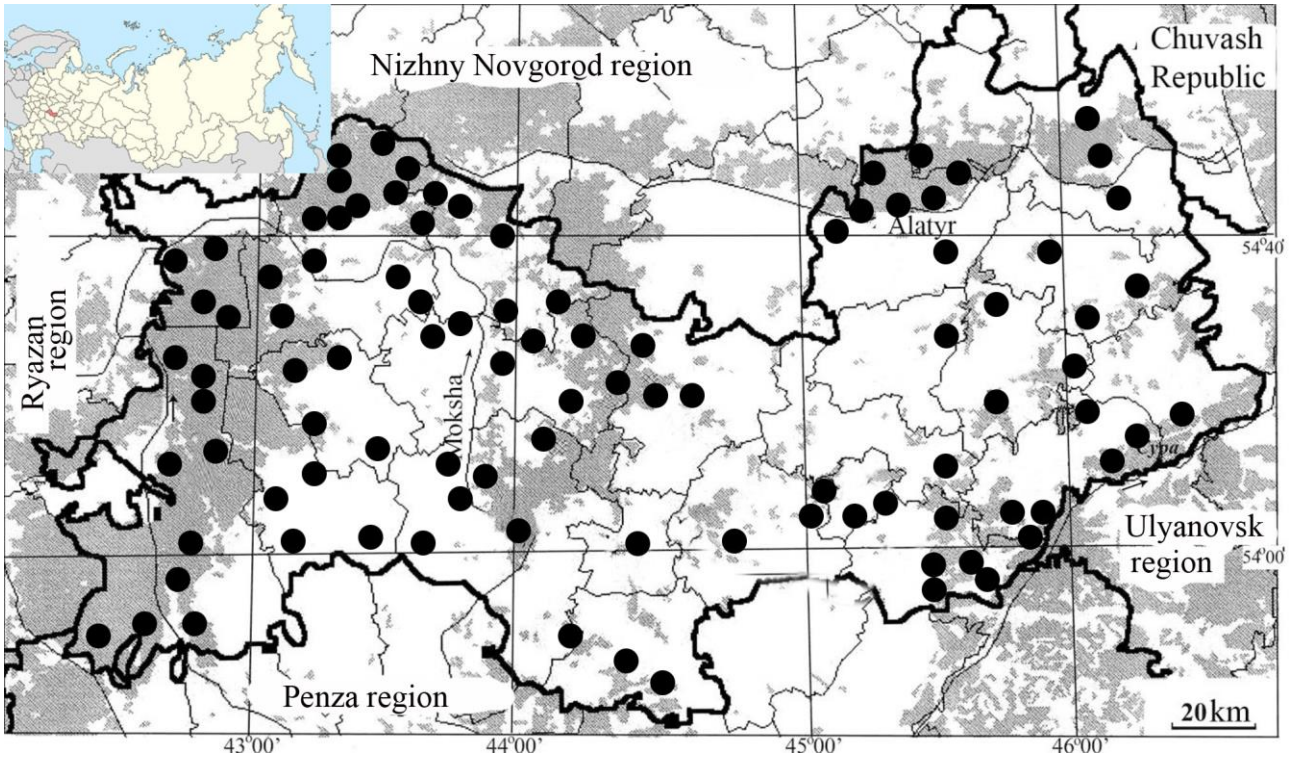

Figure 1. Study sites of cranefly in the Republic of Mordovia, Russian Federation in 2014-2018 (black dots)

The material was collected in 2014-2018 by two authors, A.B. Ruchin and G.B. Semishin (abbreviated below as RA and SG) using standard methods (Fasulati 1971) and part of the material was collected by fermenting bait traps in canopies of various, mainly deciduous trees at the height of 5-10 m (Champlain and Knull 1932; Egorov and Ivanov 2018; Makarkin and Ruchin 2018). Over 800 collected specimens were examined and identified by V.E. Pilipenko.

Specimens were studied with an Olympus SZ61 stereomicroscope. Genitalia were macerated in warm 10% KOH for about one hour to remove soft tissues, and then rinsed in distilled water. Cleared genitalia was preserved in microvials filled with glycerol, in the same tube as the species. A Nikon d7000 digital camera equipped with Tamron 70-300 /4-5,6 and EL-Nikkor 50/2,8 lenses and a Mitutoyo M Plan Apo 10X Microscope objective lens were used to capture stacked images, which were then combined using the Helicon Focus software (http://www.heliconsoft.com/heliconsoft-products/helicon-focus).

Morphological terminology generally follows that of McAlpine (1981). The nomenclature of taxa and distribution of species are given according to Oosterbroek (2019). The exact localities in Mordovia are given only for the newly studied material. Most of the specimens are deposited in alcohol at the Department of Entomology, Faculty of Biology of Moscow State University, Moscow.

The species newly registered in Mordovia are marked by asterisk (*)

RESULTS AND DISCUSSION

A total of 94 species of Tipuloidea, belonging to Limoniidae, Pediciidae and Tipulidae, were recorded in the present study. 29 species of Limoniidae and 14 species of Tipulidae are recorded in the Republic of Mordovia for the first time. The family Pediciidae, with five species, is also recorded for the first time. Six species, including *Hexatoma* (*Hexatoma*) *fuscipennis* (Curtis, 1836), *Phylidorea* (*Phylidorea*) *bicolor* (Meigen, 1804), *Dicranomyia* (*Dicranomyia*) *omissinervis* de Meijere, 1918, *Limonia macrostigma* (Schummel, 1829), *Tricyphona* (*Tricyphona*) *unicolor* (Schummel, 1829), *Ula* (*Ula*) *bolitophila* Loew, 1869 have not been previously recorded in Central European Russia. In addition to the species new for the regional fauna, findings of several rare, insufficiently known species such as *Cheilotrichia neglecta* (Lackschewitz), *Dicranomyia schineriana* (Alexander), *Dicranomyia danica* Kuntze, *Limonia albifrons* (Meigen), *Ctenophora fastuosa* Loew, *Tipula mellea* Schummel, *Tipula recticornis* Schummel, *Tipula jutlandica* Nielsen, *Tipula laetibasis* Alexander, *Tipula winthemi* Lackschewitz were highly interesting. Photographs were given for the species *Dicranomyia omissinervis* de Meijere, *Elephantomyia krivosheinae* Savchenko and *Limonia nigropunctata nigropunctata* (Schummel). The most abundant species in the studied material were *Phylidorea ferruginea* (Meigen), *Dicranomyia tristis* (Schummel), *Metalimnobia bifasciata* (Schrank), *Metalimnobia quadrimaculata* (Linnaeus), *Tipula vernalis* Meigen,

Tipula luteipennis luteipennis Meigen, *Tipula subcunctans* Alexander. The fauna of the Tipuloidea of the Republic of Mordovia includes widespread Transpalaearctic (42%), Euro-Siberian (16%), European (20%), Euro-West Asian (11%) and Holarctic species (11%).

Order Diptera Linnaeus, 1758
Family Limoniidae Speiser, 1909
Subfamily Chioneinae Rondani, 1841

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

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 18-20.IX.2017, 1♂, (SG).

Distribution. Known from several European countries, including Czech Rep., Finland, Germany, Latvia, Lithuania, Norway (south), Poland, Romania, Slovakia, Switzerland. Also Kazakhstan (east); Russia: RUN (Karelia), RUC (Yaroslavl region).

Erioconopa trivialis (Meigen, 1818)

Literature. Plavilshchikov 1964; Ruchin and Pilipenko 2015.

Material. Temnikov Distr., MSNR, post Steklyannyi, at light, 12-13.IX.2018, 1♂, 3♀♀, (SG).

Distribution. Widely distributed in Europe, also in Georgia, Armenia, Azerbaijan, Turkey (Asiatic part), Iran; Russia: RUN, RUW, RUC (Moscow region, Rep. of Mordovia), RUE (Bashkortostan Rep.), North Caucasus.

**Erioptera (Erioptera) fuscipennis* Meigen, 1818

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 18-20.IX.2017, 1♂, (SG).

Distribution. Widely distributed in Europe, also in Morocco, Algeria; Azerbaijan, Iran; Russia: RUW, RUC (Moscow region), North Caucasus (Dagestan).

**Erioptera (Erioptera) lutea lutea* Meigen, 1804

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 18-20.IX.2017, 1♂, 3♀♀, (SG); 11-14.IX.2017, 1♂, 1♀, (SG); 24-30.V.2018, 3♀♀, (SG); 16-17.VIII.2018, 3♂♂, 2♀♀, (SG); 20-23.VIII.2018, 3♀♀, (SG); Temnikov Distr., MSNR, post Steklyannyi, at light, 17.V.2018, 1♀, (SG); 12-13.IX.2018, 2♂♂, (SG); Temnikov Distr., MSNR, Pushta, quarter 446, at light, 28.VIII.2018, 1♂, (SG); Temnikov Distr., MSNR, Srednyaya Melnitsa, soil trap, 29.VII-29.VIII.2018, 2♂♂, 2♀♀, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Tver region, Chuvash Rep.), RUE, North Caucasus, WS (Altay, Tyva).

**Molophilus (Molophilus) ochraceus* (Meigen, 1818)

Material. Temnikov Distr., MSNR, Pushta, quarter 446, at light, 28.VIII.2018, 1♂, (SG).

Distribution. Widely distributed in Europe, also in Georgia, Armenia, Azerbaijan, Turkey; Russia: RUW, RUC (Tver region), RUE (Bashkortostan Rep.), North Caucasus.

**Molophilus (Molophilus) propinquus* (Egger, 1863)

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 24-30.V.2018, 1 ♂, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUE (Tatarstan Rep.), North Caucasus (Dagestan), WS (south), ES (south), FE (Primorskiy Kray, Sakhalin, Kuril Is.).

Remarks. This species is reported for the first time from Central European Russia and Mordovia. Recently, it was noted from Karelia (Humala and Polevoi 2009) and from Tatarstan Republic (Paramonov 2014).

Symplecta (Symplecta) hybrida (Meigen, 1804)

Literature. Ruchin and Pilipenko 2015.

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 28-31.VIII.2017, 1♀, (SG); 11-14.IX.2017, 2♂♂, 2♀♀, (SG); Ichalki Distr., NPS, sanatorium Alatyr, at light, 06.VIII.2018, 1♂, (SG); 16-17.VIII.2018, 1♂, (SG); Temnikov Distr., MSNR, post Steklyannyi, at light, 17.V.2018, 2♂♂, 2♀♀, (SG); 12-13.IX.2018, 1♂, (SG); Temnikov Distr., MSNR, Srednyaya Melnitsa, soil trap, 15.V.2018, 1♀, (SG).

Distribution. The species is widespread and common in the Holarctic Region; Russia: RUN, RUW, RUC (Tver and Ulyanovsk regions, Chuvash Rep., Rep. of Mordovia), RUE, North Caucasus, WS, ES (incl. Kotelnyi Is.), FE.

Subfamily Limnophilinae Osten Sacken, 1869

Dicranophragma (Brachylimnophila) nemorale (Meigen, 1818)

Literature. Ruchin and Pilipenko 2015.

Material. Temnikov Distr., MSNR, post Steklyannyi, at light, 12-13.IX.2018, 1♂, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUC (Tver region, Rep. of Mordovia), RUE, North Caucasus, WS (Altay), ES (south), FE (Primorskiy Kray, Sakhalin, Kuril Is.).

**Eloeophila maculata (Meigen, 1804)*

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 24-30.V.2018, 1♀, (SG).

Distribution. Widely distributed in Europe, also in Georgia, Armenia, Azerbaijan, Turkey (Asiatic part) and Kazakhstan (northwest); Russia: RUN (Karelia), RUW, RUC, North Caucasus.

Epiphragma (Epiphragma) ocellare (Linnaeus, 1760)

Literature. Ruchin and Pilipenko 2015.

Material. Temnikov Distr., MSNR, quarter 368, 27.V.2018, 1♀, (RA); Temnikov Distr., MSNR, quarter 403, 26.V.2016, 1♀, (RA); Temnikov Distr., MSNR, Pushta, at light, 26.V.2018, 1♂, (RA).

Distribution. The species is widespread and common in the Holarctic Region; Russia: RUN, RUW, RUC (Tver, Yaroslavl and Voronezh regions, Chuvash Rep., Rep. of Mordovia), RUE, North Caucasus, WS (south), ES (south), FE (Primorskiy Kray, Kuril Is.).

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

Material. Temnikov Distr., MSNR, quarter 383, 15.V.2016, 1♂, (RA).

Distribution. Widely distributed in Europe, also in Turkey (Asiatic part); Russia: RUN, RUW, RUC (Tver and Yaroslavl regions), WS (Altay).

Eutonia barbipes (Meigen, 1804)

Literature. Ruchin and Pilipenko 2015.

Material. Temnikov Distr., MSNR, quarter 368, 27.V.2018, 3♂♂, (RA).

Distribution. Known from several of European countries, including Austria, Belgium, Czech Rep., Denmark, Finland (south), France, Germany, Hungary, Italy, Latvia, Lithuania, Netherlands, Poland, Slovakia, Sweden, Ukraine; Russia: RUN, RUC (Moscow, Tver, Ulyanovsk, Yaroslavl regions, Chuvash Rep., Rep. of Mordovia).

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

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 24-30.V.2018, 1♂, (SG).

Distribution. Distributed in Europe, also in Georgia, Turkey (Asiatic part) and Israel; Russia: RUN (Murmansk region), RUW, RUE.

Remarks. This species is reported for the first time from Central European Russia and Mordovia. Recently, it was noted for the east (RUE) of the European part of Russia from Maryi El and Udmurt Republic (Paramonov 2011; Przhiboro 2017). There is also an unpublished record from Murmansk region (first record for the north of Russia, Gavryushin in litt., 2011).

Idioptera linnei Oosterbroek, 1992

Literature. Ruchin and Pilipenko 2015.

Material. Ichalki Distr., NPS, sanatorium Alatyr, at light, 16-17.VIII.2018, 1♂, (SG); Temnikov Distr., MSNR, quarter 308, 1♂, (RA); MSNR, quarter 417, 03.VI.2016, 1♂, (RA); MSNR, quarter 418, 2♂♂, (RA); MSNR, quarter 448, 11.V.2016, 1♀, (RA); MSNR, post Steklyannyi, at light, 17.V.2018, 1♂, (SG); MSNR, Srednyaya Melnitsa, soil trap, 15.V.2018, 1♀, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Tver region, Rep. of Mordovia), WS, ES, FE (Amur region).

Idioptera pulchella (Meigen, 1830)

Literature. Ruchin and Pilipenko 2015.

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Tver region, Rep. of Mordovia), RUE (Tatarstan Rep.), RUS (Volgograd region), North Caucasus (Kabardino-Balkar Rep.), WS (south), ES (south), FE (Magadan region, Amur region).

Limnophila (Limnophila) pictipennis (Meigen, 1818)

Literature. Ruchin and Pilipenko 2015.

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUW, RUC (Tver region, Rep. of Mordovia), RUE (Orenburg region), North Caucasus, WS (south), ES (south), FE (Khabarovskiy Kray, Primorskiy Kray).

Limnophila (Limnophila) schranki Oosterbroek, 1992

Literature. Ruchin and Pilipenko 2015.

Material. Temnikov Distr., MSNR, quarter 408**,** 10.V.2014, 2♂♂, (RA); MSNR, post Polyansky, 18.V.2014, 1♂, (RA).

Distribution. Distributed in Europe, also in Georgia, Turkey (Asiatic part) and Kazakhstan (northwest); Russia: RUN, RUW, RUC (Tver, Ulyanovsk regions, Rep. of Mordovia) and North Caucasus.

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

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 20-23.VIII.2018, 1♂, (SG); Temnikov Distr., MSNR, post Steklyannyi, at light, 12-13.IX.2018, 1♂, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Tver region), RUE (Bashkortostan Rep.), FE (Primorskiy Kray, Sakhalin, Kuril Is.).

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

Material. Temnikov Distr., MSNR, Pushta, at light, 13.V.2014, 1♀, (RA); Temnikov Distr., MSNR, Srednyaya Melnitsa, soil trap, 15.V.2018, 1♂, 1♀, (SG).

Distribution. Known from European countries, including Austria, Belgium, Czech Rep., Denmark, Estonia, Finland, France, Germany, Great Britain, Latvia, Lithuania, Norway (south), Poland, Romania, Serbia, Slovakia, Slovenia, Sweden, Ukraine; Russia: RUN, RUW, WS (Altay).

Remarks. This species is reported for the first time from Central European Russia and Mordovia.

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

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 11-14.IX.2017, 1♂, 4♀♀, (SG); 18-20.IX.2017, 3♂♂, 6♀♀, (SG); Ichalki Distr., NPS, sanatorium Alatyr, at light, 06-08.VIII.2018, 1♂, (SG); Temnikov Distr., MSNR, quarter 368, 27.V.2018, 1♀, (RA); Temnikov Distr., MSNR, post Steklyannyi, at light, 12-13.IX.2018, 10♂♂, 5♀♀, (SG); MSNR, Pushta, quarter 446, at light, 11.IX.2018, 3♂♂, (SG); Temnikov Distr., MSNR, Srednyaya Melnitsa, soil trap, 29.VII-29.VIII.2018, 1♂, (SG).

Distribution. Widely distributed in Europe, also in Armenia, Azerbaijan, Turkey (Asiatic part), Israel and in East Palearctic: Kazakhstan, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, Mongolia; Russia: RUN, RUW, RUC (Yaroslavl and Tver regions), RUE (Bashkortostan Rep.), RUS, North Caucasus, WS (Tyva).

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

Material. Temnikov Distr., MSNR, quarter 373, 20.VI.2015, 1♂, (RA).

Distribution. Distributed in Europe, and in Mongolia; Russia: RUN, RUW, RUC (Tver region), ES (south side of Lake Baikal).

**Pilaria discicollis* (Meigen, 1818)

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 11-14.IX.2017, 2♀♀, (SG).

Distribution. Russia: Distributed in Europe, also in Turkey (Asiatic part), Iran; RUN (Arkhangelsk region, Karelia), RUW, RUC (Tver region), RUE.

**Pilaria fuscipennis* (Meigen, 1818)

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 20-23.VIII.2018, 1♀, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUW, RUC, North Caucasus, WS (Altay), ?FE.

Subfamily Limoniinae Kuntze, 1920

**Achyrolimonia neonebulosa* (Alexander, 1924)

Material. Ichalki Distr., NPS, sanatorium Alatyr, at light, 16-17.VIII.2018, 1♂, 2♀♀, (SG).

Distribution. The species is widespread in the Holarctic Region; Russia: RUC (Tver region), North Caucasus, WS (Altay), FE (Primorskiy Kray, Sakhalin).

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

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 11-14.IX.2017, 1♀, (SG); 18-20.IX.2017, 1♂, (SG); Temnikov Distr., MSNR, post Steklyannyi, at light, 12-13.IX.2018, 2♂♂, 1♀, (SG).

Distribution. Widely distributed in Europe, also in Kazakhstan (Pavlodar region) and India (Kashmir); Russia: RUN, RUW, RUC (Yaroslavl region).

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

Material. Temnikov Distr., MSNR, post Steklyannyi, at light, 12-13.IX.2018, 1♂, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUC (Tver region), RUE (Bashkortostan Rep.), ES (south), FE (Magadan region, Primorskiy Kray, Sakhalin, Kuril Is.).

Dicranomyia (Dicranomyia) frontalis (Staeger, 1840)

Literature. Ruchin and Pilipenko 2015.

Material. Ichalki Distr., NPS, sanatorium Alatyr, at light, 06-08.VIII.2018, 1♂, 1♀, (SG); 16-17.VIII.2018, 1♂, 6♀♀, (SG).

Distribution. Widely distributed in Holarctic and Oriental Region; Russia: RUN, RUW, RUC (Yaroslavl, Tver regions, Rep. of Mordovia), RUE (Bashkortostan Rep.), WS (south), ES (south), FE (Magadan region, Khabarovskiy Kray, Primorskiy Kray, Sakhalin, Kuril Is.).

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

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 28-31.VIII.2017, 1♂, 4♀♀, (SG); 18-20.IX.2017, 2♂♂, 1♀, (SG); NPS, sanatorium Alatyr, at light, 16-17.VIII.2018, 1♂, (SG); Temnikov Distr., MSNR, Srednyaya Melnitsa, soil trap, 29.VII-29.VIII.2018, 2♂♂, (SG).

Distribution. The species is widespread in the Holarctic Region; Russia: RUN, RUW, RUC (Chuvash Rep., Tver and Yaroslavl regions), RUE, North Caucasus, WS, ES, FE.

**Dicranomyia (Dicranomyia) omissinervis* de Meijere, 1918 (Figure 2)

Material. Ichalki Distr., NPS, sanatorium Alatyr, at light, 16-17.VIII.2018, 1♂, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN (Arkhangelsk region), RUW, RUE (Bashkortostan Rep.), WS (Tyva), ES (Irkutsk region), FE (Magadan region, Kamchatka, Khabarovskiy Kray, Primorskiy Kray, Sakhalin, Kuril Is.).

Remarks. This species is reported for the first time from Central European Russia and Mordovia. The specimen from Mordovia shows an unusual discal cell (Figure 2 A), which usually is open.

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

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 18-20.IX.2017, 1♂, (SG); NPS, sanatorium Alatyr, at light, 06-08.VIII.2018, 1♀, (SG); Temnikov Distr., MSNR, Pushta, quarter 446, at light, 11.IX.2018, 1♂, (SG); MSNR, post Steklyannyi, at light, 12-13.IX.2018, 2♂♂, (SG).

Distribution. Widely distributed throughout the Palearctic Region and India; Russia: RUN, RUW, RUC (Tver and Yaroslavl regions), RUE (Bashkortostan Rep.), WS, ES (Siberia eastward to Yakutia).

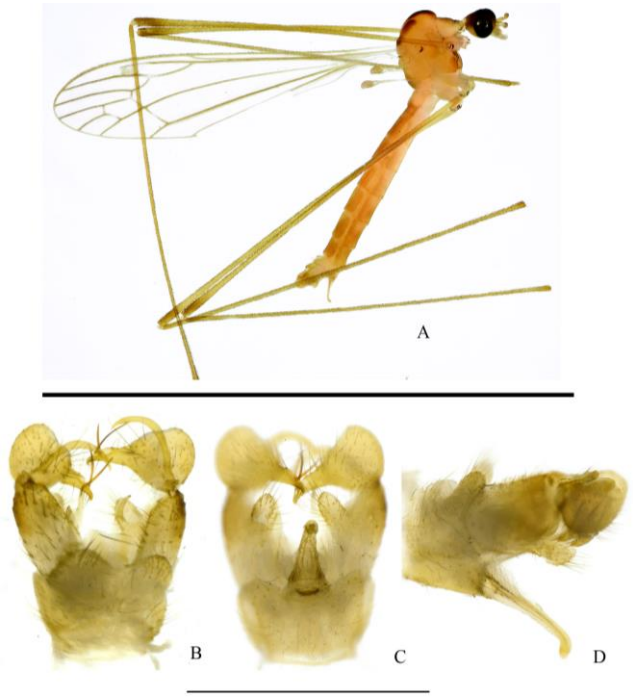

Figure 2. *Dicranomyia (Dicranomyia) omissinervis* de Meijere, 1918: A: male lateral habitus; B-D: male hypopygium B: dorsal view, C: ventral view, D: lateral view. Scale bars: A: 5 mm; B-D: 1 mm.

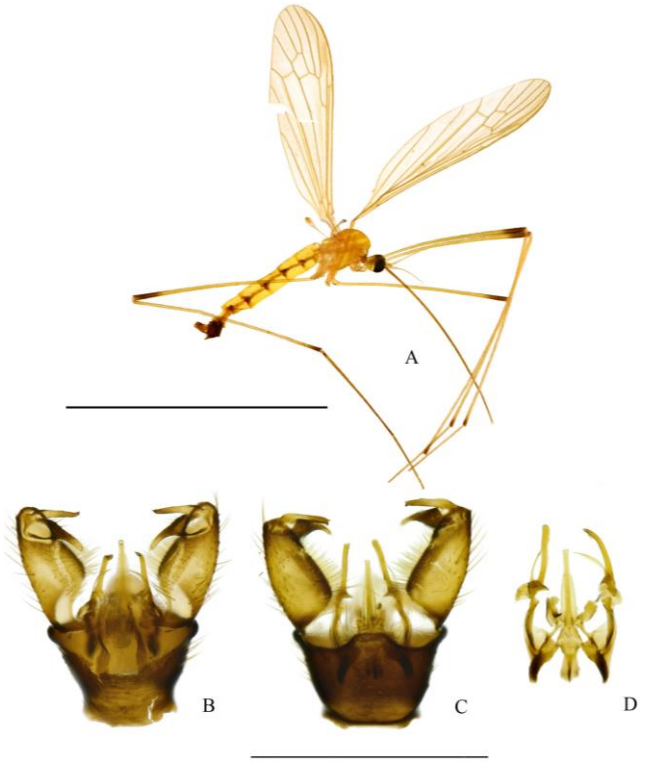

Figure 3. *Elephantomyia (Elephantomyia) krivosheinae* Savchenko, 1976: A: male lateral habitus; B-C: male hypopygium, B: dorsal view, C: ventral view, D: aedeagal complex in dorsal view. Scale bars: A: 10 mm; B-D: 1 mm

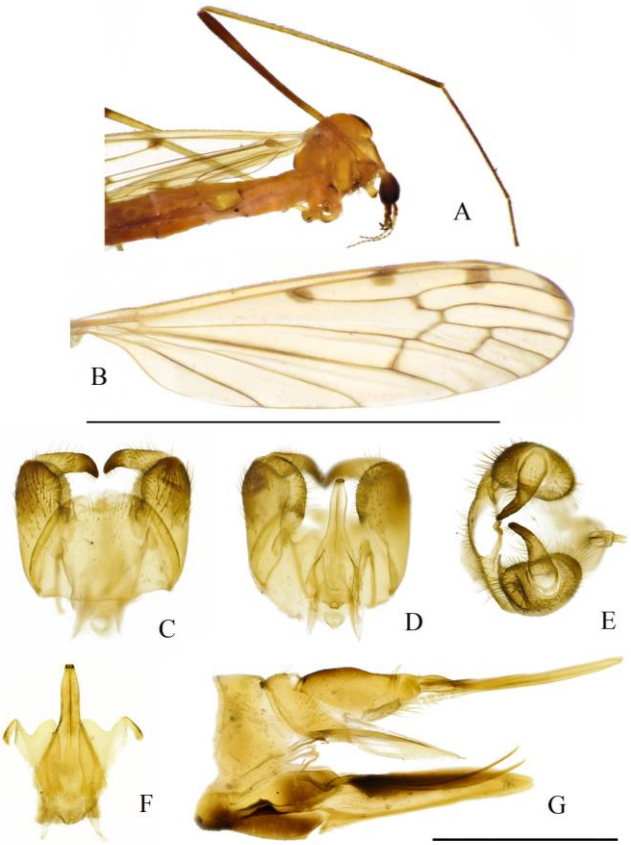

Figure 4. *Limonia nigropunctata nigropunctata* (Schummel, 1829): A: female lateral habitus; B: wing; C-E: male hypopygium, C: dorsal view, D: ventral view, E: caudal view; F: aedeagal complex in dorsal view; G: female ovipositor. Scale bars: A-B: 10 mm; C-G: 1 mm

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

Material. Temnikov Distr., MSNR, quarter 431, 02.VI.2016, 1♀, (RA); Romodanovo Distr., Pushkino, 17.VIII.2017, 1♀, (RA); Saransk, 31.VIII.2018, 1♂, (RA).

Distribution. Palearctic species known from several countries, including Austria, Czech Rep., Germany, Hungary, Italy (Trentino-Alto Adige), Lithuania, Norway, Romania, Slovakia, Sweden, Switzerland, Ukraine, Kazakhstan, Kyrgyzstan; Mongolia. Russia: RUC (Chuvash Rep.), RUE, North Caucasus, WS (Altay, Tyva, Khakasiya Rep.).

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

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 28-31.VIII.2017, 1♂, 37♀♀, (SG); 11-14.IX.2017, 3♀♀, (SG); 18-20.IX.2017, 1♂, 9♀♀, (SG); Temnikov Distr., MSNR, quarter 442, 03.VI.2017, 1♀, (RA); MSNR, quarter 86, 1♀, (RA); MSNR, Pushta, at light, 02.VI.2014, 1♂, (RA).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUW, RUC (Tver and Yaroslavl regions), North Caucasus, WS (south), ES (south), FE (south) (south Siberia eastward to Primorskiy Kray).

**Dicranomyia (Idiopyga) danica* Kuntze, 1919

Material. Temnikov Distr., MSNR, Pushta, quarter 446, at light, 11.IX.2018, 1♂, (SG).

Distribution. Known from several European countries, including Austria, Czech Rep., Denmark (incl. Faroe Is.), Finland (south), Germany, Great Britain, Hungary, Ireland, Lithuania, Netherlands, Poland, Slovakia, and Sweden. Also Turkey (Asiatic part), Kazakhstan (Pavlodar region), Kyrgyzstan; Russia: RUW (Pskov oblast), RUC (Tver region).

**Dicranoptycha fuscescens* (Schummel, 1829)

Material. Temnikov Distr., MSNR, Pushta, quarter 446, at light, 11.IX.2018, 1♂, (SG).

Distribution. Widely distributed in Europe, also in Morocco (Rif), Algeria, Georgia, Armenia, Azerbaijan, Turkey (Asiatic part), Cyprus, Lebanon, Israel, Iran, (?) Kazakhstan and Mongolia; Russia: RUW, RUC (Chuvash Rep.), RUE (Bashkortostan Rep., Tatarstan Rep.), North Caucasus.

**Discobola parvispinula* (Alexander, 1947)

Material. Ichalki Distr., NPS, Kemlyanskoe forestry, quarter 92, 11.VIII.2018, 1♂, (RA); NPS, sanatorium Alatyr, at light, 16-17.VIII.2018, 2♀♀, (SG); NPS, Lvovskoe forestry, post Obrezki, 11-14.IX.2017, 1♀, (SG); 18-20.IX.2017, 1♀, (SG).

Distribution. Known from several European countries, including Czech Rep., Lithuania, Poland, Slovakia, Ukraine (Carpathians). Widely distributed throughout the Palearctic Region; Russia: RUN (Karelia), RUC (Chuvash Rep.), RUE (Bashkortostan Rep., Kirovsk region), WS (Altay), ES (Krasnoyarskiy Kray), FE (Amur region, Primorskiy Kray, Sakhalin, Kuril Is.).

**Elephantomyia (Elephantomyia) krivosheinae* Savchenko, 1976 (Figure 3)

Material. Temnikov Distr., MSNR, Pushta, at light, 22.V.2014, 1♂, (RA).

Distribution. Palearctic species are known from several European countries, including Czech Rep., Finland, Hungary, Lithuania, Poland, Slovakia, Sweden, Switzerland, Ukraine (west). Russia: RUN, RUC (Tver region), RUE, WS (Altay, Tyva), FE (Khabarovskiy Kray, Primorskiy Kray).

Remarks. The male genitalia are rarely illustrated and here we present the first photos of them (Figure 3).

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

Material. Ichalki Distr., NPS, sanatorium Alatyr, at light, 06-08.VIII.2018, 2♂♂, 5♀♀, (SG); Temnikov Distr., MSNR, quarter 421, 13.VI.2016, 1♀, (RA); MSNR, quarter 431, 02.VI.2016, 1♀, (RA); Temnikov Distr., MSNR, post Steklyannyi, at light, 12-13.IX.2018, 1♂, (SG).

Distribution. Widely distributed in Europe, also in Turkey (Asiatic part), Egypt and Israel; Russia: RUN (Arkhangelsk region), RUW, RUC (Tver and Yaroslavl regions), RUE, North Caucasus, WS (Altay).

Limonia albifrons (Meigen, 1818)

Literature. Ruchin and Pilipenko 2015.

Distribution. Known from several European countries, including Austria, Croatia, Czech Rep., France, Germany, Hungary, Italy (Trentino-Alto Adige), Lithuania, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, Switzerland, Turkey (European part: Kirklareli), Ukraine; Russia: RUC (Rep. of Mordovia), WS (Altay).

**Limonia macrostigma* (Schummel, 1829)

Material. Temnikov Distr., MSNR, Pushta, quarter 446, at light, 14-15.VIII.2018, 1♀, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUE, North Caucasus, WS (Altay), FE (Primorskiy Kray).

Remarks. This species is reported for the first time from Central European Russia and Mordovia.

**Limonia nigropunctata nigropunctata* (Schummel, 1829) (Figure 4)

Material. Atyurievo Distr., Russian Velasma, 24.V.2014, 1♀, (RA); Stepanovka, 24.V.2014, 1♀, (RA); Temnikov Distr., Tretyakovo, 17.V.2014, 1♀, (RA); MSNR, quarter 399, 18.V.2014, 3♂♂, (RA); Purdoshki, 1♀, (RA).

Distribution. Widely distributed in Europe, also in Turkey (Asiatic part); Russia: RUW, RUC (Chuvash Rep.).

Remarks. The male and female genitalia are rarely illustrated and here we present the first photos of them.

Limonia phragmitidis (Schrank, 1781)

Literature. Ruchin and Pilipenko 2015.

Material. Elniki Distr., Malye Mordovskie Poshaty, 31.V.2014, 1♂, (RA); Staroe Shaygovo Distr., Nikolskaya Salovka, 08.VII.2017, 1♂, (RA); Temnikov Distr., MSNR, quarter 421, 13.VI.2016, 1♀, (RA); MSNR, quarter 435, 13.VI.2016, 2♀♀, (RA); 14.VI.2018, 1♂, (RA); MSNR, Pushta, at light, 1♂, (RA); MSNR, post Novenkovskiy, 13.VII.2014, 1♀, (RA).

Distribution. Widely distributed in Europe, also Morocco (Rif, Middle Atlas); Georgia, Azerbaijan, Turkey (Asiatic part), Israel, Jordan, Kazakhstan (Zailiyskiy Alatau Mts. S of Alma-Ata), Kyrgyzstan; Russia: RUN, RUW, RUC (Tver and Yaroslavl regions, Chuvash Rep.), RUE, North Caucasus, WS (Altay).

Limonia trivittata (Schummel, 1829)

Literature. Ruchin and Pilipenko 2015.

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Rep. of Mordovia, Tver region), RUE (Bashkortostan Rep.), North Caucasus, WS (Altay, Tyva), ?FE (?Kamchatka).

Metalimnobia (Metalimnobia) bifasciata (Schrank, 1781)

Literature. Ruchin and Pilipenko 2015.

Material. Bolshie Berezniki Distr., Nerley, 27.VIII.2016, 1♂, (RA); Insar Distr., Insar, 10.VI.2018, 1♂, (RA); Ichalki Distr., NPS, Aleksandrovskoe forestry, quarter 39, 06.VI.2018, 1♀, (RA); NPS, Kemlyanskoe forestry, quarter 92, 11.VIII.2018, 12♂, 6♀♀, (RA); NPS, Lvovskoe forestry, quarter 63, 20.VII.2018, 3♂♂, 2♀♀, (SG); NPS, Lvovskoe forestry, post Obrezki, 28-31.VIII.2017, 2♂♂, 3♀♀, (SG); 11-14.IX.2017, 1♀, (SG); Ichalki Distr., NPS, sanatorium Alatyr, at light, 06-08.VIII.2018, 2♀♀, (SG); 16-17.VIII.2018, 3♂♂, (SG); Romodanovo Distr., Pushkino, 17.VIII.2017, 1♀, (RA); Ruzaevka Distr., Levzhenskiy, 10.VI.2018, 1♂, (RA); Temnikov Distr., MSNR, quarter 431, 02.VI.2016, 1♂, (RA); MSNR, quarter 434, 1♂, (RA); 22.VIII.2015, 1♂, (RA); MSNR, Pushta, at light, 1♂, (RA).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Moscow, Tver, and Ulyanovsk regions, Chuvash Rep., Rep. of Mordovia), RUE, North Caucasus, WS (north), ES (Siberia north and eastward to Yakutia), FE (Kamchatka, Amur region, Primorskiy Kray, Sakhalin, Kuril Is.).

Metalimnobia (Metalimnobia) quadrimaculata (Linnaeus, 1760)

Literature. Ruchin and Pilipenko 2015.

Material. Bolshie Berezniki Distr., Prissurskiy, 31.VIII.2018, 1♂, (RA); Insar Distr., Insar, 1♂,1♀, (RA); Vasina Polyana, 10.VI.2018, 1♂, (RA); Ichalki Distr., NPS, Aleksandrovskoe forestry, quarter 39, 06.VI.2018, 1♂,1♀, (RA); quarter 31, 18.VI.2018, 1♀, (RA); Ichalki Distr., NPS, Barakhmanovskoe forestry, quarter 113, 27.VIII.2018, 1♂, (RA); NPS, Kemlyanskoe forestry, quarter 22, 06.VI.2018, quarter 92, 11.VIII.2018, 2♂♂, (RA); NPS, Lvovskoe forestry, quarter 63, 20.VII.2018, 2♂♂, (RA); 7♂♂, 8♀♀, (RA); post Obrezki, 24-30.V.2018, 1♂, (SG); 11-14.IX.2017, 1♂, (SG); NPS, sanatorium Alatyr, at light, 06-08.VIII.2018, 1♀, (SG); 16-17.VIII.2018, 3♀♀, (SG); Ruzaevka Distr., Levzhenskiy, 10.VI.2018, 4♀♀, (RA); Khovanshchina, 10.VI.2018, 1♀, (RA); Temnikov Distr., MSNR, quarter 422, 21.VI.2018, 1♂, (RA); MSNR, quarter 424, 05.VI.2018, 2♂♂, 3♀♀, (RA); MSNR, quarter 426, 14.VI.2018, 4♂♂, 3♀♀, (RA); MSNR, quarter 435, 21.VI.2018, 2♂♂, (RA); MSNR, quarter 437, 26.VI.2018, 2♀♀, (RA); MSNR, quarter 439, 21.VI.2018, 3♀♀, (RA); MSNR, quarter 440, 01.VI.2018, 2♂♂, 3♀♀, (RA); 14.VI.2018, 2♀♀, (RA); MSNR, post Inorskiy, 11-14.V.2018, 1♂, 1♀, (RA); MSNR, Pushta, at light, 14.VIII.2017, 1♂, (RA); MSNR, Srednyaya Melnitsa, soil trap, 29.VII-29.VIII.2018, 1♀, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Moscow, Tver, Ulyanovsk, Yaroslavl regions, Chuvash Rep., Rep. of Mordovia), RUE (Bashkortostan Rep.), North Caucasus, WS (south), ES (south), FE (Kamchatka, Amur region, Primorskiy Kray, Sakhalin, Kuril Is.).

Metalimnobia (Metalimnobia) quadrinotata (Meigen, 1818)

Literature. Ruchin and Pilipenko 2015.

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 24-30.V.2018, 1♂, (SG); 28-31.VIII.2017, 4♂♂, 5♀♀, (SG); NPS, sanatorium Alatyr, at light, 16-17.VIII.2018, 5♂♂, 4♀♀, (SG); Romodanovo Distr., Pushkino, 17.VIII.2017, 2♂♂, 1♀, (RA); Temnikov Distr., MSNR, quarter 337, 11.VI.2016, 1♀, (RA); MSNR, quarter 347, 13.VII.2017, 1♀, (RA); MSNR, Drozhdenovkiy, 04.VI.2017, 1♀, (RA); MSNR, Pushta, at light, 22.V.2014, 1♂, (RA).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Moscow, Tver, Yaroslavl and Ulyanovsk regions, Chuvash Rep., Rep. of Mordovia), RUE, North Caucasus, WS, ES (east to Yakutia), FE (Magadan and Amur regions).

Rhipidia (Rhipidia) maculata Meigen, 1818

Literature. Ruchin and Pilipenko 2015.

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 28-31.VIII.2017, 1♀, (SG); 18-20.IX.2017, 1♂, 5♀♀, (SG); NPS, sanatorium Alatyr, at light, 16-17.VIII.2018, 3♀♀, (SG); Temnikov Distr., MSNR, post Steklyannyi, at light, 12-13.IX.2018, 1♂, 3♀♀, (SG); MSNR, Srednyaya Melnitsa, soil trap, 29.VII-29.VIII.2018, 1♀, (SG).

Distribution. The species is widespread in the Holarctic Region; Russia: RUN, RUW, RUC (Tver and Ulyanovsk regions, Rep. of Mordovia), RUE (Bashkortostan Rep.), North Caucasus, WS, ES, FE (from Magadan region and Kamchatka to Primorskiy Kray, Sakhalin and Kuril Is.).

Family Pediciidae Osten Sacken 1860

Subfamily Pediciinae Kertesz 1902

* *Dicranota (Paradicranota) gracilipes* Wahlgren, 1905

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 20-23.VIII.2018, 1♀, (SG).

Distribution. Distributed in Europe; Russia: RUN, RUW, RUE (Bashkortostan Rep.).

Remarks. This species is reported for the first time from Central European Russia and Mordovia. There is also an unpublished record from Bashkortostan Republic (first record for the east European Russia, Gavryushin in litt., 2012).

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

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 20-23.VIII.2018, 1♂, (SG).

Distribution. Distributed in Europe; Russia: RUN, RUW, RUC (Tver and Ulyanovsk regions, Chuvash Rep.), RUE (Bashkortostan Rep., Orenburg region), ?WS (?Altay).

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

Material. Insar Distr., Novley, 27.V.2017, 2♂♂, (RA); Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 24-30.V.2018, 2♂♂, 6♀♀, (SG); 18-20.IX.2017, 2♀♀, (SG); Temnikov Distr., MSNR, Pushta, at light, 13.V.2014, 3♀♀, (SG); MSNR, post Steklyannyi, at light, 12-13.IX.2018, 4♂♂, 4♀♀, (SG).

Distribution. Widely distributed in Europe, also in Morocco (Rif), Georgia, Armenia, Azerbaijan, Turkey (Asiatic part), Lebanon and Kazakhstan (Zailiyskiy Alatau Mts. S of Alma-Ata), Kyrgyzstan; Russia: RUN, RUW, RUC (Tver region), RUE (Bashkortostan Rep.), North Caucasus, WS (Altay).

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

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 24-30.V.2018, 3♀♀, (SG).

Distribution. Widely distributed in Europe, also in Turkey (Asiatic part); Russia: Novaya Zemlya, RUN, RUW, WS (Altay).

Remarks. This species is reported for the first time from Central European Russia and Mordovia.

Subfamily Ulinae Alexander, 1966

**Ula (Ula) bolitophila* Loew, 1869

Material. Temnikov Distr., MSNR, Pushta, at light, 13.V.2014, 1♀, (RA); MSNR, Srednyaya Melnitsa, soil trap, 15.V.2018, 1♀, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUE, WS (Altay), ES (south), FE (Khabarovskiy Kray, Primorskiy Kray, Sakhalin, Kuril Is.).

Remarks. This species is reported for the first time from Central European Russia and Mordovia.

Family Tipulidae Linnaeus, 1758

Subfamily Ctenophorinae Kertesz, 1902

Ctenophora (Cnemoncosis) fastuosa Loew, 1871

Literature. Ruchin and Pilipenko 2015.

Distribution. Known from several European countries, including Bulgaria, Croatia, Czech Rep., Germany, Poland (south), Romania, Ukraine (south); Also: Uzbekistan (south of Aral Sea); China (Heilongjiang, Zhejiang); Russia: RUC (Moscow region, Chuvash Rep., Rep. of Mordovia), RUS (north of Black Sea); WS (Tyva), FE (Amur region, Primorskiy Kray). A rare Palearctic species.

Dictenidia bimaculata (Linnaeus, 1760)

Literature. Ruchin and Pilipenko 2015.

Material. Temnikov Distr., MSNR, Pushta, at light, 08.VIII.2017, 1♀, (RA).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Moscow, Tver, Yaroslavl and Ulyanovsk regions, Chuvash Rep., Rep. of Mordovia), RUS, WS (southern half), ES, FE (Kamchatka, Sakhalin (incl. Moneron), Amur region, Primorskiy Kray).

Tanyptera (Tanyptera) atrata atrata (Linnaeus, 1758)

Literature. Ruchin and Pilipenko 2015.

Material. Bolshie Berezniki Distr., Nerley, 05.VI.2016, 1♂, (RA); Temnikov Distr., Russkoe Karaevo, 21.V.2017, 1♂, (RA); MSNR, quarter 360, 27.V.2016, 1♂, (RA); MSNR, quarter 381, 28.V.2018, 1♂, (RA).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Moscow, Nizhniy Novgorod, Tver, Yaroslavl, Ulyanovsk regions, Chuvash Rep., Rep. of Mordovia), RUS, WS (Altay), FE (Amur region).

Subfamily Tipulinae Kertesz, 1902

Nephrotoma aculeata (Loew, 1871)

Literature. Ruchin and Pilipenko 2015.

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 20-23.VIII.2018, 1♀, (SG); Krasnoslobodsk Distr., Staroe Sindrovo, 16.IX.2017, 1♀, (RA); Staroe Shaygovo Distr., Staroe Shaygovo, 30.VII.2017, 1♀, (RA); Temnikov Distr., MSNR, Srednyaya Melnitsa, soil trap, 29.VII-29.VIII.2018, 2♀♀, (SG); MSNR, Pushta, quarter 446, at light, 14-15.VIII.2018, 1♀, (SG); 28.VIII.2018, 1♀, (SG); MSNR, post Steklyannyi, at light, 12-13.IX.2018, 1♂, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Moscow, Yaroslavl regions, Chuvash Rep., Rep. of Mordovia), RUS, WS (south), ES (south), FE (south, incl. south Kamchatka, Sakhalin).

Nephrotoma analis (Schummel, 1833)

Literature. Ruchin and Pilipenko 2015.

Material. Temnikov Distr., MSNR, Pushta, at light, 18.VII.2014, 1♂, (RA).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Moscow, Tver and Yaroslavl regions, Chuvash Rep., Rep. of Mordovia), RUS, WS (southeast), ES (Minusinsk), FE (Amur region).

Nephrotoma appendiculata appendiculata (Pierre, 1919)

Literature. Ruchin and Pilipenko 2015.

Material. Temnikov Distr., MSNR, Plotomoyka, 16.VI.2018, 1♀, (RA).

Distribution. Widely distributed in Europe; Russia: RUN, RUW, RUC (Kaluga, Moscow, Tver, Yaroslavl, and Ulyanovsk regions, Chuvash Rep., Rep. of Mordovia), RUS.

Nephrotoma cornicina cornicina (Linnaeus, 1758)

Literature. Plavilshchikov 1964; Ruchin and Pilipenko 2015.

Material. Chamzinka Distr., Picheuri, 28.VII.2018, 2♀♀, (RA).

Distribution. The species is widespread and common in the Holarctic Region; Russia: RUN, RUW, RUC (Tula, Moscow, Tver, Yaroslavl and Ulyanovsk regions, Chuvash Rep., Rep. of Mordovia), RUS, WS (Ekaterinburg, south), ES (southern half), FE (south, incl. Sakhalin, Kuril Is.).

Nephrotoma crocata (Linnaeus, 1758)

Literature. Ruchin and Pilipenko 2015.

Distribution. Widely distributed in Europe; Russia: RUN, RUW, RUC (Tula, Nizhniy Novgorod, Moscow, Tver, Yaroslavl and Ulyanovsk regions, Chuvash Rep., Rep. of Mordovia), RUS, WS, ES.

**Nephrotoma dorsalis* (Fabricius, 1781)

Material. Temnikov Distr., MSNR, post Inorskiy, 25.VI.2014, 1♂, (RA).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Moscow, Tver, and Yaroslavl regions, Chuvash Rep.), RUS (west), ES (south), FE (south, incl. Kamchatka).

**Nephrotoma lamellata lamellata* (Riedel, 1910)

Material. Temnikov Distr., MSNR, quarter 409, 15.VI.2016, 1♂, (RA); MSNR, quarter 360, 27.V.2016, 1♂, (RA).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUW, RUC (Kaluga, Moscow regions, Chuvash Rep.,), WS (Altay, Tyva, Khakasiya Rep.), ES (south), FE (Amur region).

Nephrotoma pratensis pratensis (Linnaeus, 1758)

Literature. Ruchin and Pilipenko 2015.

Material. Ardatov Distr., Oktyabrskiy, 26.V.2017, 1♂, 1♀, (RA).

Distribution. Widely distributed in Europe; Russia: RUN, RUW, RUC (Moscow, Tver, Yaroslavl and Ulyanovsk regions, Rep. of Mordovia), RUS, WS (southwest Chelyabinsk Territory).

**Nephrotoma quadristriata* (Schummel, 1833)

Material. Ichalki Distr., NPS, Barakhmanovskoe forestry, quarter 101, 12.VIII.2018, 1♀, (RA).

Distribution. Widely distributed in Europe; Russia: RUN, RUW, RUC (Moscow region, Chuvash Rep.), RUS (west), WS (southeast), ES (southwest).

**Nephrotoma scalaris* (Meigen, 1818)

Material. Temnikov Distr., MSNR, post Podrubnyi, 25.V.2014, 1♀, (RA); MSNR, Pushta, at light, 02.VI.2014, 1♀, (RA); MSNR, quarter 430, 11.VI.2016, 1♀, (RA); MSNR, quarter 59, 23.VIII.2016, 1♂, (RA).

Distribution. Widely distributed in Europe; Russia: RUC (Moscow, Tver and Yaroslavl regions, Chuvash Rep.), RUS.

Nephrotoma scurra (Meigen, 1818)

Literature. Plavilshchikov 1964; Antsiferova and Dobrosmyslov 1966; Ruchin and Pilipenko 2015.

Material. Bolshie Berezniki Distr., Simkinskoe lesnichestvo, 12.VIII.2017, 1♀, (RA); Ichalki Distr., NPS, Barakhmanovskoe forestry, quarter 112, 12.VIII.2018, 1♀, (RA); Lvovskoe forestry, quarter 70, 07.VI.2018, 1♀, (RA); NPS, Lvovskoe forestry, post Obrezki, 28-31.VIII.2017, 1♀, (SG); NPS, sanatorium Alatyr, at light, 06-08.VIII.2018, 2♀♀, (SG); 16-17.VIII.2018, 2♀♀, (SG); Temnikov Distr., MSNR, quarter 276, 04.VII.2017, 1♂, (RA); MSNR, quarter 319, 13.VII.2017, 1♂, (RA); MSNR, quarter 331, 09.VI.2016, 1♂, (RA); MSNR, quarter 384, 27.VII.2014, 2♀♀, (RA); MSNR, quarter 384, 14.VI.2016, 1♂, (RA); MSNR, quarter 429, 15.VI.2016, 1♀, (RA); MSNR, Pushta, quarter 446, at light, 14-15.VIII.2018, 1♀, (SG); 28.VIII.2018, 2♀♀, (SG); Zhegalovo, 25.VII.2018, 1♂, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUC (Voronezh, Ryazan, Moscow, Tver and Yaroslavl regions, Chuvash Rep., Rep. of Mordovia), RUS (west), WS, ES, FE.

**Nephrotoma tenuipes* (Riedel, 1910)

Material. Ichalki Distr., NPS, sanatorium Alatyr, at light, 06-08.VIII.2018, 1♂, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUW, RUC (Moscow, Tver, and Yaroslavl regions, Chuvash Rep.), North Caucasus, WS (Altay, Tyva), FE (Kamchatka).

**Nigrotipula nigra nigra* (Linnaeus, 1758)

Material. Bolshie Berezniki Distr., 6 km SE Permisi, 12.VI.2015, 1♂, (RA).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Voronezh, Moscow, and Tver regions, Chuvash Rep.), RUS (in Russia widespread between 63°N and 44°N), WS, ES, FE (Amur region).

Prionocera subserricornis (Zetterstedt, 1851)

Literature. Ruchin and Pilipenko 2015.

Material. Temnikov Distr., MSNR, quarter 408, 10.V.2014, 1♀, (RA); MSNR, post Inorskiy, 11-14.V.2018, 1♂, (SG); MSNR, post Podrubnyi, 15.V.2016, 4♀♀, (RA); MSNR, Pushta, at light, 25.VI.2014, 1♀, (RA); MSNR, Srednyaya Melnitsa, soil trap, 15.V.2018, 1♀, (SG).

Distribution. The species is widespread in the Holarctic Region; Russia: RUN, RUW, RUC (Moscow, Tver, and Yaroslavl regions, Rep. of Mordovia), WS, ES, FE (Kamchatka, Sakhalin, and Kuril Is.).

Prionocera turcica (Fabricius, 1787)

Literature. Ruchin and Pilipenko 2015.

Distribution. The species is widespread in the Holarctic Region; Russia: RUN, RUW, RUC (Moscow, Yaroslavl, and Voronezh regions, Rep. of Mordovia), RUS, WS, ES, FE.

Tipula (Acutipula) fulvipennis De Geer, 1776

Literature. Ruchin and Pilipenko 2015.

Distribution. Widely distributed in Europe, also in Kazakhstan and Mongolia; Russia: RUN, RUW, RUC (Moscow, Ulyanovsk regions, Rep. of Mordovia), RUS, WS (south), ES (south).

**Tipula (Acutipula) luna* Westhoff, 1879

Material. Temnikov Distr., MSNR, quarter 368, 27.V.2018, 3♂♂, 1♀, (RA).

Distribution. Widely distributed in Europe; Russia: RUN, RUW, RUC (Moscow and Tver regions).

**Tipula (Lunatipula) affinis* Schummel, 1833

Material. Tengushevo Distr., Barashevo, 07.VI.2014, 1♂, (RA).

Distribution. Widely distributed in Europe, also Georgia, Armenia, Azerbaijan, Kazakhstan; Russia: RUN, RUW, RUC (Moscow, Tver, and Ulyanovsk regions), WS.

Tipula (Lunatipula) fascipennis Meigen, 1818

Literature. Ruchin and Pilipenko 2015.

Material. Ichalki Distr., NPS, Barakhmanovskoe forestry, quarter 98, 25.VII.2017, 1♀, (RA); Kochkurovo Distr., Podlesnaya Tavla, 08.VII.2017, 1♀, (RA); Krasnoslobodsk Distr., Staraya Avgura, 01.VII.2018, 1♂, (RA); Temnikov Distr., MSNR, quarter 384, 17.VI.2014, 1♂, (RA); MSNR, quarter 403, 5.VII.2015, 1♀, (RA); MSNR, quarter 430, 30.VI.2015, 1♀, (RA); MSNR, post Inorskiy, 28.VI.2015, 1♀, (RA); 02.VII.2017, 1♂, (RA); MSNR, Pushta, at light, 03.VII.2014, 1♀, (RA).

Distribution. Widely distributed in Europe, also in Georgia, Armenia, Azerbaijan; Russia: RUN, RUW, RUC (Moscow, Tver, and Yaroslavl regions, Chuvash Rep., Rep. of Mordovia), RUS.

Tipula (Lunatipula) lunata Linnaeus, 1758

Literature. Ruchin et al 2007; Ruchin 2008; Ruchin and Pilipenko 2015.

Material. Bolshie Berezniki Distr., Permisi, 05.VI.2016, 1♀, (RA); Lyambir Distr., Novaya Uda,

29.VII.2016, 1♀, (RA); Staroe Shaygovo Distr., Nikolskaya Salovka, 08.VII.2017, 1♀, (RA); Temnikov Distr., MSNR, quarter 397, 17.VIII.2014, 1♀, (RA); MSNR, quarter 430, 11.VI.2016, 1♂, (RA); MSNR, Pushta, at light, 02.VI.2014, 1♂, 3♀♀, (RA); Purdoshki, 31.V.2014, 1♂, (RA).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Moscow, Tver, Yaroslavl and Ulyanovsk regions, Chuvash Rep., Rep. of Mordovia), RUS, WS, ES, FE.

**Tipula (Lunatipula) mellea* Schummel, 1833

Material. Saransk, 1♂, (RA).

Distribution. Known from several European countries, including Austria, Belarus, Bulgaria, Croatia, Czech Rep., France, Germany, Hungary, Poland, Romania, Serbia, Slovakia, Ukraine also in Kazakhstan (east); Russia: RUC (Ulyanovsk, Voronezh regions), RUS.

Tipula (Lunatipula) recticornis Schummel, 1833

Literature. Ruchin and Pilipenko 2015.

Distribution. Known from several European countries, including Austria, Czech Rep., Finland (south), Germany, Lithuania, Poland, Romania, Slovakia, Sweden; also from Mongolia; Russia: RUC (Moscow region, Rep. of Mordovia), WS (north, Altay, Tyva), ES (north).

Tipula (Lunatipula) vernalis Meigen, 1804

Literature. Plavilshchikov 1964; Ruchin and Pilipenko 2015.

Material. Atyurievo Distr., Russian Velasma, 24.V.2014, 1♂, (RA); Bolshie Berezniki Distr., 6 km SE Permisi, 12.VI.2015, Bolshie Berezniki Distr., Nerley, 05.VI.2016, 05.VI.2016, 3♀♀, (RA); Permisi, 12.VI.2015, 1♀, (RA); 05.VI.2016, 1♂, 1♀, (RA); Dubensky Distr., Krasnye Luga, 11.VI.2017, 1♂, 1♀, (RA); Yavleyka, 3♂♂, 1♀, (RA); Elniki Distr., Malye Mordovskie Poshaty, 31.V.2014, 1♂, 2♀♀, (RA); Insar Distr., Kochetovka, 04.VI.2016, 1♀, (RA); NPS, Kemlyanskoe forestry, quarter 106, 08.VI.2018, 3♀♀, (RA); quarter 92, 07.VI.2018, 1♂, 2♀♀, (RA); quarter 94, 2♀♀, (RA); Kadoshkinsky Distr., Latyshovka, 04.VI.2016, 1♂, 1♀, (RA); Kovylkino Distr., Chepurnovka, 29.VI.2017, 1♀, (RA); Lyambir Distr., Atemar, 24.VI.2017, 1♂, 1♀, (RA); Oktyabrskiy Distr., Monastyrskoe, 12.VI.2017, 1♂, (RA); Ruzaevka Distr., Boldovo, 04.VI.2016, 2♂♂, 2♀♀, (RA); Palaevka, 10.VI.2017, 3♂♂, 1♀, (RA); Khovanshchina, 10.VI.2017, 1♂, 3♀♀, (RA); Temnikov Distr., MSNR, 22.V.2018, 2♂♂, (SG); 25.V.2018, 2♂♂, 2♀♀, (SG); MSNR, quarter 197, 18.VI.2016, 1♀, (RA); MSNR, quarter 331, 1♂, (RA); MSNR, quarter 368, 1♂, (RA); MSNR, quarter 421, 08.VI.2014, 13.VI.2016, 1♀, (RA); 1♂, 3♀♀, (RA); MSNR, quarter 433, 03.VI.2016, 1♀, (RA); MSNR, quarter 442, 02.VI.2016, 1♂, (RA); 03.VI.2017, 1♀, (RA); MSNR, Drozhdenovkiy, 18.VI.2017, 1♂, (RA); Alkaevo, 30.V.2015, 1♂, (RA); Purdoshki, 31.V.2014, 1♀, (RA); Dachniy, 07.VI.2014, 1♀, (RA); Torbeevo Distr., Surgod, 21.VI.2016, 1♀, (RA).

Distribution. Widely distributed in Europe; Russia: RUN, RUW, RUC (Smolensk, Moscow, Tver, Yaroslavl, and Ulyanovsk regions, Chuvash Rep., Rep. of Mordovia), North Caucasus.

**Tipula (Platytipula) autumnalis* Loew, 1864

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 11-14.IX.2017, 1♂, (SG).

Distribution. Known from several European countries, including Belarus, Czech Rep., Denmark, Estonia, Germany, Latvia, Lithuania, Netherlands, Poland, Sweden (Oland), Ukraine; Russia: RUN, RUW, RUC (Moscow, Tver, Yaroslavl, and Voronezh regions).

Tipula (Platytipula) luteipennis luteipennis Meigen, 1830

Literature. Ruchin and Pilipenko 2015.

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 11-14.IX.2017, 15♂♂, 10♀♀, (SG); 18-20.IX.2017, 4♂♂, 3♀♀, (SG); 5-6.IX.2018, 4♂♂, (SG); Temnikov Distr., MSNR, post Steklyannyi, at light, 12-13.IX.2018, 17♂♂, 14♀♀, (SG); MSNR, Taratinsky, 1♀, (RA); MSNR, Pushta, quarter 446, at light, 11.IX.2018, 16♂♂, 5♀♀, (SG).

Distribution. Widely distributed in Europe also in Kazakhstan (north, east), Kyrgyzstan, Mongolia; Russia: RUN, RUW, RUC (Moscow, Tver, Yaroslavl and Smolensk regions, Chuvash Rep., Rep. of Mordovia), RUS, WS (south), ES.

**Tipula (Pterelachisus) jutlandica* Nielsen, 1947

Material. Temnikov Distr., MSNR, post Inorskiy, 1♀, (RA).

Distribution. Known from several European countries, including Denmark, Finland (south), Germany, Lithuania, Sweden, and Ukraine; Russia: RUC (Moscow and Tver regions), WS (Altay).

**Tipula (Pterelachisus) laetibasis* Alexander, 1934

Material. Temnikov Distr., MSNR, post Inorskiy, 11-14.V.2018, 1♀, (SG); MSNR, post Steklyannyi, at light, 17.V.2018, 2♂♂, (SG).

Distribution. Known from a small number of European countries, including Czech Rep., Finland, Norway (north), and Sweden and also from Japan (Honshu); Russia: RUN, RUC (Moscow region), WS (Altay), ES, FE (incl. Sakhalin, Kuril Is.).

Tipula (Pterelachisus) pseudovariipennis Czizek, 1912

Literature. Ruchin and Pilipenko 2015.

Distribution. Widely distributed in Europe; Russia: RUW, RUC (Moscow region, Chuvash Rep., Rep. of Mordovia) RUS.

Tipula (Pterelachisus) submarmorata Schummel, 1833

Literature. Ruchin and Pilipenko 2015.

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 24-30.V.2018, 2♂♂, 1♀, (SG); Temnikov Distr., MSNR, quarter 342, 25.V.2015, 1♂, (RA); MSNR, quarter 442, 03.VI.2017, 1♀, (RA); MSNR, post Steklyannyi, at light, 17.V.2018, 1♂, 2♀♀, (SG); MSNR, Srednyaya Melnitsa, soil trap, 15.V.2018, 1♂, (SG).

Distribution. Widely distributed in Europe; Russia: RUN, RUW, RUC (Moscow and Tver regions, Rep. of Mordovia).

Tipula (Pterelachisus) varipennis Meigen, 1818

Literature. Ruchin and Pilipenko 2015.

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 24-30.V.2018, 1♂, 2♀♀, (SG); Temnikov Distr., Tretyakovo, 17.V.2014, 1♂, 1♀ (RA).

Distribution. Widely distributed in Europe, Siberia and in Kazakhstan (east); Russia: RUN, RUW, RUC (Moscow, Tver, and Yaroslavl regions, Rep. of Mordovia), RUS, WS (south), ES (Krasnoyarskiy Kray, Irkutsk region).

**Tipula (Pterelachisus) winthemi* Lackschewitz, 1932

Material. Temnikov Distr., MSNR, Srednyaya Melnitsa, soil trap, 15.V.2018, 1♂, 1♀, (SG); Zubova Polyana Distr., Yavas, 22.VI.2018, 1♀ (RA).

Distribution. Known from several European countries, including Austria, Belgium, Croatia, Denmark, Estonia, Finland, Germany, Lithuania, Netherlands, Spain (north), Sweden (north), Switzerland, and Ukraine; also from Mongolia; Russia: RUC (Moscow region), WS (Ob delta), ES (Irkutsk region), FE (Kamchatka).

Tipula (Savtshenkia) obsoleta *Meigen, 1818*

Literature. Ruchin and Pilipenko 2015.

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 18-20.IX.2017, 5♂♂, 3♀♀, (SG); Temnikov Distr., MSNR, post Steklyannyi, at light, 12-13.IX.2018, 2♂♂, (SG).

Distribution. Widely distributed in Europe, also in Georgia, Turkey (Asiatic part: Trabzon), Kazakhstan (east); Russia: RUN, RUW, RUC (Moscow, Tver, Yaroslavl, Smolensk regions, Chuvash Rep., Rep. of Mordovia).

Tipula (Tipula) paludosa Meigen, 1830

Literature. Plavilshchikov 1964; Timraleev 1992; Ruchin et al 2007; Ruchin 2008; Ruchin and Pilipenko 2015.

Material. Atyurievo Distr., Mordovskaya Kozlovka, 10.VIII.2014, 1♂, (RA); Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 20-23.VIII.2018, 4♂♂, (SG); Temnikov Distr., MSNR, quarter 324, 16.VIII.2015, 1♀ (RA); MSNR, quarter 399, 17.VIII.2014, 1♂, (RA); MSNR, quarter 420, 06.VIII.2017, 1♂, (RA); MSNR, quarter 85, 23.VIII.2016, 1♂, (RA); MSNR, post Steklyannyi, at light, 12-13.IX.2018, 1♂, (SG); MSNR, Pushta, quarter 446, at light, 14-15.VIII.2018, 3♂, (SG).

Distribution. Widely distributed in Europe and in North America; Russia: RUN, RUW, RUC (Moscow, Tver, Ulyanovsk, Yarovslavl, and Tula regions, Rep. of Mordovia), RUS.

Tipula (Tipula) subcunctans Alexander, 1921

Literature. Timraleev 1992; Pilipenko 2009; Ruchin and Pilipenko 2015.

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 11-14.IX.2017, 11♂♂, 20♀♀, (SG); 18-20.IX.2017, 2♂♂, 2♀♀, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Moscow, Tver, and Yaroslavl regions, Chuvash Rep., Rep. of Mordovia), RUS, WS (south), ES (south, Yakutia), FE (south, incl. Sakhalin).

Tipula (Vestiplex) hortorum Linnaeus, 1758

Literature. Ruchin and Pilipenko 2015.

Material. Temnikov Distr., MSNR, quarter 403, 20.V.2017, 1♂, (RA); MSNR, quarter 408, 20.V.2017, 1♂, (RA); MSNR, quarter 448, 11.V.2016, 1♂, (RA); MSNR, Pushta, at light, 13.V.2014, 1♀ (RA).

Distribution. Widely distributed in Europe; Russia: RUN, RUW, RUC (Moscow, Tver, Nizhniy Novgorod and Ulyanovsk regions, Chuvash Rep., Rep. of Mordovia), RUS.

Tipula (Vestiplex) nubeculosa Meigen, 1804

Literature. Ruchin and Pilipenko 2015.

Material. Insar Distr., Novley, 27.V.2017, 2♂♂, (RA); Temnikov Distr., MSNR, quarter 338, 27.V.2018, 1♀, (RA); MSNR, quarter 408, 10.V.2014, 1♂, (RA); MSNR, quarter 448, 24.V.2015, 1♂, (RA); MSNR, post Inorskiy, 11-14.V.2018, 5♂♂, 1♀, (SG); MSNR, post Inorskiy, 21.V.2017, 1♀, (RA); MSNR, post Polyansky, 18.V.2014, 1♂, (RA); MSNR, Pushta, at light, 12.V.2014, 1♀, (RA); MSNR, Srednyaya Melnitsa, soil trap, 15.V.2018, 1♂, (SG).

Distribution. Widely distributed in Europe; Russia: RUN, RUW, RUC (Moscow, Tver, and Ulyanovsk regions, Chuvash Rep., Rep. of Mordovia), RUS.

Tipula (Vestiplex) scripta scripta Meigen, 1830

Literature. Ruchin and Pilipenko 2015.

Material. Ichalki Distr., NPS, sanatorium Alatyr, at light, 06-08.VIII.2018, 3♂♂, 3♀♀, (SG); NPS, Kemlyanskoe forestry, quarter 92, 11.VIII.2018, 1♀, (RA); NPS, Lvovskoe forestry, post Obrezki, 20-23.VIII.2018, 1♀, (SG).

Distribution. Widely distributed throughout the Palearctic Region; Russia: RUN, RUW, RUC (Moscow, Tver, Yaroslavl, Ulyanovsk, Nizhniy Novgorod and Voronezh regions, Chuvash Rep., Rep. of Mordovia), RUS, WS (south), ES (south), FE (Sakhalin).

Tipula (Yamatotipula) couckei Ton. 1921

Literature. Ruchin and Pilipenko 2015.

Distribution. Widely distributed throughout the Palearctic Region. Russia: RUN, RUW, RUC (Bryansk, Moscow, Tver, Ulyanovsk, and Voronezh regions, Rep. of Mordovia), RUS, WS (Altay, Tyva), ES (Krasnoyarskiy Kray).

Tipula (Yamatotipula) lateralis Meigen, 1804

Literature. Ruchin and Pilipenko 2015.

Material. Kochkurovo Distr., Novaya Pyrma, 11.VIII.2017, 1♂, (RA); Temnikov Distr., MSNR, Pushta, quarter 446, at light, 29.IX.2018, 3♀♀, (SG); MSNR, Srednyaya Melnitsa, soil trap, 29.VII-29.VIII.2018, 1♂, 1♀, (SG).

Distribution. Widely distributed in Europe, also in Georgia, Armenia, Turkey (Asiatic part: widespread), Kazakhstan (east), Turkmenistan. Russia: RUN, RUW, RUC (Moscow, Tver, Yaroslavl, Ulyanovsk, and Voronezh regions, Rep. of Mordovia), RUS.

**Tipula (Yamatotipula) pierrei* Tonnoir, 1921

Material. Ichalki Distr., NPS, Lvovskoe forestry, post Obrezki, 28-31.VIII.2017, 1♀, (SG); 20-23.VIII.2018, 4♂♂, 3♀♀, (SG); NPS, sanatorium Alatyr, at light, 06-08.VIII.2018, 1♀, (SG); 16-17.VIII.2018, 1♀, (SG); Temnikov Distr., MSNR, Pushta, quarter 446, at light, 1♀, (SG).

Distribution. Widely distributed throughout the Palearctic Region. Russia: RUN, RUW, RUC (Moscow, Tver, Yaroslavl, Ulyanovsk, Smolensk and Ryazan regions), RUS, WS, ES, FE (incl. Kuril Is.).

Conclusion

As a result of this study, the known diversity of craneflies in the Republic of Mordovia significantly exceeds that of the neighboring regions. For example, the list of the most researched, Chuvash Republic includes 67 species (Paramonov 2016, 2017, 2018). However, the fauna of Mordovia has not yet been fully explored and requires further study.

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