

New Data on the Hoverflies (Diptera, Syrphidae) of the Republic of Mordovia (Russian Federation) with an Updated Checklist of Species

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Abstract—Altogether 158 species of the hoverflies are listed in this report. It includes species recorded for the Republic of Mordovia for the first time (57 spp.), those repeatedly recorded here (61 spp.), and species which are included based on their previous records (40 spp.). Three species are excluded from the previous faunal list as being based on misidentifications, and one species is considered as doubtfully recorded. Thirteen genera—*Baccha* Fabricius, *Brachyopa* Meigen, *Eumerus* Meigen, *Neocnemodon* Goffe, *Lejota* Rondani, *Melangyna* Verrall, *Meligramma* Frey, *Meliscaeva* Frey, *Neoascia* Williston, *Orthonevra* Macquart, *Parasyrphus* Matsumura, *Pipizella* Rondani, and *Scaeva* Fabricius—are reported for the fauna of Mordovia for the first time. The species composition and richness of the state protected areas of Mordovia are discussed. The constancy of the presence of the commonest species in the study area is compared. Reference sources of the literature records from Mordovia are provided for each previously recorded species.

Keywords: new data, Diptera, Syrphidae, Republic of Mordovia, checklist of species

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The hoverflies are one of the largest and widespread families in the order Diptera. Recent estimates indicate that there are over 6100 described species belonging to about 200 genera (Pape et al., 2011). Hoverflies are capable of hovering suspended in one spot for a long time and commonly could be recognized by their jerky flight. They are small to large flies, 4–25 mm long, and greatly diverse in their morphology and environmental requirements. These flies could be totally black or totally pale, but very often they have contrasting markings or fluffy bodies, particularly the abdomen, thus mimicking various groups of stinging Hymenoptera. One of the main diagnostic characters of this diverse family is the wing venation pattern: the apex of the medial vein is strongly bent toward the costal margin and forming an apical cross vein; the presence of a spurious vein between the radial and medial vein branches is also characteristic. Additionally, the asymmetrical genitalia of the Syrphidae are distinctive (Thompson and Rotheray, 1998).

Adults of the family are significant pollinators of many plants including ornamental ones, vegetables, and fruit trees, being one of the few families of Diptera, whose species are feeding exclusively on flowers with the small exceptions (Ssymank and Gilbert, 1993), and pollen is considered as the mandatory food for their females when they are raising eggs (Haslett, 1989). Some species of the hoverflies are dominating insects in many habitats, including an agrarian environment, and composing a corresponding part in the diet of insectivorous birds (Grim, 2006). There are some migrant species among these flies, making it possible to observe their concentrations along the seashores periodically, landing on boats sailing over the seas, and becoming food for marine animals (Schmid, 1999), but there are also much rarer species, with lower dispersal rate, and associated with more special situations (Gilbert, 2005).

The immature stages of this group represent a variable range of feeding modes, and thus, can be found in

a diverse array of habitats, including natural ecosystems and agricultural crops (Freier et al., 2007). It is generally accepted that there are four subfamilies of the hoverflies (Vujić et al., 2013). The subfamily Microdontinae is a small ancient myrmecophylous group of hoverflies with all extant species associated with the wood ants (Reemer, 2013). The subfamily Milesiinae is the largest group of hoverflies that constitutes about two thirds of the family, being the most diverse subfamily in their larval feeding habits including coprophagy, mycetophagy, phytophagy, saproxylophagy or aquatic filter feeding; these habits characterize taxa of lower ranks within this subfamily (Thompson and Rotheray, 1998; Krivosheina and Krivosheina, 2019). The subfamilies Syrphinae and Pipizinae comprise about one third of the family species; only these two subfamilies contain hoverfly species with predatory larvae that prey on a broad range of aphids and other soft-bodied insects. The former subfamily shows preferences to open living and root aphids, while the latter one, to root aphids and gall-inducing groups (Rojo et al., 2003). Both subfamilies were most recently considered as sister groups, and thus, aphidophagous habit of their larvae has evolved only once in the evolutionary history of the hoverflies (Ståhls et al., 2003).

There is no comprehensive revision of the hoverflies from the Russian Federation, but several studies were devoted to faunas of different regions, such as Leningrad (Stackelberg, 1958), Moscow (Zimina, 1957, 1981, 1986), Vologda (Belova et al., 2008), Nizhniy Novgorod (Anufriev and Soshnikov, 1984) and Kirov provinces (Pestov et al., 2010), the Chuvash (Pestov, 2018) and the Komi republics (Pestov, 2010), Krasnodar Territory and the North Caucasus (Skuffin, 1967, 1976; Stackelberg and Richter, 1968; Skuffin and Lysenko, 1975; Zimina, 1976; Kuznetzov and Kustov, 2000), the South Urals (Sorokina and Chashchina, 2003; Sorokina, 2006), the Siberia (Barkalov, 2012; Barkalov and Mutin, 2021), the Republic of Sakha (Yakutia) (Bagachanova, 1990), Chukotka (Barkalov and Mutin, 2015) and Wrangel Island (Barkalov and Khruleva, 2021), Kamchatka (Mutin, 2010; Mutin and Lobkova, 2018), Karaginskii Island (Barkalov et al., 2011), Khabarovsk and Primorskii territories (Mutin et al., 2016; Mutin and Barkalov, 2018; Mutin, 2020, 2021), Bolshoi Shantar Island (Mutin, 2021), Sakhalin and Kuril islands (Mutin and Barkalov, 1997). The most recent study on the hoverflies of Mordovia included 103 species belonging to 44 genera,

which is certainly an incomplete representation of the actual fauna (Chursina and Ruchin, 2018). New data on this diverse group of insects in the Republic of Mordovia are presented herein.

MATERIALS AND METHODS

The material of this study originates from 85 localities, situated in 15 administrative districts and cities of the Republic of Mordovia (68.2%), though largely from the Mordovia State Nature Reserve (Mordovia SNR hereafter) (42 localities, 49.4%), situated in Temnikov District, and from Smolny National Park (Smolny NP hereafter) (15 localities, 12.8%), situated in Ichalki District (Fig. 1; Table 1). The material was collected by the Russian entomologists A.B. Ruchin, G.B. Semishin, M.N. Esin, E.F. Artaeva, S.A. Lukyanov, K.P. Tomkovich, and N.E. Vikhrev, during the years of 2009 and 2014–2021 inclusive. The researchers used conventional entomological nets, pitfall traps, pan traps, beer traps, and a Malaise trap for collection of insects (Golub et al., 2012; Ruchin et al., 2020; Ruchin and Egorov, 2021; Skvarla et al., 2021).

The material was identified by the senior author of this publication mainly following Veen (2004) with minor exceptions (Steenis and Lucas, 2011; Soszyński et al., 2013; Nedeljković et al., 2018). The composition of the hoverfly fauna of the study area was discussed with Chursina and Ruchin (2018). The taxonomy and general distribution of the flies are given based on Haarto and Kerppola (2014), Barkalov and Mutin (2018) and Speight (2018). The taxonomic status of the species of the tribe Pipizini Williston is treated in accordance with Vujić et al. (2013), which is also followed by Barkalov and Mutin (2018). The material description includes complete label data with geographical indication (name of locality), coordinates, dates, and the collector name. All the samples are deposited in the collection of the Mordovia State Nature Reserve (Pusha Village, Republic of Mordovia, Russian Federation).

RESULTS

Altogether 158 species of the hoverflies are listed for Mordovia alphabetically within the subfamilies and genera. New records from the study area are marked with asterisks, and names of the species, which are not present in the material though mentioned in the literature from the study area, are included in square brackets.

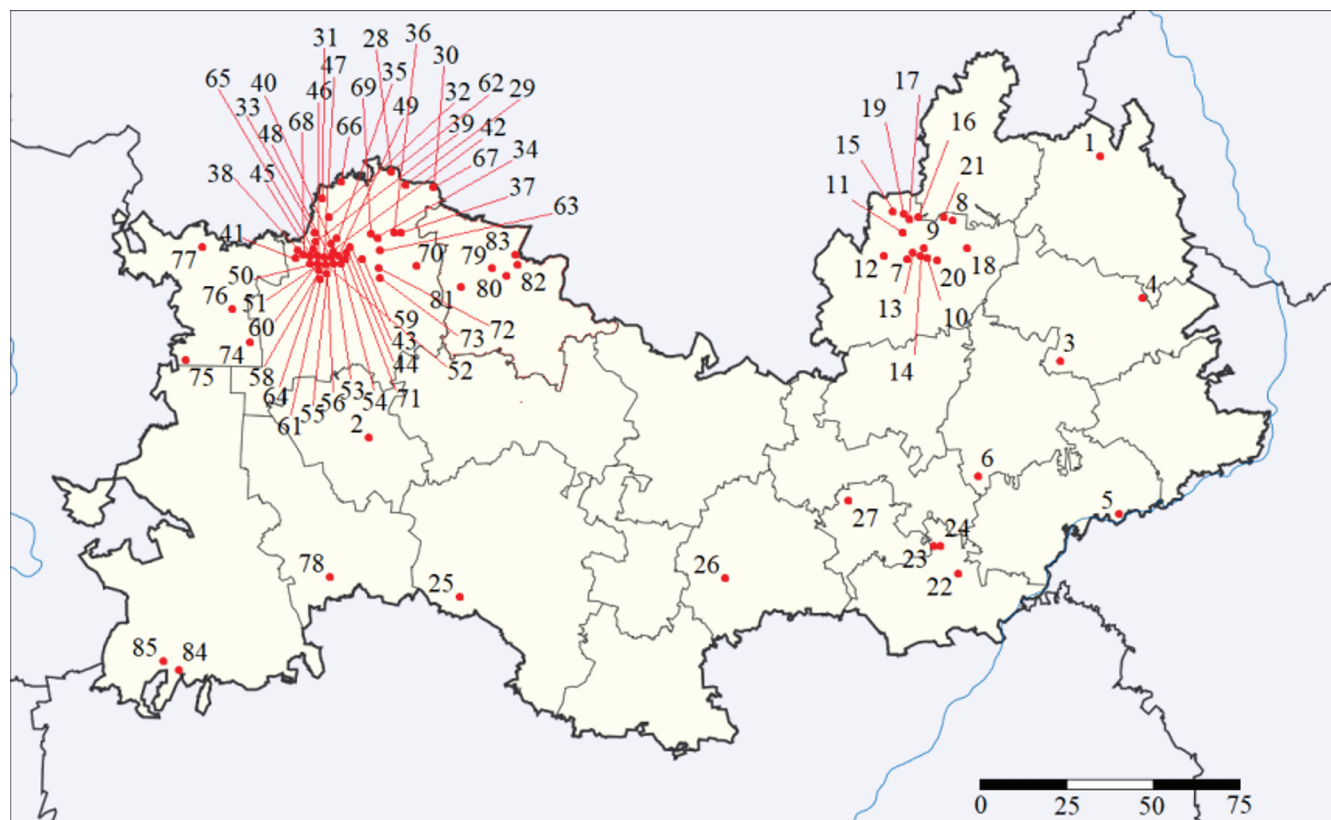


Fig. 1. Administrative map of the Republic of Mordovia showing collecting sites (numbering of the sites corresponds to Table 1). Scale in kilometers.

Names of the localities, dates, numbers of specimens and collector names are given for each species. Reference sources of the previous records from Mordovia and the overall distribution of the species are also provided.

LIST OF RECORDS

Family **SYRPHIDAE** Latreille, 1802

Subfamily **MICRODONTINAE** Rondani, 1845

Genus **MICRODON** Meigen, 1803

Microdon analis (Macquart, 1842)

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q440, 26.V.2018, 1 ♀ (leg. A.B. Ruchin); Taratinskii cordon, 17.V.2019, 1 ♂ (leg. G.B. Semishin). Smolny NP: Rezovatovskii cordon, 9.VI.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern

Africa, Middle Asia, Asiatic Russia to the Pacific coast, and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

****Microdon devius*** (Linnaeus, 1758)

Material. Mordovia SNR: Noven'kovskii cordon, 10.VI.2019, 1 ♂, 1 ♀ (leg. G.B. Semishin). Smolny NP: Selishchinskaya Chashchoba, 12–27.VI.2021, 1 ♂, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Turkey and Asiatic Russia to the Altai-Sayan Region (Barkalov and Mutin, 2018; Speight, 2018).

****Microdon miki*** Doczkal et Schmid, 1999

Material. Mordovia SNR: Q381, 28.V.2018, 1 ♀ (leg. A.B. Ruchin); Q440, 26.V.2018, 1 ♂ (leg. A.B. Ruchin). Smolny NP: Rezovatovskii cordon, 8.VI.2021, 1 ♂ (leg. G.B. Semishin).

Table 1. Details of sampling locations of the hoverflies in the Republic of Mordovia

No.	District/city	Localities	Coordinates (N, E)
1	Ardatovo Distr.	Bolshoye Kuzmino env.	54.9480, 46.0841
2	Atyurievo Distr.	Russkaya Velyazma env.	54.3450, 43.3362
3	Atyashevo Distr.	Russkie Dubrovki env.	54.5181, 45.9145
4	Atyashevo Distr.	Selishchi env.	54.6473, 46.2615
5	Bolshie Berezniki Distr.	Simkino env., Biological Station of the Mordovian State University (= MSU Biostation)	54.1758, 46.1651
6	Chamzinka Distr.	Mokshaley env.	54.2567, 45.6360
7	Ichalki Distr.	Smolny NP, Alatyř health resort	54.7395, 45.3886
8	Ichalki Distr.	Smolny NP, Barakhmanovskoe forestry, Q3	54.8306, 45.5518
9	Ichalki Distr.	Smolny NP, Barakhmanovskoe forestry, Q98	54.7557, 45.4106
10	Ichalki Distr.	Smolny NP, Barakhmanovskoe forestry, Q112	54.7401, 45.4557
11	Ichalki Distr.	Smolny NP, Kemlyanskoe forestry, Q22	54.7936, 45.3584
12	Ichalki Distr.	Smolny NP, Kemlyanskoe forestry, Q87	54.7444, 45.2796
13	Ichalki Distr.	Smolny NP, Kemlyanskoe forestry, Q93	54.7450, 45.3910
14	Ichalki Distr.	Smolny NP, Kemlyanskoe forestry, Q94	54.7448, 45.4052
15	Ichalki Distr.	Smolny NP, Lvovskoe forestry, Q?	54.8438, 45.3151
16	Ichalki Distr.	Smolny NP, Lvovskoe forestry, Q53	54.8337, 45.3990
17	Ichalki Distr.	Smolny NP, Lvovskoe forestry, Q63	54.8276, 45.3788
18	Ichalki Distr.	Smolny NP, Mokrov cordon	54.7585, 45.6119
19	Ichalki Distr.	Smolny NP, Obrezki cordon	54.8344, 45.3782
20	Ichalki Distr.	Smolny NP, Rezovatovskii cordon	54.7399, 45.4736
21	Ichalki Distr.	Smolny NP, Selishchinskaya Chashchoba	54.8331, 45.5319
22	Kochkurovo Distr.	Muran env.	54.0418, 45.5620
23	Kochkurovo Distr.	Napolnaya Tavla env.	54.0958, 45.4461
24	Kochkurovo Distr.	Podlesnaya Tavla env.	54.0971, 45.4804
25	Kovylkino Distr.	Samaevka env.	53.9993, 43.6987
26	Ruzaevka Distr.	Russkoe Baimakovo env.	54.0382, 44.6934
27	Saransk City	Leninskii Distr.	54.1882, 45.1373
28	Temnikov Distr.	Mordovia SNR, Q6	54.9310, 43.4239
29	Temnikov Distr.	Mordovia SNR, Q19	54.8999, 43.4870
30	Temnikov Distr.	Mordovia SNR, Q86	54.8945, 43.6013
31	Temnikov Distr.	Mordovia SNR, Q88	54.8728, 43.1721
32	Temnikov Distr.	Mordovia SNR, Q206	54.8268, 43.2016
33	Temnikov Distr.	Mordovia SNR, Q299	54.7883, 43.1414
34	Temnikov Distr.	Mordovia SNR, Q342	54.7761, 43.3856
35	Temnikov Distr.	Mordovia SNR, Q360	54.7704, 43.2274
36	Temnikov Distr.	Mordovia SNR, Q373	54.7883, 43.4400
37	Temnikov Distr.	Mordovia SNR, Q375	54.7856, 43.4669
38	Temnikov Distr.	Mordovia SNR, Q376	54.7526, 43.0792

Table 1. (Contd.)

No.	District/city	Localities	Coordinates (N, E)
39	Temnikov Distr.	Mordovia SNR, Q381	54.7570, 43.1621
40	Temnikov Distr.	Mordovia SNR, Q384	54.7596, 43.2117
41	Temnikov Distr.	Mordovia SNR, Q401	54.7464, 43.0749
42	Temnikov Distr.	Mordovia SNR, Q409	54.7500, 43.2133
43	Temnikov Distr.	Mordovia SNR, Q413	54.7536, 43.2799
44	Temnikov Distr.	Mordovia SNR, Q421	54.7475, 43.2765
45	Temnikov Distr.	Mordovia SNR, Q422	54.7361, 43.1321
46	Temnikov Distr.	Mordovia SNR, Q424	54.7335, 43.1714
47	Temnikov Distr.	Mordovia SNR, Q425	54.7340, 43.1807
48	Temnikov Distr.	Mordovia SNR, Q426	54.7344, 43.1856
49	Temnikov Distr.	Mordovia SNR, Q427	54.7335, 43.2201
50	Temnikov Distr.	Mordovia SNR, Q435	54.7271, 43.1346
51	Temnikov Distr.	Mordovia SNR, Q436	54.7275, 43.1501
52	Temnikov Distr.	Mordovia SNR, Q438	54.7290, 43.1829
53	Temnikov Distr.	Mordovia SNR, Q440	54.7309, 43.2163
54	Temnikov Distr.	Mordovia SNR, Q441	54.7318, 43.2328
55	Temnikov Distr.	Mordovia SNR, Q447	54.7135, 43.2266
56	Temnikov Distr.	Mordovia SNR, Q448	54.7118, 43.2022
57	Temnikov Distr.	Mordovia SNR, Q449	54.7119, 43.2270
58	Temnikov Distr.	Mordovia SNR, Dolgii Most cordon	54.7480, 43.2010
59	Temnikov Distr.	Mordovia SNR, Drozhdenovskii cordon	54.7340, 43.3100
60	Temnikov Distr.	Mordovia SNR, Inorskii cordon	54.7280, 43.1490
61	Temnikov Distr.	Mordovia SNR, Noven'kii cordon	54.7087, 43.2130
62	Temnikov Distr.	Mordovia SNR, Noven'kovskii cordon	54.9316, 43.4215
63	Temnikov Distr.	Mordovia SNR, Pavlovskii cordon	54.7541, 43.4006
64	Temnikov Distr.	Mordovia SNR, Pushta settl.	54.7191, 43.2236
65	Temnikov Distr.	Mordovia SNR, Pushta settl. env.	54.7490, 43.1551
66	Temnikov Distr.	Mordovia SNR, Srednyaya Melnitsa cordon	54.9018, 43.2327
67	Temnikov Distr.	Mordovia SNR, Steklyannii cordon	54.8940, 43.6010
68	Temnikov Distr.	Mordovia SNR, Taratinskii cordon	54.7451, 43.0864
69	Temnikov Distr.	Mordovia SNR, Zhegalovskii cordon	54.7789, 43.3611
70	Temnikov Distr.	Purdoshki env.	54.7063, 43.5185
71	Temnikov Distr.	Tatarskoe Karaevo env.	54.7030, 43.2360
72	Temnikov Distr.	Zhegalovo env., Nr. 11	54.7076, 43.4051
73	Temnikov Distr.	Zhegalovo env., Nr. 12	54.6989, 43.4106
74	Tengushevo Distr.	Barashevo env., Nr. 19	54.5455, 42.9101
75	Tengushevo Distr.	Dachnyi env.	54.5052, 42.6468
76	Tengushevo Distr.	Khlebino env.	54.6276, 42.8389

Table 1. (Contd.)

No.	District/city	Localities	Coordinates (N, E)
77	Tengushevo Distr.	Tengushevo env., Nr. 24	54.7602, 42.7262
78	Torbeevo Distr.	Kazhlodka env.	54.0371, 43.2120
79	Yelnikovskii Distr.	Alekseevka env.	54.7060, 43.8130
80	Yelnikovskii Distr.	Bolshoi Urkat, Nr. 15	54.6929, 43.8649
81	Yelnikovskii Distr.	Standrovo env.	54.6553, 43.6906
82	Yelnikovskii Distr.	Svobodnyi, Nr. 16	54.7221, 43.9036
83	Yelnikovskii Distr.	Svobodnyi, Nr. 17	54.7424, 43.9032
84	Zubova Polyana Distr.	Marlyai env.	53.8287, 42.6385
85	Zubova Polyana Distr.	Udevo env.	53.8514, 42.5835

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Asiatic Russia to the Pacific coast and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

Microdon mutabilis (Linnaeus, 1758) aggr.

= either *Microdon mutabilis* (Linnaeus, 1758) or *M. mymiae* Schönrogge et al., 2002.

Chursina and Ruchin, 2018, as *Microdon mutabilis* (Linnaeus, 1758).

Material. Mordovia SNR: Q19, 16.VI.2020, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia, Kazakhstan, and Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

Subfamily MILESIINAE Rondani, 1845

Genus *ANASIMYIA* Schiner, 1864

**Anasimyia (Anasimyia) lunulata* (Meigen, 1822)

Material. Mordovia SNR: Inorskii cordon, 16.V.2020, 1 ♀ (leg. G.B. Semishin); Pushta settl. env., 11.V.2015, 1 ♀ (leg. A.B. Ruchin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Transcaucasia, Middle Asia, Asiatic Russia to the

Pacific coast, and Korea; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Anasimyia (Eurimyia) lineata (Fabricius, 1787)

Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q19, 15.VI.2020, 1 ♂, 2 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Asiatic Russia to the Pacific coast and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

[Genus *BLERA* Billberg, 1820]

[*Blera fallax* (Linnaeus, 1758)]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Asiatic Russia to the Pacific coast and Northern China (Barkalov and Mutin, 2018; Speight, 2018).

*Genus *BRACHYOPA* Meigen, 1822

**Brachyopa bicolor* (Fallén, 1817)

Material. Mordovia SNR: Pushta settl., 17.V.2018, 1 ♂ (leg. A.B. Ruchin).

Distribution. Europe from southern Scandinavia and vicinity of St. Petersburg south to the Mediterranean

(Haarto and Kerppola, 2014; Barkalov and Mutin, 2018; Speight, 2018).

**Brachyopa dorsata* Zetterstedt, 1837

Material. Mordovia SNR: Q19, 5.V.2021, 1 ♂ (leg. G.B. Semishin); Inorskii cordon, 11.V.2018, 1 ♂ (leg. G.B. Semishin); Pavlovskii cordon, 7.V.2020, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

**Brachyopa panzeri* Goffe, 1945

Material. Mordovia SNR: Q384, 10.V.2016, 1 ♀ (leg. A.B. Ruchin); Q436, 20.V.2020, 1 ♀ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

[Genus *BRACHYPALPOIDES* Hippa, 1978]

[*Brachypalpoides lentus* (Meigen, 1822)]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia and Turkey (Barkalov and Mutin, 2018; Speight, 2018).

[Genus *CALLICERA* Panzer, 1809]

[*Callicera aenea* (Fabricius, 1781)]

Chursina and Ruchin, 2018.

Distribution. Europe from southern Scandinavia and central part of European Russia south to the Mediterranean; Asiatic Russia to the Pacific coast, China, and Korea (Barkalov and Mutin, 2018; Speight, 2018).

[Genus *CERIANA* Rafinesque, 1815]

[*Ceriana conopsoides* (Linnaeus, 1758)]

Feoktistov, 2011; Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Transcaucasia, Asiatic Russia to East Siberia, and China (Barkalov and Mutin, 2018; Speight, 2018).

Genus *CHALCOSYRPHUS* Curran, 1925

Chalcosyrphus (Xylotina) nemorum (Fabricius, 1805)

Plavilshchikov, 1964; Chursina and Ruchin, 2018.

Material. Dachnyi env., 23–26.VII.2021, 9 ♂ (leg. M.N. Esin). Mordovia SNR: Q86, 14.VI.2020, 1 ♂ (leg. G.B. Semishin); Q447, 26.V.2015, 1 ♂ (leg. A.B. Ruchin); Dolgii Most cordon, 17–20.IX.2020, 2 ♀ (leg. M.N. Esin); Drozhdenovskii cordon, 15.VIII.2018, 1 ♀ (leg. G.B. Semishin); 22–26.IX.2020, 1 ♀ (leg. M.N. Esin); Inorskii cordon, 20.V.2020, 1 ♀ (leg. G.B. Semishin); Noven'kii cordon, 17–22.VII.2020, 1 ♂ (leg. M.N. Esin); Pushta settl., 11.VI.2018, 1 ♂ (leg. G.B. Semishin); Steklyannyi cordon, 18.V.2018, 1 ♀ (leg. G.B. Semishin). Smolny NP: Rezovatovskii cordon, 18.V–5.VI.2021, 1 ♂, 2 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Kazakhstan and Asiatic Russia to the Pacific coast; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

[*Chalcosyrphus (Xylotina) nitidus*
(Portschinsky, 1879)]

Chursina and Ruchin, 2018.

Distribution. Europe from vicinity of St. Petersburg south to Ukraine; Asiatic Russia to the Pacific coast and Northern China (Barkalov and Mutin, 2018; Speight, 2018).

[*Chalcosyrphus (Xylotodes) piger* (Fabricius, 1794)]

Feoktistov, 2011; Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Asiatic Russia to the Pacific coast and Northern China; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Chalcosyrphus (Xylotomima) valgus (Gmelin, 1790)

Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q373, 14–27.V.2020, 1 ♂ (leg. A.B. Ruchin); Inorskii cordon, 20.V.2018, 1 ♂ (leg. G.B. Semishin). Smolny NP: Barakhmanovskoe forestry, Q112, 26.V–28.VI.2020, 2 ♂ (leg. G.B. Semishin); Mokrov cordon, 26.V.2021, 1 ♀ (leg. G.B. Semishin); Rezovatovskii cordon, 20.V–8.VI.2021, 2 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Transcaucasia, Kazakhstan, Asiatic Russia to East Siberia, and Northern China (Barkalov and Mutin, 2018; Speight, 2018).

Genus *CHEILOSIA* Meigen, 1822

[*Cheilosia (Cheilosia) albipila* (Meigen, 1838)]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Kazakhstan and Asiatic Russia to the Altai-Sayan Region (Barkalov and Mutin, 2018; Speight, 2018).

Cheilosia (Cheilosia) albitarsis (Meigen, 1822)

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Bolshoye Kuzmino env., 26.V.2017, 1 ♂ (leg. A.B. Ruchin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Kazakhstan and Asiatic Russia to the Pacific coast; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

[*Cheilosia (Cheilosia) chrysocoma* (Meigen, 1822)]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Asiatic Russia to the Altai-Sayan Region (Barkalov and Mutin, 2018; Speight, 2018).

Cheilosia (Cheilosia) flavipes (Panzer, 1798)

Chursina and Ruchin, 2018.

Material. Mordovia SNR: Steklyannyi cordon, 18.V.2018, 1 ♂ (leg. G.B. Semishin). Smolny NP: Mokrov cordon, 22.V.2021, 1 ♂ (leg. G.B. Semishin); Rezovatovskii cordon, 16.V.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Transcaucasia, Middle Asia, and Asiatic Russia to West Siberia (Barkalov and Mutin, 2018; Speight, 2018).

Cheilosia (Cheilosia) grossa (Fallén, 1817)

Chursina and Ruchin, 2018.

Material. Russkoe Baimakovo env., 26.VI.2017, 1 ♀ (leg. A.B. Ruchin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Middle Asia, and Asiatic Russia to East Siberia; Oriental Region (Speight, 2018).

Cheilosia (Cheilosia) impressa Loew, 1840

Chursina and Ruchin, 2018.

Material. Smolny NP: Mokrov cordon, 22.V.2021, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Middle Asia and Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

Cheilosia (Cheilosia) lasiopa (Kowarz, 1885)

Chursina and Ruchin, 2018.

Material. Smolny NP: Mokrov cordon, 22.V.2021, 1 ♂, 2 ♀ (leg. G.B. Semishin); Rezovatovskii cordon, 18.V.2021, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Kazakhstan, Asiatic Russia to the Altai-Sayan Region, and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

Cheilosia (Cheilosia) latifrons (Zetterstedt, 1843)

= *Cheilosia griseiventris* Loew, 1857; = *Ch. intonsa* Loew, 1857.

Chursina and Ruchin, 2018.

Material. Smolny NP: Mokrov cordon, 22.V.2021, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Turkey, Middle Asia, and Asiatic Russia to West Siberia (Barkalov and Mutin, 2018; Speight, 2018).

Cheilosia (Cheilosia) mutabilis (Fallén, 1817)

Plavilshchikov, 1964; Chursina and Ruchin, 2018.

Material. Smolny NP., Lvovskoe forestry, Q?, 27.VI.2018, 1 ♀ (leg. A.B. Ruchin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Turkey, Transcaucasia, Iran, Kazakhstan, and Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

****Cheilosia (Cheilosia) nebulosa*** (Verrall, 1871)

= *Cheilosia langhofferi* (Becker, 1894).

Chursina and Ruchin (2018), as *Cheilosia brun-nipennis* (Becker, 1894).

Material. Mordovia SNR: Noven'kovskii cordon, 14.V.2020, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to mountainous regions of Southern Europe; Asiatic Russia to the Altai-Sayan Region (Barkalov and Mutin, 2018; Speight, 2018).

Cheilosia (Cheilosia) pagana (Meigen, 1822)

Chursina and Ruchin, 2018.

Material. Smolny NP: Lvovskoe forestry, Q53, 26.V.2018, 1 ♀ (leg. G.B. Semishin); Rezovatovskii cordon, 16.V.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Turkey,

Transcaucasia, Kazakhstan, Asiatic Russia to the Pacific coast, Mongolia, and Northern China (Barkalov and Mutin, 2018; Speight, 2018).

****Cheilosia (Cheilosia) proxima*** (Zetterstedt, 1843)

Material. Smolny NP: Barakhmanovskoe forestry, Q112, 25.V.2020, 1 ♂ (leg. G.B. Semishin); Rezovatovskii cordon, 16–20.V.2021, 2 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Turkey, Middle Asia, Asiatic Russia to the Pacific coast, and Western China (Barkalov and Mutin, 2018; Speight, 2018).

****Cheilosia (Cheilosia) psilophthalma*** (Becker, 1894)

Material. Mordovia SNR: Pavlovskii cordon, 7.V.2020, 2 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean (Barkalov and Mutin, 2018; Speight, 2018).

****Cheilosia (Cheilosia) rufimana*** (Becker, 1894)

Material. Mordovia SNR: Q436, 8.V.2021, 2 ♂ (leg. G.B. Semishin); Q376, 7.VI.2020, 1 ♀ (leg. G.B. Semishin); Inorskii cordon, 16.V.2020, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Kazakhstan and Asiatic Russia to East Siberia (Barkalov and Mutin, 2018; Speight, 2018).

****Cheilosia (Cheilosia) urbana*** (Meigen, 1822)

Material. Mordovia SNR: Q86, 2.V.2021, 1 ♂ (leg. G.B. Semishin); Q206, 27.IV–5.VI.2020, 1 ♂ (leg. M.N. Esin); Inorskii cordon, 12.V.2018, 1 ♂ (leg. G.B. Semishin); Noven'kovskii cordon, 12–18.V.2020, 3 ♂, 3 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Turkey, Iran, and Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

[*Cheilosia (Cheilosia) velutina* Loew, 1840]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Kazakhstan, Asiatic Russia to the Pacific coast, Mongolia, and China (Barkalov and Mutin, 2018; Speight, 2018).

**Cheilosia (Cheilosia) vernalis* (Fallén, 1817)

= *Cheilosia rotundicornis* (Hellén, 1914); = *Ch. rotundiventris* (Becker, 1894).

Chursina and Ruchin, 2018, as *Chrysogaster simplex* Loew, 1843.

Material. Mordovia SNR: Q19, 16.VI.2020, 1 ♀ (leg. G.B. Semishin); 5.V.2021, 1 ♀ (leg. G.B. Semishin); Pavlovskii cordon, 20.IV–9.V.2020, 3 ♂ (leg. G.B. Semishin); Pushta settl., 20–21.IV.2021, 1 ♂ (leg. M.N. Esin); Srednyaya Melnitsa cordon, 4.V.2019, 1 ♀ (leg. G.B. Semishin). Smolny NP: Rezovatovskii cordon, 16.V.2021, 1 ♂ (leg. G.B. Semishin); Barakhmanovskoe forestry, Q112, 26.V.2020, 1 ♀ (leg. G.B. Semishin); Kemlyanskoe forestry, Q87, 26.VI.2020, 1 ♀ (leg. G.B. Semishin); Mokrov cordon, 29.VI–14.VIII.2021, 2 ♀ (leg. G.B. Semishin). Napolnaya Tavla env., 4.VIII.2018, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Turkey, Transcaucasia, Kazakhstan, Asiatic Russia to the Pacific coast, and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

**Cheilosia (Cheilosia) vulpina* (Meigen, 1822)

Material. Smolny NP: Kemlyanskoe forestry, Q94, 8.VI.2018, 1 ♂ (leg. G.B. Semishin); Mokrov cordon, 14.VI.2021, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and central part of European Russia south to the Mediterranean; Iran, Kazakhstan, and Asiatic Russia to West Siberia (Haarto and Kerppola, 2014; Barkalov and Mutin, 2018; Speight, 2018).

?[*Cheilosia (Convocheila) laticornis*
Rondani, 1857]

= *Cheilosia latifacies* Loew, 1857.

Chursina and Ruchin, 2018.

Distribution. Europe from southern Scandinavia and southern part of European Russia south to the Mediterranean; Northern Africa, Israel, Turkey, Transcaucasia, Iran, Kyrgyzstan, and Afghanistan (Barkalov and Mutin, 2018; Speight, 2018).

**Cheilosia (Eucartosyrphus) longula*
(Zetterstedt, 1838)

Material. Mordovia SNR: Q19, 16.VI.2020, 1 ♀ (leg. G.B. Semishin); Q86, 14.VI.2021, 1 ♂ (leg. G.B. Semishin); Q422, 13.VI.2016, 1 ♀ (leg. A.B. Ruchin). Smolny NP: Alatyr health resort, 20.VIII.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Kazakhstan, Asiatic Russia to the Pacific coast, Mongolia, China, and Korea (Barkalov and Mutin, 2018; Speight, 2018).

Cheilosia (Eucartosyrphus) scutellata
(Fallén, 1817)

Chursina and Ruchin, 2018.

Material. Kazhlodka env., 31.VII–04.VIII.2020, 1 ♂ (leg. K.P. Tomkovich and M.N. Esin). Mordovia SNR: Q19, 16.VI.2020, 1 ♀ (leg. G.B. Semishin); Q86, 14.VI.2020, 2 ♂ (leg. G.B. Semishin); Steklyannyi cordon, 8.IX.2019, 1 ♀ (leg. G.B. Semishin). Smolny NP: Alatyr health resort, 20.VIII.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Transcaucasia, Iran, Middle Asia, Asiatic Russia to the Pacific coast, Mongolia, and China (Barkalov and Mutin, 2018; Speight, 2018).

Cheilosia (Floccocheila) illustrata
(Harris, 1780)

Chursina and Ruchin, 2018.

Material. Smolny NP: Kemlyanskoe forestry, Q87, 26.VI.2020, 1 ♂ (leg. G.B. Semishin); Mokrov cordon, 28.VI.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Kazakhstan and Asiatic Russia to West Siberia (Barkalov and Mutin, 2018; Speight, 2018).

Cheilosia (Neocheilosia) morio (Zetterstedt, 1838)

Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q86, 30.IV.2021, 1 ♂ (leg. G.B. Semishin); Q409, 23.IV.2016, 1 ♀ (leg. G.B. Semishin); Steklyannyi cordon, 1.V.2019, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Central Europe; Asiatic Russia to Yakutia, Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

**Cheilosia (Taeniochilosia) pubera*
(Zetterstedt, 1838)

Material. Mordovia SNR: Pushta settl., 19.V.2018, 1 ♀ (leg. G.B. Semishin). Podlesnaya Tavla env., 19.V.2014, 1 ♀ (leg. E.F. Artaeva). Smolny NP: Lvovskoe forestry, Q63, 29.V.2020, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe (Barkalov and Mutin, 2018; Speight, 2018).

[Genus *CHRYSOGASTER* Meigen, 1803]

[Chrysogaster solstitialis (Fallén, 1817)]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa and Transcaucasia (Barkalov and Mutin, 2018; Speight, 2018).

Genus *CRIORHINA* Meigen, 1822

Criorhina (Criorhina) asilica (Fallén, 1816)

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Smolny NP: Selishchinskaya Chashchoba, 12.VI.2021, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean (Barkalov and Mutin, 2018; Speight, 2018).

[Criorhina (Criorhina) ranunculi (Panzer, 1804)]

Feoktistov, 2011; Chursina and Ruchin, 2018.

Distribution. Europe from southern Scandinavia and central part of European Russia south to the Mediterranean (Barkalov and Mutin, 2018; Speight, 2018).

Genus *ERISTALINUS* Rondani, 1845

**Eristalinus (Eristalinus) sepulchralis*
(Linnaeus, 1758)

Material. Russkaya Velyazma env., 2.VIII.2016, 1 ♀ (leg. A.B. Ruchin). Smolny NP: Kemlyanskoe forestry: Q87, 3.VI.2020, 1 ♂ (leg. G.B. Semishin); Q93, 10.VIII.2018, 1 ♂ (leg. G.B. Semishin); Lvovskoe forestry, Q53, 25.V.2018, 1 ♀ (leg. G.B. Semishin). Simkino env., MSU Biostation, 30.VII.2009, 1 ♂ (leg. S.A. Lukyanov).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Syria, Middle Asia, Asiatic Russia to the Pacific coast, China, and Korea; Oriental Region (Barkalov and Mutin, 2018; Speight, 2018).

Eristalinus (Lathyrophthalmus) aeneus
(Scopoli, 1763)

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Russkye Dubrovky env., 30.VI.2018, 1 ♂ (leg. A.B. Ruchin). Smolny NP: Kemlyanskoe forestry, Q93, 25.IV.2019, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, UAE, Syria, Middle Asia, Afghanistan, Asiatic Russia to the Pacific coast, Mongolia, China, and Korea; Afrotropical, Oriental, Australasian and Nearctic regions (Barkalov and Mutin, 2018; Speight, 2018).

Genus *ERISTALIS* Latreille, 1804

[Eristalis (Eoseristalis) abusiva Collin, 1931]

Feoktistov, 2011; Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Central Europe; Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

[*Eristalis (Eoseristalis) alpina* Strobl, 1893]

Chursina and Ruchin, 2018.

Distribution. Europe from Finland south to elevated parts of Southern Europe; Turkey, Middle Asia, Asiatic Russia to the Pacific coast, and Mongolia (Haarto and Kerppola, 2014; Barkalov and Mutin, 2018; Speight, 2018).

[*Eristalis (Eoseristalis) anthophorina* (Fallén, 1817)]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Central Europe; Asiatic Russia to the Pacific coast and Mongolia; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Eristalis (Eoseristalis) arbustorum
(Linnaeus, 1758)

Plavilshchikov, 1964; Chursina and Ruchin, 2018.

Material. Mordovia SNR: Srednyaya Melnitsa cordon, 29.VI.2018, 1 ♂ (leg. G.B. Semishin); Kemyanskoe forestry, Q87, 26.VI.2020, 1 ♂ (leg. G.B. Semishin); Mokrov cordon, 15.VIII.2021, 1 ♂ (leg. G.B. Semishin). Selyshchy env., 30.VI.2018, 1 ♂ (leg. A.B. Ruchin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Middle Asia, Asiatic Russia to the Pacific coast, and Korea; Oriental and Nearctic regions (Barkalov and Mutin, 2018; Speight, 2018).

[*Eristalis (Eoseristalis) cryptarum*
(Fabricius, 1794)]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Asiatic Russia to East Siberia, Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

Eristalis (Eoseristalis) horticola (De Geer, 1776)

= *Eristalis lineata* (Harris, 1776).

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Smolny NP: Rezovatovskii cordon, 6.VI.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Transcaucasia, and Asiatic Russia to the Pacific coast; Oriental Region (Barkalov and Mutin, 2018; Speight, 2018).

[*Eristalis (Eoseristalis) intricaria* (Linnaeus, 1758)]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Middle Asia and Asiatic Russia to East Siberia (Barkalov and Mutin, 2018; Speight, 2018).

Eristalis (Eoseristalis) nemorum (Linnaeus, 1758)

= *Eristalis interrupta* (Poda, 1761).

Plavilshchikov, 1964; Antsiferova and Dobromyslov, 1966; Chursina and Ruchin, 2018.

Material. Mordovia SNR: Noven'kii cordon, 17–22.VII.2020, 2 ♀ (leg. M.N. Esin). Smolny NP: Kemyanskoe forestry: Q22, 11.VIII.2018, 1 ♀ (leg. A.B. Ruchin); Q87, 27.VI.2020, 1 ♂, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Turkey, Middle Asia, Asiatic Russia to the Pacific coast, and Mongolia; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

**Eristalis (Eoseristalis) obscura* Loew, 1866

= *Eristalis pseudorupium* Kanervo, 1938; = *E. vitripennis* auctt. (nec Strobl, 1893).

Material. Mordovia SNR: Zhegalovskii cordon, 28.VII.2018, 1 ♀ (leg. A.B. Ruchin). Smolny NP: Rezovatovskii cordon, 6.VI.2021, 1 ♂, 4 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to northern parts of Central Europe; Middle Asia and Asiatic Russia to the Pacific coast; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

**Eristalis (Eoseristalis) oestracea* (Linnaeus, 1758)

Chursina and Ruchin, 2018, as *Mallota tricolor* Loew, 1871.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of southern Europe; Kazakhstan and Asiatic Russia to East Siberia; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Eristalis (Eoseristalis) rupium (Fabricius, 1805)

Plavilshchikov, 1964; Chursina and Ruchin, 2018.

Material. Smolny NP: Rezovatovskii cordon, 6.VI.2021, 2 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Turkey, Asiatic Russia to the Pacific coast, and Mongolia; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Eristalis (Eristalis) tenax (Linnaeus, 1758)

Plavilshchikov, 1964; Chursina and Ruchin, 2018.

Material. Khlebino env., 10–14.IX.2020, 1 ♀ (leg. M.N. Esin). Saransk City, Leninskii Distr., 11.VII.2018, 1 ♀ (leg. S.A. Lukyanov). Mordovia SNR: Dolgii Most cordon, 17–20.IX.2020, 1 ♂ (leg. M.N. Esin); Srednyaya Melnitsa cordon, 29.VI.2018, 1 ♀ (leg. G.B. Semishin). Selyshchy env., 30.VI.2018, 2 ♂, 2 ♀ (leg. A.B. Ruchin). Smolny NP: Mokrov cordon, 14–15.VIII.2021, 2 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; considerable part of the Palaearctic from Northern Africa to the Pacific coast; other zoogeographical regions except for the Antarctic (Barkalov and Mutin, 2018; Speight, 2018).

*Genus *EUMERUS* Meigen, 1822

**Eumerus flavitarsis* Zetterstedt, 1843

Material. Barashevo env., Nr. 19, 30.VIII–3.IX.2020, 1 ♀ (leg. M.N. Esin). Mordovia SNR: Dolgii Most cordon, 17–20.IX.2020, 1 ♂, 1 ♀ (leg. M.N. Esin). Purdozhki env., 21–24.VIII.2020, 1 ♂ (leg. M.N. Esin). Zhegalovo env., Nr. 12, 21–24.VIII.2020, 1 ♀ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Middle Asia and Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

Genus *FERDINANDEA* Rondani, 1844

Ferdinandea cuprea (Scopoli, 1763)

Chursina and Ruchin, 2018, as *Myolepta vara* (Panzer, 1798), partim.

Material. Marlyai env., 15–28.V.2020, 2 ♂, 1 ♀ (leg. A.B. Ruchin). Mokshaley env., 28.VII.2018, 1 ♀ (leg. A.B. Ruchin). Mordovia SNR: Q424, 6–18.IX.2019, 1 ♀ (leg. A.B. Ruchin); Q425, 3–20.VIII.2019, 1 ♀ (leg. A.B. Ruchin); Q435, 10–14.VII.2019, 1 ♂ (leg. A.B. Ruchin); 26.VIII–6.IX.2019, 2 ♀ (leg. A.B. Ruchin); Q342, 27.V–6.VI.2020, 1 ♂ (leg. A.B. Ruchin); Q424, 11–17.X.2019, 1 ♀ (leg. A.B. Ruchin); Q427, 14–24.V.2019, 1 ♀ (leg. A.B. Ruchin); Taratinskii cordon, 27–29.VI.2020, 1 ♀ (leg. K.P. Tomkovich). Muran env., 26.VII.2018, 1 ♀ (leg. A.B. Ruchin). Udevo env., 9.VIII.2018, 1 ♀ (leg. A.B. Ruchin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Turkey, and Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

**Ferdinandea ruficornis* (Fabricius, 1775)

Material. Mordovia SNR: Q375, 14–27.V.2020, 2 ♀ (leg. A.B. Ruchin); 27.V–6.VI.2020, 1 ♀ (leg. A.B. Ruchin); Q424, 23.VII–3.VIII.2019, 1 ♀ (leg. A.B. Ruchin); Q426, 24.VI–2.VII.2019, 1 ♀ (leg. A.B. Ruchin); 6–18.IX.2019, 1 ♀ (leg. A.B. Ruchin); 18.IX–2.X.2019, 1 ♀ (leg. A.B. Ruchin); Q435, 6–14.V.2019, 1 ♀ (leg. A.B. Ruchin); 14–24.V.2019, 2 ♀ (leg. A.B. Ruchin); 24.V–4.VI.2019, 1 ♀ (leg. A.B. Ruchin).

A.B. Ruchin); 11–24.VI.2019, 1 ♀ (leg. A.B. Ruchin); 2–10.VII.2019, 1 ♀ (leg. A.B. Ruchin); 3–20.VIII.2019, 1 ♀ (leg. A.B. Ruchin); Noven'kovskii cordon, 12.V.2020, 1 ♀ (leg. G.B. Semishin). Samaevka env., 31.VII–4.VIII.2020, 1 ♀ (leg. K.P. Tomkovich and M.N. Esin).

Distribution. Europe from Denmark south to the Mediterranean; Uzbekistan, Asiatic Russia to the Pacific coast, and Northern China (Barkalov and Mutin, 2018; Speight, 2018).

Genus *HAMMERSCHMIDTIA* Schummel, 1834

Hammerschmidtia ferruginea (Fallén, 1817)

Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q413, 12.VI.2016, 1 ♂ (leg. A.B. Ruchin); Noven'kii cordon, 24.VI.2020, 1 ♀ (leg. K.P. Tomkovich).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Transcaucasia and Asiatic Russia to the Pacific coast; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Genus *HELOPHILUS* Meigen, 1822

[*Helophilus affinis* Wahlberg, 1844]

Feoktistov, 2011; Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to northern parts of Central Europe; Asiatic Russia to the Pacific coast and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

Helophilus hybridus Loew, 1846

Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q299, 16.VIII.2020, 1 ♀ (leg. A.B. Ruchin). Smolny NP: Rezovatovskii cordon, 16–18.V.2021, 1 ♂, 1 ♀ (leg. G.B. Semishin). Zhegalovo env., Nr. 11, 21–24.VIII.2020, 1 ♂ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Central Europe; Asiatic Russia to the Pacific coast and Mongolia;

Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Helophilus pendulus (Linnaeus, 1758)

Plavilshchikov, 1964; Antsiferova and Dobromyslov, 1966; Chursina and Ruchin, 2018.

Material. Bolshoi Urkat, Nr. 15, 21–24.VIII.2020, 1 ♂, 1 ♀ (leg. M.N. Esin). Dachnyi env., 23–26.VII.2021, 2 ♂ (leg. M.N. Esin). Mordovia SNR: Q86, 14.VI.2020, 1 ♀ (leg. G.B. Semishin); Dolgii Most cordon, 17–20.IX.2020, 1 ♂, 1 ♀ (leg. M.N. Esin); Noven'kovskii cordon, 14.V.2020, 2 ♀ (leg. G.B. Semishin). Smolny NP: Mokrov cordon, 15.VIII.2021, 1 ♀ (leg. G.B. Semishin). Svobodnyi: Nr. 16, 21–24.VIII.2020, 2 ♂, 1 ♀ (leg. M.N. Esin); Nr. 17, 21–24.VIII.2020, 1 ♀ (leg. M.N. Esin). Zhegalovo env., Nr. 11, 21–24.VIII.2020, 4 ♂, 6 ♀ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Iran, Middle Asia, Afghanistan, Asiatic Russia to the Pacific coast, and China (Barkalov and Mutin, 2018; Speight, 2018).

Helophilus trivittatus (Fabricius, 1805)

= *Helophilus parallelus* (Harris, 1776).

Chursina and Ruchin, 2018.

Material. Smolny NP: Rezovatovskii cordon, 3.VII.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Iran, Middle Asia, Afghanistan, Asiatic Russia to the Pacific coast, and China (Barkalov and Mutin, 2018; Speight, 2018).

*Genus *LEJOTA* Rondani, 1857

**Lejota ruficornis* (Zetterstedt, 1843)

Material. Mordovia SNR: Noven'kovskii cordon, 14.V.2020, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

[Genus *MALLOTA* Meigen, 1822]

[*Mallota megilliformis* (Fallén, 1817)]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Central Europe; Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

[*Mallota rossica* Portschiński, 1877]

Chursina and Ruchin, 2018.

Distribution. Europe to central part of European Russia in the east; Iran, Kyrgyzstan, Asiatic Russia to the Pacific coast, Mongolia, Northern China, and Korea (Barkalov and Mutin, 2018; Speight, 2018).

[*Mallota tricolor* Loew, 1871]

Feoktistov, 2011; Chursina and Ruchin, 2018: misidentification, see under *Eristalis* (*Eoseristalis*) *oestracea* (Linnaeus, 1758).

Distribution. Northern part of Central Europe and European Russia; Turkey, Asiatic Russia to the Pacific coast, Mongolia, China, and Korea (Barkalov and Mutin, 2018; Speight, 2018).

Genus *MYATHROPA* Rondani, 1845

Myathropa florea (Linnaeus, 1758)

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Dachnyi env., 23–26.VII.2021, 1 ♀ (leg. M.N. Esin). Mordovia SNR: Q6, 7.VII.2020, 1 ♂ (leg. G.B. Semishin); Q19, 15–16.VI.2020, 2 ♂, 5 ♀ (leg. G.B. Semishin). Smolny NP: Rezovatovskii cordon, 6.VI.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Middle Asia, Afghanistan, and Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

*Genus *NEOASCIA* Williston, 1886

**Neoascia* (*Neoascia*) *podagrica* (Fabricius, 1775)

Material. Tengushevo env., Nr. 24, 10–14.IX.2020, 1 ♀ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Israel, Turkey, Transcaucasia, and Asiatic Russia to the Altai-Sayan Region (Barkalov and Mutin, 2018; Speight, 2018).

**Neoascia* (*Neoascia*) *tenur* (Harris, 1780)

Material. Alekseevka env., 13–16.VII.2021, 1 ♂, 3 ♀ (leg. M.N. Esin). Mordovia SNR: Q206, 27.IV–5.VI.2020, 1 ♂ (leg. M.N. Esin); Q449, 18.V.2020, 1 ♀ (leg. N.E. Vikhrev); Noven'kii cordon, 15–17.VII.2020, 1 ♀ (leg. M.N. Esin); 17–22.VII.2020, 2 ♂ (leg. M.N. Esin). Smolny NP: Mokrov cordon, 22.V–29.VI.2021, 2 ♂, 4 ♀ (leg. G.B. Semishin); Obrezki cordon, 17.VI.2018, 1 ♀ (leg. G.B. Semishin); Rezovatovskii cordon, 16.V.2021, 2 ♀ (leg. G.B. Semishin). Standrovo env., 13–16.VII.2021, 1 ♂ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Turkey, Middle Asia, Asiatic Russia to the Pacific coast, Mongolia, and China (Barkalov and Mutin, 2018; Speight, 2018).

**Neoascia* (*Neoasciella*) *geniculata* (Meigen, 1822)

Material. Smolny NP: Mokrov cordon, 22.V.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Central Europe; Middle Asia, Asiatic Russia to the Pacific coast, and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

**Neoascia* (*Neoasciella*) *interrupta* (Meigen, 1822)

Material. Smolny NP: Kemlyanskoe forestry, Q87, 3.VI.2020, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Transcaucasia and Asiatic Russia to West Siberia (Barkalov and Mutin, 2018; Speight, 2018).

**Neoascia (Neoasciella) meticulosa* (Scopoli, 1763)

Material. Mordovia SNR: Q360, 27.V.2016, 1 ♀ (leg. A.B. Ruchin); Dolgii Most cordon, 21.V.2020, 1 ♂ (leg. G.B. Semishin). Smolny NP: Rezovatovskii cordon, 16.V.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Transcaucasia, Kazakhstan, Asiatic Russia to the Altai-Sayan Region, and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

*Genus *ORTHONEVRA* Macquart, 1829

**Orthonevra brevicornis* (Loew, 1843)

Material. Mordovia SNR: Inorskii cordon, 16.V.2020, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Denmark south to elevated parts of Southern Europe; Turkey, Transcaucasia, and Asiatic Russia to West Siberia (Barkalov and Mutin, 2018; Speight, 2018).

[Genus *PARHELOPHILUS* Girschner, 1897]

[*Parhelophilus frutetorum* (Fabricius, 1775)]

Feoktistov, 2011; Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia, Kazakhstan, and Asiatic Russia to East Siberia (Barkalov and Mutin, 2018; Speight, 2018).

[Genus *PSARUS* Latreille, 1804]

[*Psarus abdominalis* (Fabricius, 1794)]

Chursina and Ruchin, 2018.

Distribution. Europe from southern Scandinavia and central part of European Russia south to Central and Southeastern Europe; Turkey (Barkalov and Mutin, 2018; Speight, 2018).

Genus *RHINGIA* Scopoli, 1763

Rhingia campestris Meigen, 1822

Chursina and Ruchin, 2018.

Material. Mordovia SNR: Inorskii cordon, 17–20.V.2021, 1 ♀ (leg. A.B. Ruchin); Noven'kovskii cordon, 29.V.2019, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia, Asiatic Russia to the Pacific coast, and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

Genus *SERICOMYIA* Meigen, 1803

Sericomyia silentis (Harris, 1776)

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Dachnyi env., 23–26.VII.2021, 1 ♂ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Transcaucasia and Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

[Genus *SPHECOMYIA* Latreille, 1829]

[*Sphecomyia vespiformis* (Gorski, 1852)]

Feoktistov, 2011; Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to northern Poland; Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

[Genus *SPILOMYIA* Meigen, 1803]

[*Spilomyia diophthalma* (Linnaeus, 1758)]

Feoktistov, 2011; Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Northern Africa, Turkey, Transcaucasia, Kazakhstan, Asiatic Russia to the Pacific coast, and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

Genus *SYRITTA* Le Peletier et Serville, 1828

Syritta pipiens (Linnaeus, 1758)

Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q19, 14.VI.2020, 1 ♂ (leg. G.B. Semishin); Q86, 14.VI.2020, 2 ♂ (leg. G.B. Semishin); Srednyaya Melnitsa cordon, 18.VIII.2018, 2 ♀ (leg. G.B. Semishin); Steklyannyi cordon, 17.VIII.2018, 1 ♂ (leg. G.B. Semishin). Smolny NP: Alaty health resort, 20.VIII.2021, 1 ♂ (leg. G.B. Semishin); Kemlyanskoe forestry, Q87, 31.VII.2019, 1 ♂ (leg. G.B. Semishin); Mokrov cordon, 15.VI.2021, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; considerable part of the Palaearctic from Northern Africa to the Pacific coast; Oriental, Nearctic, and Neotropical regions (Barkalov and Mutin, 2018; Speight, 2018).

Genus *TEMNOSTOMA* Le Peletier et Serville, 1828

Temnostoma (Temnostoma) bombylans
(Fabricius, 1805)

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q19, 16.VI.2020, 1 ♀ (leg. G.B. Semishin); Pushta settl., 5.VI.2020, 1 ♀ (leg. A.B. Ruchin). Smolny NP: Rezovatovskii cordon, 5.VI.2021, 1 ♂, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from southern Scandinavia and central part of European Russia south to the European Mediterranean and Northern Africa; this species is unknown to the east of the Urals (Barkalov and Mutin, 2018; Speight, 2018).

Temnostoma (Temnostomoides) apiforme
(Fabricius, 1794)

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q441, 6.VI.2020, 1 ♂ (leg. A.B. Ruchin). Smolny NP: Rezovatovskii cordon, 5.VI.2021, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Central Europe; Asiatic Russia to the Pacific coast and Korea (Barkalov and Mutin, 2018; Speight, 2018).

**Temnostoma (Temnostomoides) sericomylaeforme*
(Portschinsky, 1886)

Material. Mordovia SNR: Q424, 11–24.VI.2019, 1 ♀ (leg. A.B. Ruchin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to Denmark, northern Poland (Barkalov and Mutin, 2018; Speight, 2018; Żóralski and Mielczarek, 2018).

Temnostoma (Temnostomoides) vespiforme
(Linnaeus, 1758)

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q421, 29.V.2015, 1 ♀ (leg. A.B. Ruchin); Q440, 26.VI.2020, 1 ♂ (leg. A.B. Ruchin). Smolny NP: Rezovatovskii cordon, 5.VI.2021, 1 ♂ (leg. G.B. Semishin); Selishchinskaya Chashchoba, 12.VI.2021, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Transcaucasia, Kazakhstan, Asiatic Russia to the Pacific coast, and Korea; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Genus *VOLUCELLA* Geoffroy, 1762

Volucella bombylans (Linnaeus, 1758)

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q6, 6.VII.2020, 2 ♀ (leg. G.B. Semishin); Q86, 12.VI.2020, 1 ♂ (leg. G.B. Semishin); Noven'kovskii cordon, 30.V.2019, 1 ♂ (leg. G.B. Semishin). Selyshchy env., 30.VI.2018, 1 ♂, 1 ♀ (leg. A.B. Ruchin). Smolny NP: Rezovatovskii cordon, 5–9.VI.2021, 2 ♂, 1 ♀ (leg. G.B. Semishin); Selishchinskaya Chashchoba, 11.VI.2021, 2 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia, Middle Asia, Asiatic Russia to the Pacific coast, and China; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Volucella inanis (Linnaeus, 1758)

Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q88, 18.VII.2020, 1 ♀ (leg. A.B. Ruchin); Noven'kovskii cordon, 4–7.VII.2020, 1 ♂ (leg. K.P. Tomkovich).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Syria, Turkey, Middle Asia, Afghanistan, Asiatic Russia to the Pacific coast, Mongolia, and China (Barkalov and Mutin, 2018; Speight, 2018).

[*Volucella inflata* (Fabricius, 1794)]

Chursina and Ruchin, 2018.

Distribution. Europe from southern Scandinavia and central part of European Russia south to the Mediterranean; Transcaucasia (Barkalov and Mutin, 2018; Speight, 2018).

Volucella pellucens (Linnaeus, 1758)

Plavilshchikov, 1964; Ruchin et al., 2007; Ruchin, 2008; Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q19, 15–16.VI.2020, 3 ♂, 1 ♀ (leg. G.B. Semishin); Q401, 7.VI.2020, 1 ♂ (leg. A.B. Ruchin); Steklyannyi cordon, 10–15.VI.2020, 1 ♀ (leg. G.B. Semishin). Smolny NP: Kemlyanskoe forestry, Q87, 26.VI.2020, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Transcaucasia, Middle Asia, Asiatic Russia to the Pacific coast, Mongolia, and China; Oriental Region (Barkalov and Mutin, 2018; Speight, 2018).

Genus *XYLOTA* Meigen, 1822

[*Xylota abiens* Meigen, 1822]

Chursina and Ruchin, 2018.

Distribution. Europe from Denmark south to elevated parts of Southern Europe; Transcaucasia, Kazakhstan, Asiatic Russia to the Pacific coast, and Korea (Barkalov and Mutin, 2018; Speight, 2018).

Xylota florum (Fabricius, 1805)

Chursina and Ruchin, 2018.

Material. Dachnyi env., 23–26.VII.2021, 1 ♂ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia and Asiatic Russia to East Siberia (Barkalov and Mutin, 2018; Speight, 2018).

Xylota segnis (Linnaeus, 1758)

Plavilshchikov, 1964; Chursina and Ruchin, 2018.

Material. Mordovia SNR: Noven'kovskii cordon, 4–7.VII.2020, 1 ♀ (leg. K.P. Tomkovich). Svobodnyi, Nr. 17, 21–24.VIII.2020, 1 ♀ (leg. M.N. Esin). Zhegalovo env., Nr. 12, 21–24.VIII.2020, 1 ♀ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Transcaucasia, Kazakhstan, Afghanistan, Asiatic Russia to the Pacific coast, and China; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Xylota sylvarum (Linnaeus, 1758)

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Dachnyi env., 23–26.VII.2021, 1 ♀ (leg. M.N. Esin). Mordovia SNR: Steklyannyi cordon, 17.VIII.2018, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Turkey, Middle Asia, and Asiatic Russia to East Siberia (Barkalov and Mutin, 2018; Speight, 2018).

Xylota tarda Meigen, 1822

Chursina and Ruchin, 2018.

Material. Smolny NP: Selishchinskaya Chashchoba, 11.VI.2021, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia, Kazakhstan, Asiatic Russia to the Pacific coast, and China (Barkalov and Mutin, 2018; Speight, 2018).

[*Xylota triangularis* Zetterstedt, 1838]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Central Europe; Asiatic Russia to the Pacific coast and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

Subfamily PIPIZINAE Williston, 1885

*Genus *NEOCNEMODON* Goffe, 1944

**Neocnemodon pubescens*

(Delucchi et Pschorn-Walcher, 1955)

Material. Mordovia SNR: Noven'kovskii cordon, 14.V.2020, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Central Europe; Asiatic Russia to the Pacific coast; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

**Neocnemodon vitripennis* (Meigen, 1822)

Material. Mordovia SNR: Dolgii Most cordon, 21.V.2020, 1 ♂ (leg. G.B. Semishin); Drozhdenovskii cordon, 22–26.IX.2020, 1 ♀ (leg. M.N. Esin). Tengushevo env., Nr. 24, 10–14.IX.2020, 1 ♀ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Central Europe; Asiatic Russia to the Pacific coast, Mongolia, and China (Barkalov and Mutin, 2018; Speight, 2018).

Genus *PIPIZA* Fallén, 1810

**Pipiza austriaca* Meigen, 1822

Material. Mordovia SNR: Noven'kovskii cordon, 29.VII.2018, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Kazakhstan, Asiatic Russia to the Pacific coast, and Korea (Barkalov and Mutin, 2018; Speight, 2018).

[*Pipiza lugubris* (Fabricius, 1775)]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Middle Asia, Asiatic Russia to the Pacific coast,

and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

Pipiza noctiluca (Linnaeus, 1758)

Chursina and Ruchin, 2018.

Material. Kazhlodka env., 31.VII.2020, 1 ♀ (leg. A.B. Ruchin). Smolny NP: Kemlyanskoe forestry, Q87, 26.VI.2020, 1 ♀ (leg. G.B. Semishin); Lvovskoe forestry, Q63, 5.VII.2018, 1 ♂ (leg. G.B. Semishin); Mokrov cordon, 24.V–28.VI.2021, 3 ♀ (leg. G.B. Semishin); Rezovatovskii cordon, 16.V.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Asiatic Russia to East Siberia (Barkalov and Mutin, 2018; Speight, 2018).

**Pipiza notata* Meigen, 1822

= *Pipiza bimaculata* Meigen, 1822.

Material. Khlebino env., 10–14.IX.2020, 1 ♀ (leg. M.N. Esin). Mordovia SNR: Q86, 14.VI.2020, 1 ♂ (leg. G.B. Semishin). Smolny NP: Lvovskoe forestry, Q63, 29.V.2020, 1 ♀ (leg. G.B. Semishin); Kemlyanskoe forestry, Q94, 8.VI.2018, 1 ♀ (leg. A.B. Ruchin); Mokrov cordon, 25.V.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Middle Asia, Asiatic Russia to the Pacific coast, and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

*Genus *PIPIZELLA* Rondani, 1856

**Pipizella viduata* (Linnaeus, 1758)

Material. Mordovia SNR: Q86, 14.VI.2020, 1 ♂, 1 ♀ (leg. G.B. Semishin). Smolny NP: Barakhmanovskoe forestry, Q112, 28.VI.2020, 1 ♀ (leg. G.B. Semishin); Rezovatovskii cordon, 16.V.2021, 1 ♀ (leg. G.B. Semishin). Zhegalovo env., Nr. 11, 21–24.VIII.2020, 1 ♂, 1 ♀ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Middle Asia, Asiatic Russia to the Pacific coast, and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

**Pipizella virens* (Fabricius, 1805)

Material. Mordovia SNR: Q86, 14.VI.2020, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia and Iran (Barkalov and Mutin, 2018; Speight, 2018).

Genus *TRICHOPSOMYIA* Williston, 1888

Trichopsomyia flavitarsis (Meigen, 1822)

Chursina and Ruchin, 2018.

Material. Smolny NP: Mokrov cordon, 13.VI.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Kazakhstan, Asiatic Russia to the Pacific coast, and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

Subfamily SYRPHINAE Latreille, 1802

*Genus *BACCHA* Fabricius, 1805**Baccha elongata* (Fabricius, 1775)

= *Baccha obscuripennis* Meigen, 1822.

Material. Dachnyi env., 23–26.VII.2021, 1 ♀ (leg. M.N. Esin). Mordovia SNR: Q421, 22–26.IX.2020, 2 ♀ (leg. M.N. Esin); Q449, 31.VIII.2020, 2 ♀ (leg. M.N. Esin). Smolny NP: Rezovatovskii cordon, 16.V.2021, 1 ♂, 2 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Middle Asia, Asiatic Russia to the Pacific coast, and Mongolia; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Genus *CHRYSTOXUM* Meigen, 1803

Chrysotoxum bicinctum (Linnaeus, 1758)

Plavilshchikov, 1964; Chursina and Ruchin, 2018.

Material. Barashevo env., Nr. 19, 30.VIII–3.IX.2020, 1 ♀ (leg. M.N. Esin). Smolny NP: Alatyry

health resort, 20.VIII.2021, 1 ♀ (leg. G.B. Semishin); Selishchinskaya Chashchoba, 11.VI.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Turkey, Middle Asia, and Asiatic Russia to the Altai-Sayan Region (Barkalov and Mutin, 2018; Speight, 2018).

Chrysotoxum festivum (Linnaeus, 1758)

Plavilshchikov, 1964; Antsiferova and Dobromyslov, 1966; Chursina and Ruchin, 2018.

Material. Kazhodka env., 31.VII–4.VIII.2020, 1 ♀ (leg. K.P. Tomkovich and M.N. Esin). Mordovia SNR: Q19, 15.VI.2020, 1 ♀ (leg. G.B. Semishin); Q436, 16.VIII.2020, 1 ♀ (leg. A.B. Ruchin); Q447, 10.VI.2020, 1 ♂ (leg. G.B. Semishin). Smolny NP: Mokrov cordon, 13.VI.2021, 1 ♂ (leg. G.B. Semishin); Obrezki cordon, 17.VI.2018, 1 ♂ (leg. G.B. Semishin); Selishchinskaya Chashchoba, 12.VI.2021, 1 ♂ (leg. G.B. Semishin). Svobodny, Nr. 16, 21–24.VIII.2020, 1 ♀ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Turkey, Middle Asia, Asiatic Russia to the Pacific coast, Mongolia, and Korea; Oriental Region (Barkalov and Mutin, 2018; Speight, 2018).

[*Chrysotoxum octomaculatum* Curtis, 1831]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Armenia, Kazakhstan, and Asiatic Russia to the Altai-Sayan Region (Barkalov and Mutin, 2018; Speight, 2018).

**Chrysotoxum vernale* Loew, 1841

Material. Smolny NP: Mokrov cordon, 22.V.2021, 1 ♀ (leg. G.B. Semishin); Rezovatovskii cordon, 4.VI.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia, Iran, Middle Asia, and Asiatic Russia to East Siberia (Barkalov and Mutin, 2018; Speight, 2018).

[*Chrysotoxum verralli* Collin, 1940]

Chursina and Ruchin, 2018.

Distribution. Europe from Denmark south to elevated parts of Southern Europe; Transcaucasia and Asiatic Russia to East Siberia (Barkalov and Mutin, 2018; Speight, 2018).

Genus *DASYSYRPHUS* Enderlein, 1938

**Dasysyrphus hilaris* (Zetterstedt, 1843)

Material. Mordovia SNR: Q438, 10.V.2019, 1 ♂ (leg. A.B. Ruchin); Inorskii cordon, 16.V.2020, 2 ♂ (leg. G.B. Semishin). Smolny NP: Rezovatovskii cordon, 19.V.2021, 2 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Central Europe; Asiatic Russia to the Pacific coast and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

Dasysyrphus neovenustus

Soszyński et Mielczarek, 2013

= *Dasysyrphus venustus* (Meigen, 1822).

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Mordovia SNR: Noven'kovskii cordon, 12–14.V.2020, 2 ♂, 3 ♀ (leg. G.B. Semishin); Pushta settl., 9.V.2009, 1 ♂ (leg. A.B. Ruchin); 17.V.2018, 1 ♀ (leg. A.B. Ruchin); 7.VI.2020, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia, Asiatic Russia to the Pacific coast, and Mongolia; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

**Dasysyrphus pauxillus* (Williston, 1887)

Material. Mordovia SNR: Q427, 25.IV–6.V.2020, 1 ♂ (leg. A.B. Ruchin); Pavlovskii cordon, 6.V.2020, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Asiatic Russia to East Siberia; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Dasysyrphus tricoloratus (Fallén, 1817)

Chursina and Ruchin, 2018.

Material. Mordovia SNR: Noven'kovskii cordon, 14.V.2020, 1 ♂, 1 ♀ (leg. G.B. Semishin). Purdozhki env., 21–24.VIII.2020, 1 ♂ (leg. M.N. Esin). Smolny NP: Alatyr health resort, 21.VIII.2021, 1 ♀ (leg. G.B. Semishin); Lvovskoe forestry, Q63, 23.VIII.2018, 1 ♀ (leg. G.B. Semishin); Rezovatovskii cordon, 6–8.VI.2021, 1 ♂, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia, Middle Asia, Asiatic Russia to the Pacific coast, Mongolia, and Korea (Barkalov and Mutin, 2018; Speight, 2018).

**Dasysyrphus venustus* auctt. (nec Meigen, 1822)

= *Dasysyrphus* sp. (unnamed species of the *D. venustus* (Meigen, 1822) group).

Material. Mordovia SNR: Inorskii cordon, 16.V.2020, 1 ♀ (leg. G.B. Semishin); Noven'kovskii cordon, 12.V.2020, 1 ♂ (leg. G.B. Semishin); Pavlovskii cordon, 9.V.2020, 1 ♂ (leg. G.B. Semishin). Smolny NP: Barakhmanovskoe forestry, Q112, 26.V.2020, 2 ♀ (leg. G.B. Semishin).

Distribution. Needs clarification due to confusion with a similar species, *D. neovenustus* (Soszyński et al., 2013).

Genus *DIDEA* Macquart, 1834

**Didea fasciata* Macquart, 1834

Material. Mordovia SNR: Q19, 16.VI.2020, 1 ♀ (leg. G.B. Semishin); Dolgii Most cordon, 17–20.IX.2020, 1 ♀ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia, Asiatic Russia to the Pacific coast, and Korea; Oriental and Nearctic regions (Barkalov and Mutin, 2018; Speight, 2018).

[*Didea intermedia* (Loew, 1854)]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

Genus *EPISTROPHE* Walker, 1852

[*Epistrophe diaphana* (Gravenhorst, 1807)]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia, Middle Asia, and Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

Epistrophe grossulariae (Meigen, 1822)

Plavilshchikov, 1964; Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q19, 16.VI.2020, 2 ♂ (leg. G.B. Semishin); Q421, 22–26.IX.2020, 1 ♀ (leg. M.N. Esin). Smolny NP: Kemlyanskoe forestry, Q87, 27.VI.2020, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Turkey, Asiatic Russia to the Pacific coast, Mongolia, and Korea; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Genus *EPISYRPHUS* Matsumura et Adachi, 1917

Episyrphus balteatus (De Geer, 1776)

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Dachnyi env., 23–26.VII.2021, 1 ♂ (leg. M.N. Esin). Mordovia SNR: Q424, 17–29.X.2019, 1 ♂ (leg. A.B. Ruchin); Q425, 11–17.X.2019, 1 ♂ (leg. A.B. Ruchin). Q427, 11–17.X.2019, 1 ♂ (leg. A.B. Ruchin); Q435, 2–11.X.2019, 1 ♀ (leg. A.B. Ruchin); 17–29.X.2019, 1 ♀ (leg. A.B. Ruchin). Samaevka env., 31.VII–4.VIII.2020, 3 ♂, 7 ♀ (leg. K.P. Tomkovich and M.N. Esin). Smolny NP: Selishchinskaya Chashchoba, 18.VIII.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Middle Asia, Afghanistan, Asiatic Russia to the Pacific coast, Mongolia, China, and Korea; Oriental and

Australasian regions (Barkalov and Mutin, 2018; Speight, 2018).

Genus *EUPEODES* Osten Sacken, 1877

Eupeodes (Eupeodes) corollae (Fabricius, 1794)

Plavilshchikov, 1964; Antsiferova, 1966; Astradamov, 2005; Chursina and Ruchin, 2018.

Material. Mordovia SNR: Steklyannyi cordon, 9–11.VII.2020, 1 ♀ (leg. K.P. Tomkovich). Svobodny, Nr. 16, 21–24.VIII.2020, 1 ♀ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Transcaucasia, Iran, Middle Asia, Asiatic Russia to the Pacific coast, China, Mongolia, and Korea; Afro-tropical and Oriental regions (Barkalov and Mutin, 2018; Speight, 2018).

Eupeodes (Eupeodes) luniger (Meigen, 1822)

Chursina and Ruchin, 2018.

Material. Smolny NP: Rezovatovskii cordon, 16.V.2021, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Turkey, Middle Asia, Afghanistan, Asiatic Russia to the Pacific coast, Mongolia, and Korea; Oriental and Nearctic regions (Barkalov and Mutin, 2018; Speight, 2018).

Eupeodes (Lapposyrphus) lapponicus
(Zetterstedt, 1838)

Chursina and Ruchin, 2018.

Material. Mordovia SNR: Pavlovskii cordon, 8.IV.2020, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Turkey, Transcaucasia, Middle Asia, Asiatic Russia to the Pacific coast, and Mongolia; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Genus *LEUCOZONA* Schiner, 1860

Leucozona (Ischyrosyrphus) glaucia
(Linnaeus, 1758)

Chursina and Ruchin, 2018.

Material. Dachny env., 23–26.VII.2021, 1 ♀ (leg. M.N. Esin). Mordovia SNR: Srednyaya Melnitsa cordon, 29.VI.2018, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Turkey, Asiatic Russia to the Pacific coast, Mongolia, and Korea (Barkalov and Mutin, 2018; Speight, 2018).

Leucozona (Ischyrosyrphus) laternaria
(Müller, 1776)

Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q19, 16.VI.2020, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Turkey, Asiatic Russia to the Pacific coast, Mongolia, China, and Korea (Barkalov and Mutin, 2018; Speight, 2018).

[*Leucozona (Leucozona) inopinata* Doczkal, 2000]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Middle Asia and Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

*Genus *MELANGYNA* Verrall, 1901

**Melangyna lasiophthalma* (Zetterstedt, 1843)

Material. Mordovia SNR: Q448, 19.IV.2019, 1 ♀ (leg. A.B. Ruchin); Inorskii cordon, 19–21.IV.2021, 1 ♂ (leg. M.N. Esin). Pushta settl., 2.IV.2020, 1 ♀ (leg. G.B. Semishin). Smolny NP: Kemlyanskoe forestry, Q93, 26.IV.2020, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Middle Asia, Asiatic Russia to the Pacific coast,

Mongolia, and Korea; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Genus *MELANOSTOMA* Schiner, 1860

Melanostoma mellinum (Linnaeus, 1758)

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q6, 5.VII.2020, 1 ♀ (leg. G.B. Semishin); Q421, 22–26.IX.2020, 2 ♀♀ (leg. M.N. Esin); Noven'kovskii cordon, 14.V.2020, 1 ♀ (leg. G.B. Semishin); Pushta settl., 1.VII.2015, 1 ♀ (leg. A.B. Ruchin); Srednyaya Melnitsa cordon, 16.V.2018, 1 ♀ (leg. G.B. Semishin); Steklyannyi cordon, 17.VIII.2018, 1 ♀ (leg. G.B. Semishin). Smolny NP: Barakhmanovskoe forestry: Q3, 1.VIII.2019, 1 ♂ (leg. G.B. Semishin); Q112, 28.VI.2020, 1 ♀ (leg. G.B. Semishin); Kemlyanskoe forestry, Q93, 8.VIII.2018, 1 ♀ (leg. G.B. Semishin); Lvovskoe forestry, Q53, 26.V.2018, 1 ♀ (leg. G.B. Semishin); 26.V.2018, 1 ♀ (leg. A.B. Ruchin); Mokrov cordon, 26.V.2021, 2 ♀ (leg. G.B. Semishin); Rezovatovskii cordon, 16–18.V.2021, 2 ♂, 6 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Middle Asia, Iran, Afghanistan, Asiatic Russia to the Pacific coast, Mongolia, China, and Korea; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

**Melanostoma scalare* (Fabricius, 1794)

Material. Mordovia SNR: Q421, 22–26.IX.2020, 1 ♀ (leg. M.N. Esin); Dolgii Most cordon, 17–20.IX.2020, 2 ♀ (leg. M.N. Esin). Samaevka env., 31.VII–4.VIII.2020, 1 ♀ (leg. K.P. Tomkovich and M.N. Esin). Smolny NP: Barakhmanovskoe forestry, Q3, 1.VIII.2019, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Middle Asia, Afghanistan, Asiatic Russia to the Pacific coast, Mongolia, China, and Korea; Afrotropical and Oriental regions (Barkalov and Mutin, 2018; Speight, 2018).

*Genus *MELISCAEVA* Frey, 1946

**Meliscaeva cinctella* (Zetterstedt, 1843)

Material. Mordovia SNR: Q375, 27.V–6.VI.2020, 1 ♂ (leg. A.B. Ruchin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Turkey, Middle Asia, Asiatic Russia to the Pacific coast, Mongolia, and Korea; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

*Genus *MELIGRAMMA* Frey, 1946

**Meligramma euchroma* (Kowarz, 1885)

= *Epistrophella euchroma* (Kowarz, 1885).

Material. Mordovia SNR: Noven'kovskii cordon, 14.V.2020, 1 ♀ (leg. G.B. Semishin). Smolny NP: Lvovskoe forestry, Q63, 30.V.2020, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia and Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

**Meligramma triangulifera* (Zetterstedt, 1843)

Material. Mordovia SNR: Q436, 8.V.2021, 1 ♂ (leg. G.B. Semishin). Purdoshki env., 21–24.VIII.2020, 1 ♂ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Asiatic Russia to the Pacific coast; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Genus *PARAGUS* Latreille, 1804

**Paragus (Pandasyophthalmus) haemorrhous*
Meigen, 1822

Material. Mordovia SNR: Q449, 31.VIII.2020, 2 ♂ (leg. M.N. Esin). Samaevka env., 31.VII–4.VIII.2020, 1 ♂ (leg. K.P. Tomkovich and M.N. Esin). Smolny NP: Barakhmanovskoe forestry, Q98, 23.V.2019, 1 ♀ (leg. G.B. Semishin); Kemlyanskoe forestry: Q87, 30.VII.2019, 1 ♂ (leg. G.B. Semishin); Q93, 10.VIII.2018, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Middle Asia, Afghanistan, Asiatic Russia to the Pacific coast, Mongolia, China, and Korea; Afrotropical and Nearctic regions (Barkalov and Mutin, 2018; Speight, 2018).

[*Paragus (Paragus) bicolor* (Fabricius, 1794)]

Chursina and Ruchin, 2018.

Distribution. Europe from southern Scandinavia and central part of European Russia south to the Mediterranean; Northern Africa, Iran, Middle Asia, Asiatic Russia to the Pacific coast, and Mongolia; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

**Paragus (Paragus) pecchiolii* Rondani, 1857

Material. Barashevo env., Nr. 19, 30.VIII–3.IX.2020, 1 ♂ (leg. M.N. Esin). Mordovia SNR: Inor'skii cordon, 4.VIII.2017, 1 ♀ (leg. G.B. Semishin). Smolny NP: Kemlyanskoe forestry, Q93, 10.VIII.2018, 1 ♂ (leg. G.B. Semishin); Mokrov cordon, 15.VI.2021, 2 ♂ (leg. G.B. Semishin); Rezovatovskii cordon, 6.VI–5.VII.2021, 3 ♂, 2 ♀ (leg. G.B. Semishin). Tatarskoye Karayevo env., 21.VII.2020, 1 ♂ (leg. K.P. Tomkovich).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Turkey, Iran, Middle Asia, Afghanistan, Asiatic Russia to the Pacific coast, Mongolia, and China (Barkalov and Mutin, 2018; Speight, 2018).

*Genus *PARASYRPHUS* Matsumura, 1917

**Parasyrphus lineolus* (Zetterstedt, 1843)

Material. Mordovia SNR: Q373, 14–27.V.2020, 1 ♀ (leg. A.B. Ruchin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Asiatic Russia to the Pacific coast, Mongolia, and China; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Genus *PLATYCHEIRUS*
Le Peletier et Serville, 1828

Platycheirus (Platycheirus) albimanus
(Fabricius, 1781)

Feoktistov, 2011; Chursina and Ruchin, 2018.

Material. Mordovia SNR: Inorskii cordon, 16.V.2020, 1 ♀ (leg. G.B. Semishin); Noven'kovskii cordon, 12–14.V.2020, 2 ♂, 2 ♀ (leg. G.B. Semishin). Smolny NP: Barakhmanovskoe forestry, Q112, 26.V.2020, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Turkey, Middle Asia, Asiatic Russia to the Pacific coast, and Mongolia; Oriental and Nearctic regions (Barkalov and Mutin, 2018; Speight, 2018).

**Platycheirus (Platycheirus) angustatus*
(Zetterstedt, 1843)

Material. Mordovia SNR: Q19, 16.VI.2020, 1 ♂ (leg. G.B. Semishin). Smolny NP: Lvovskoe forestry, Q63, 29.V.2020, 1 ♀ (leg. G.B. Semishin); Mokrov cordon, 30.VI.2021, 1 ♂ (leg. G.B. Semishin); Rezovatovskii cordon, 19.V.2021, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Middle Asia, Asiatic Russia to the Pacific coast, and Mongolia; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

**Platycheirus (Platycheirus) clypeatus*
(Meigen, 1822)

Material. Mordovia SNR: Q86, 12.VI.2020, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Turkey, Middle Asia, Afghanistan, Asiatic Russia to the Pacific coast, Mongolia, and Korea; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

**Platycheirus (Platycheirus) europaeus*
Goeldlin, Maibach et Speight, 1990

Material. Mordovia SNR: Q19, 14.VI.2020, 1 ♀ (leg. G.B. Semishin); Q86, 14.VI.2020, 2 ♂, 1 ♀ (leg.

G.B. Semishin). Smolny NP: Barakhmanovskoe forestry, Q112, 26.V.2020, 1 ♂ (leg. G.B. Semishin); Rezovatovskii cordon, 4–9.VI.2021, 3 ♀ (leg. G.B. Semishin). Zhegalovo env., Nr. 11, 21–24.VIII.2020, 1 ♀ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia south to the Mediterranean; Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

**Platycheirus (Platycheirus) fulviventris*
(Macquart, 1829)

Material. Smolny NP: Mokrov cordon, 22.V–14.VI.2021, 1 ♂, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Turkey and Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

**Platycheirus (Platycheirus) peltatus* (Meigen, 1822)

Material. Smolny NP: Kemlyanskoe forestry, Q87, 3.VI.2020, 1 ♀ (leg. G.B. Semishin); Mokrov cordon, 26.V.2021, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Middle Asia, Asiatic Russia to the Pacific coast, and Mongolia (Barkalov and Mutin, 2018; Speight, 2018).

[Platycheirus (Platycheirus) podagratus
(Zetterstedt, 1838)]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Middle Asia, Asiatic Russia to the Pacific coast, and Mongolia; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

Genus *PYROPHAENA* Schiner, 1860

**Pyrophaena granditarsis* (Forster, 1771)

= *Platycheirus (Pyrophaena) granditarsis* (Forster, 1771).

Material. Mordovia SNR: Steklyannyi cordon, 5–13.VII.2020, 1 ♀ (leg. K.P. Tomkovich).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Central Europe; Middle Asia, Asiatic Russia to the Pacific coast, and Northern China; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

[*Pyrophaena rosarum* (Fabricius, 1787)]

= *Platycheirus* (*Pyrophaena*) *rosarum* (Fabricius, 1787).

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Asiatic Russia to the Pacific coast; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

*Genus *SCAEVA* Fabricius, 1805

**Scaeva selenitica* (Meigen, 1822)

Material. Smolny NP: Obrezki cordon, 15.VI.2018, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Turkey, and Asiatic Russia to the Pacific coast (Barkalov and Mutin, 2018; Speight, 2018).

Genus *SPHAEROPHORIA*

Le Peletier et Serville, 1828

**Sphaerophoria chongjini* Bańkowska, 1964

Material. Smolny NP: Kemlyanskoe forestry, Q87, 26.VI.2020, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Asiatic Russia to the Pacific coast and Korea (Barkalov and Mutin, 2018; Speight, 2018).

Sphaerophoria scripta (Linnaeus, 1758)

Plavilshchikov, 1964; Antsiferova et al., 1966; Antsiferova, 1979; Chursina and Ruchin, 2018.

Material. Bolshoi Urkat, Nr. 15, 21–24.VIII.2020, 2 ♂ (leg. M.N. Esin). Mordovia SNR: Q86, 14.VI.2020,

1 ♂ (leg. G.B. Semishin); Q88, 18.VII.2020, 1 ♂ (leg. A.B. Ruchin); Q449, 31.VIII.2020, 1 ♀ (leg. M.N. Esin); Dolgii Most cordon, 17–20.IX.2020, 7 ♂, 2 ♀ (leg. M.N. Esin); Inorskii cordon, 16.V.2020, 2 ♂ (leg. G.B. Semishin); Noven'kovskii cordon, 12–14.V.2020, 2 ♂ (leg. G.B. Semishin); Pavlovskii cordon, 9.V.2020, 2 ♂ (leg. G.B. Semishin). Samaevka env., 31.VII–4.VIII.2020, 1 ♀ (leg. K.P. Tomkovich and M.N. Esin). Smolny NP: Obrezki cordon, 9.VIII.2021, 1 ♂ (leg. G.B. Semishin); Mokrov cordon, 15.VIII.2021, 1 ♂ (leg. G.B. Semishin); Rezovatovskii cordon, 16–18.V.2021, 3 ♂ (leg. G.B. Semishin); Selishchinskaya Chashchoba, 26.VI.2021, 1 ♂ (leg. G.B. Semishin). Svobodny, Nr. 16, 21–24.VIII.2020, 7 ♂, 2 ♀ (leg. M.N. Esin). Zhegalovo env., Nr. 11, 21–24.VIII.2020, 1 ♀ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Syria, Middle Asia, Afghanistan, Asiatic Russia to the Pacific coast, and Mongolia; Oriental and Nearctic regions (Barkalov and Mutin, 2018; Speight, 2018).

**Sphaerophoria taeniata* (Meigen, 1822)

Material. Mordovia SNR: Q86, 12.VI.2020, 1 ♂ (leg. G.B. Semishin); Steklyannyi cordon, 9–11.VII.2020, 1 ♂ (leg. G.B. Semishin). Smolny NP: Kemlyanskoe forestry: Q87, 3.VI.2020, 1 ♂ (leg. G.B. Semishin); Q93, 20.V.2019, 1 ♂ (leg. G.B. Semishin); Mokrov cordon, 24.V–29.VI.2021, 1 ♂, 2 ♀ (leg. G.B. Semishin); Rezovatovskii cordon, 16.V–4.VI.2021, 3 ♂, 1 ♀ (leg. G.B. Semishin). Zhegalovo env., Nr. 11, 21–24.VIII.2020, 5 ♀ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Middle Asia, Asiatic Russia to the Pacific coast, Mongolia, China, and Korea (Barkalov and Mutin, 2018; Speight, 2018).

Genus *SYRPHUS* Fabricius, 1775

Syrphus ribesii (Linnaeus, 1758)

Plavilshchikov, 1964; Antsiferova, 1979; Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q375, 27.V–6.VI.2020, 1 ♂ (leg. A.B. Ruchin); Q342, 27.V–6.VI.2020, 1 ♂

(leg. A.B. Ruchin); Q421, 22–26.IX.2020, 1 ♀ (leg. M.N. Esin); Q424, 6–18.IX.2019, 1 ♀ (leg. A.B. Ruchin); Q426, 18.IX–2.X.2019, 1 ♀ (leg. A.B. Ruchin); Q427, 6–14.V.2019, 1 ♂ (leg. A.B. Ruchin); Drozhdenovskii cordon, 22–26.IX.2020, 2 ♀ (leg. M.N. Esin); Inorskii cordon, 16–20.V.2020, 5 ♂, 1 ♀ (leg. G.B. Semishin); Noven'kovskii cordon, 12–14.V.2020, 1 ♂, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Turkey, Middle Asia, Afghanistan, Asiatic Russia to the Pacific coast, Mongolia, China, and Korea; Nearctic Region (Barkalov and Mutin, 2018; Speight, 2018).

**Syrphus torvus* Osten Sacken, 1875

Material. Marlyai env., 15–28.V.2020, 1 ♂ (leg. A.B. Ruchin). Mordovia SNR: Q435, 24.V–4.VI.2019, 1 ♀ (leg. A.B. Ruchin); 11–17.X.2019, 1 ♀ (leg. A.B. Ruchin); Inorskii cordon, 16.V.2020, 2 ♂ (leg. G.B. Semishin); Noven'kovskii cordon, 14.V.2020, 1 ♀ (leg. G.B. Semishin); Pushta settl., 7.VI.2020, 1 ♀ (leg. G.B. Semishin); Steklyannyi cordon, 18.V.2018, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Turkey, Kazakhstan, Asiatic Russia to the Pacific coast, Mongolia, China, and Korea; Oriental and Nearctic regions (Barkalov and Mutin, 2018; Speight, 2018).

Syrphus vitripennis Meigen, 1822

Plavilshchikov, 1964; Chursina and Ruchin, 2018.

Material. Kazhodka env., 31.VII–4.VIII.2020, 1 ♂, 1 ♀ (leg. K.P. Tomkovich and M.N. Esin). Mordovia SNR: Q86, 14.VI.2020, 1 ♂, 1 ♀ (leg. G.B. Semishin); Q375, 14–27.V.2020, 1 ♀ (leg. A.B. Ruchin); Q421, 22–26.IX.2020, 3 ♀ (leg. M.N. Esin); Q424, 24.V–4.VI.2019, 1 ♂ (leg. A.B. Ruchin); Q425, 2–11.X.2019, 1 ♀ (leg. A.B. Ruchin); Q426, 11–17.X.2019, 1 ♀ (leg. A.B. Ruchin); Dolgii Most cordon, 17–20.IX.2020, 1 ♀ (leg. M.N. Esin); Inorskii cordon, 16.V.2020, 1 ♂ (leg. G.B. Semishin); Noven'kovskii cordon, 14.V.2020, 1 ♀ (leg. G.B. Semishin). Samaevka env., 31.VII–4.VIII.2020, 3 ♂, 3 ♀ (leg. K.P. Tomkovich and M.N. Esin). Smolny NP: Alatyry health resort, 20–21.VIII.2021, 1 ♂, 2 ♀ (leg. G.B. Semishin). Svobodny:

Nr. 16, 21–24.VIII.2020, 1 ♂ (leg. M.N. Esin); Nr. 17, 21–24.VIII.2020, 1 ♀ (leg. M.N. Esin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Northern Africa, Iran, Kazakhstan, Afghanistan, Asiatic Russia to the Pacific coast, Mongolia, and Korea; Oriental and Nearctic regions (Barkalov and Mutin, 2018; Speight, 2018).

[Genus *XANTHANDRUS* Verrall, 1901]

[*Xanthandrus comtus* (Harris, 1780)]

Chursina and Ruchin, 2018.

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia, Kazakhstan, Asiatic Russia to the Pacific coast, Mongolia, and Korea (Barkalov and Mutin, 2018; Speight, 2018).

Genus *XANTHOGRAMMA* Schiner, 1860

Xanthogramma (Xanthogramma) citrofasciatum
(De Geer, 1776)

Chursina and Ruchin, 2018.

Material. Smolny NP: Mokrov cordon, 23.V.2021, 1 ♂ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to the Mediterranean; Transcaucasia and Asiatic Russia to West Siberia (Barkalov and Mutin, 2018; Speight, 2018).

Xanthogramma (Xanthogramma) pedissequum
(Harris, 1776)

Chursina and Ruchin, 2018.

Material. Mordovia SNR: Q19, 15.VI.2020, 1 ♀ (leg. G.B. Semishin).

Distribution. Europe from Fennoscandia and vicinity of St. Petersburg south to elevated parts of Southern Europe; Asiatic Russia to West Siberia (Barkalov and Mutin, 2018; Speight, 2018).

DISCUSSION

158 species of the hoverflies are listed in this report from Mordovia. It includes species recorded herein for the first time (57 spp.), species repeatedly recorded in the republic (61 spp.), and species which are not present in our material, but known based on their previous records (40 spp.). In addition to this, three species (*Cheilosia brunnipennis*, *Chrysogaster simplex* and *Myolepta vara*) are excluded from the previous list based on misidentifications, and one species is considered here as doubtfully recorded, because the sole specimen of the normally southern European *?Cheilosia laticornis* is partly damaged and cannot be reliably identified. Altogether 57 genera of hoverflies are provided from Mordovia. 13 genera, *Baccha*, *Brachyopa*, *Eumerus*, *Neocnemodon*, *Lejota*, *Melangyna*, *Meligramma*, *Meliscaeva*, *Neoascia*, *Orthonevra*, *Parasyrphus*, *Pipizella*, and *Scaeva*, are recorded from Mordovia for the first time. 11 genera, *Blera*, *Brachypalpoides*, *Callicera*, *Ceriana*, *Chrysogaster*, *Mallota*, *Parhelophilus*, *Psarus*, *Sphecomyia*, *Spilomyia*, and *Xanthandrus*—are not represented in the new material, but are listed here, citing their previous records (Feoktistov, 2011; Chursina and Ruchin, 2018); the latter group of genera contains several uncommon or locally recorded species, which should be emphasized when inventorying localities in the future publications (Reemer et al., 2009; Mengual and Ssymank, 2015; Prokhorov et al., 2018).

The material of this study originates from 85 localities situated in 15 administrative districts and the capital of the Republic of Mordovia (68.2%); however, almost a half of the localities (49.4%) originates from Mordovia State Nature Reserve situated in Temnikov District; consequently, the largest number of the species (86; 71.7%) is recorded from this district of the Republic of Mordovia. A slightly smaller number of species (74; 61.7%) is recorded from Smolny National Park situated in Ichalki District, though the number of the studied localities in this area is considerably smaller (12.8%); thus the number of species found per site in the latter area is greater. The most constantly found species in the Republic of Mordovia are *Sphaerophoria scripta* (15 localities, 17.6%), *Syrphus vitripennis* (14 localities, 16.5%), *Melanostoma mellinum* (12 localities, 14.1%), *Ferdinandea cuprea* (11 localities, 12.9%), *Chalcosyrphus nemorum* (10 localities, 11.8%), followed by *Cheilosia vernalis*, *Helophilus pendulus*, and *Syrphus ribesii*

(9 localities, 10.6%). The constancy of different species of hoverflies of the Mordovian fauna in the previous studies has not been evaluated, though this could be extracted from the detailed records provided by Chursina and Ruchin (2018).

The most frequently cited species in the study area is *Volucella pellucens* (Plavilshchikov, 1964; Ruchin et al., 2007; Ruchin, 2008; Feoktistov, 2011; Chursina and Ruchin, 2018), the second place is shared by *Sphaerophoria scripta* (Plavilshchikov, 1964; Antsiferova et al., 1966; Antsiferova, 1979; Chursina and Ruchin, 2018) and *Eupeodes corollae* (Plavilshchikov, 1964; Antsiferova, 1966; Astradamov, 2005; Chursina and Ruchin, 2018), and the third place is shared by *Chrysotoxum festivum*, *Eristalis nemorum* and *Helophilus pendulus* (Plavilshchikov, 1964; Antsiferova and Dobromyslov, 1966; Chursina and Ruchin, 2018). These species are also present in the material provided in this publication and may be considered as the most representative species of the study area, even if they are thought less constant as compared with some other species recorded in our study; the reason for their frequent citation in the literature may be their larger size or distinctive appearance, though some of these species are also regarded in our study as very constant.

The following 14 species recorded from Mordovia have their southern distributional limits in the central part of European Russia: *Cheilosia morio*, *Eristalis abusiva*, *E. anthophorina*, *E. obscura*, *Helophilus affinis*, *H. hybridus*, *Mallota megilliformis*, *Sphecomyia vespiiformis*, *Temnostoma apiforme*, *T. sericomyiaeforme*, *Xylota triangularis*, *Neocnemodon pubescens*, *N. vitripennis*, and *Dasysyrphus hilaris*. The following 10 species recorded from the study area have their northern distributional limits in the central part of European Russia: *Callicera aenea*, *?Cheilosia laticornis*, *Criorhina ranunculi*, *Ferdinandea ruficornis*, *Orthonevra brevicornis*, *Psarus abdominalis*, *Temnostoma bombylans*, *Volucella inflata*, *Chrysotoxum verralli* and *Paragus bicolor*. *Chalcosyrphus nitidus* and *Mallota rossica* possess their western distributional limits in the central part of European Russia. *Temnostoma bombylans*, which was mentioned as reaching its northern distributional limit in the central part of European Russia, is also considered to reach here its eastern distributional limit and otherwise is only known in European Russia from Moscow and Kaluga provinces (Krivosheina and

Stähls, 2003), while records from the Chuvash Republic and the South Urals could be erroneous and refer to the recently described *T. angustistriatum* (Sorokina and Chashchina, 2003; Pestov, 2018). Therefore, we consider our records of this species in Mordovia as very close to its distribution boundary. However, some of the aforementioned species are not represented in our material and are included in the list based on the previous records (Feoktistov, 2011; Chursina and Ruchin, 2018); probably these species are uncommon or locally distributed, which should be checked when inventorying localities in the future studies.

In spite of the intensive studies of the hoverflies during the past decade, the list of species known from Mordovia stays incomplete and representing possibly only about three-fifths of the actual number, judging based on the comparisons with the better studied areas of similar sizes and situated at about the same latitudes, e.g., the Baltic States (Kuznetsov, 1993). Therefore, many interesting records of these attractive insects are expected to be made and presented in the future publications, when more diverse habitats and more administrative districts of the Republic of Mordovia are studied.

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COMPLIANCE WITH ETHICAL STANDARDS

Conflict of interest. The authors declare that they have no conflict of interest.

Statement on the welfare of animals. All the applicable international, national, and institutional guidelines for the care and use of animals were followed. All the procedures performed in studies involving animals were in accordance with the ethical standards of the institution or practice at which the studies were conducted.

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