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A LIST OF THE SCIOMYZIDAE, FANNIIDAE AND MUSCIDAE (DIPTERA) OF MORDOVIA

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Abstract. Mordovia is a lowland region of Russia located 400–500 km South-East-East of Moscow. There were very few published data on the Mordovian fauna of the Diptera families considered in this paper. The present work is mostly based upon material collected during the field season 2020. Now we offer a list of Mordovian fauna which includes 35 species of Sciomyzidae, 23 Fanniidae and 141 Muscidae, a total of 199 species, 178 of which are first recorded for Mordovia. New synonym is offered: *Pherbellia brunnipes* Meigen, 1838 = *P. stackelbergi* Elberg, 1965, **syn. nov.**

Keywords: fauna, Mordovia, Sciomyzidae, Fanniidae, Muscidae.

СПИСОК SCIOMYZIDAE, FANNIIDAE И MUSCIDAE (DIPTERA) МОРДОВИИ

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Аннотация. Мордовия — равнинный регион России, который расположен в 400–500 км к юго-востоку-востоку от Москвы. Мордовская фауна рассматриваемых здесь семейств Diptera почти не изучалась. Материал для настоящей работы собран в основном за полевой сезон 2020 года. Публикуемый список фауны Мордовии включает 35 видов Sciomyzidae, 23 Fanniidae и 141 Muscidae — всего 199 видов, из которых 178 впервые указаны для Мордовии. Предложен новый синоним: *Pherbellia brunnipes* Meigen, 1838 = *P. stackelbergi* Elberg, 1965, **syn. nov.**

Ключевые слова: фауна, Мордовия, Sciomyzidae, Fanniidae, Muscidae.

INTRODUCTION

Mordovia (Republic of Mordovia officially) is a federal subject of Russia with an area of 26 000 square kilometers, it is situated in 400–500 km South-East-East of Moscow. Along the North-South and West-East axes, Mordovia extends for 100 and 250 kilometers, respectively. By database https://faunaeu.org (Pont 2013; Rozkosny 2013), it belongs to the CET part of Russia, i.e., central territory of European Russia. The Western part of Mordovia is covered with forests, and the rest of the territory of the region is mostly represented by agricultural landscapes.

In 1936, in the North-West corner of Mordovia, Mordovia State Nature Reserve (hereinafter MNR) was established. Very few published data on fauna of Mordovian Diptera have been obtained from the territory of MNR. Soviet entomologists: V. V. Redikortsev, N. V. Bondarenko and S. M. Nesmerchuk studied the entomofauna of the MNR, but the results have never been published. The manuscripts they left behind were sorted out by N.N. Plavilschikov (1964) and thus the first list of the regional insects was published. For the families of Diptera considered in this paper Plavilschikov's list included 2 species of Sciomyzidae and 12 of Muscidae. Later V. F. Feoktistov (2011) added to Mordovian fauna 3 Sciomyzidae and 2 Muscidae species. Two more new Muscidae species were recently reported for Mordovia, one was found in the collection bequeathed by Gennady Veselkin (Vikhrev 2013) and other one was found in the material collected by beer traps (Vikhrev et al. 2020).

The present faunistic report is based on the intensive collecting during the field season 2020 (May-September) and sorting out some specimens collected in MNR in previous years. Totally we list here 35 species of Sciomyzidae (were 5); 23 of Fanniidae (were 0); 141 of Muscidae (were 16). The majority of specimens were collected in vicinity of Pushta village (Figs 1–2) where the administration of MNR is located. Pushta is surrounded mainly by pine forest, also by deciduous forest in humid areas and agricultural landscape of nearby villages. Our main collecting sites around Pushta are shown in Fig. 3.

It should be emphasized that our study of the Mordovian fauna was qualitative, not quantitative. This is why many common species were undercollected or only a few such specimens were mounted. This approach allowed us to focus our efforts on collecting species most interesting from faunistic or taxonomic point of view. In order to avoid misleading, the undercollected species are marked as "Common".

Figs 1–2. *1* — MNR entrance, Pushta village (photo: M. Ryzhov); *2* — our team collecting on bank of the Moksha River near Purdoshki (photo: K. Tomkovich)

Рис. 1–2. *1* — въезд в Мордовский заповедник, Пушта (фото: М. Рыжов); *2* — наш авторский коллектив собирает материал на берегу реки Мокша около деревни Пурдошки (фото: К. Томкович)

Fig. 3. Our main collecting sites (red spots) around Pushta village
Рис. 3. Основные места сбора около Пушты (красные кружки)

MATERIAL AND METHODS

Here we give only synonyms that are used in the previous faunistic reports on Mordovian fauna cited in the paper.

Suprageneric taxa (families, subfamilies and tribes) are arranged in the following order:
Sciomyzidae
— — Sciomyzini
— — Tetanocerini
Fanniidae
Muscidae
— Achanthipterinae
— Azeliinae
— — Azeliini
— — Reinwardtiini
— Muscinae
— — Muscini
— — Stomoxyini
— Phaoniinae
— — Eginiini
— — Phaoniini
— Mydaeinae
— Coenosiinae
— — Limnophorini
— — Coenosiini

Names of genera and species are listed alphabetically.

Geographical coordinates are given in the decimal degrees format.

The specimens listed here are deposited either in Zoological Museum of Moscow University, Russia (those collected by N. Vikhrev, K. Tomkovich and M. Yanbulat) or in the collection of MNR, Mordovia, Pushta village (those from M. Esin, A. Ruchin, G. Semishin).

When using a very popular in Russia term "cordon" we mean a lodge on the territory of a nature reserve where rangers or other staff may live.

A preliminary list of the Sciomyzidae, Fanniidae and Muscidae (Diptera) of Mordovia

Sciomyzidae
Sciomyzini

1. *Colobaea bifasciella* Fallen, 1820
Taratinsky cordon, 54.74°N 43.09°E, 27–29 June 2020, K. Tomkovich, 1♂.

2. *Colobaea distincta* Meigen, 1830
Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 1♂, 1♀.

3. *Pherbellia albocostata* Fallen, 1820
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, N. Vikhrev, 1♀; Rosstanye, 54.831°N

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43.135°E, meadow, 5 August 2020, K. Tomkovich, 1♂.

4. *Pherbellia argyra* Verbeke, 1967
Smolny National Park (16 km NE of Kemlya), 54.76°N 45.47°E, 3 June 2020, G. Semishin, 1♂; Pushta vill. env., 54.71°N 43.22°E, 20–27 July 2020, K. Tomkovich, 1♂; Purdoshki env., 54.689°N 43.533°E, 6 September 2020, N. Vikhrev, 1♂.

5. *Pherbellia austera* Meigen, 1830
Inorskoe Lake, 54.728°N 43.15°E, 20 May 2020, M. Esin, 1♂, 1♀; Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 1♂; Taratinsky cordon, 54.74°N 43.09°E, 27–29 June 2020, K. Tomkovich, 1♀.

6. *Pherbellia brunnipes* Meigen, 1838
Inorskoe Lake, 54.728°N 43.15°E, 20 May 2020, N. Vikhrev, 1♂, 1♀; Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 1♂, 1♀.

SYNONYMY. *Pherbellia stackelbergi* Elberg, 1965 was recorded for CET region of Russia, but *P. brunnipes* was not (Rozkosny 2013). In our opinion, the description of *P. stackelbergi* was groundless. According to Elberg (1965) these two species differ as follows:

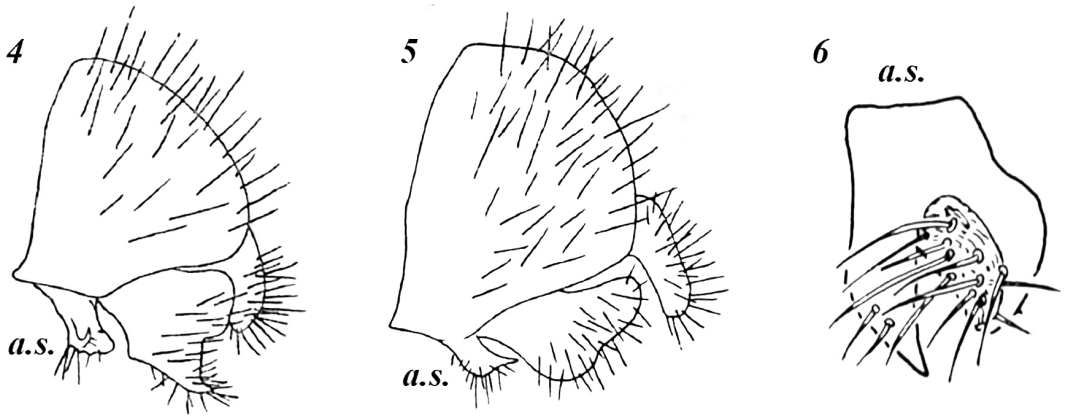
— Hypopygium as in Fig. 4. Row of small hairs along lower frontal eye-margin extends on anterior half of frons, often almost till base of antenna ..... *stackelbergi*

— Hypopygium as in Fig. 5. Row of small hairs along lower frontal eye-margin extends only slightly beyond anterior orbital setae ..... *brunnipes*

First, Elberg never examined Meigen's type and gave no reason why he regarded one part of specimens as a new species and other part as *P. brunnipes*. Thus, it was Elberg's arbitrary decision, with equal grounds the choice could have been vice versa. Also, *P. pusila* Zetterstedt, 1938 or *P. coxata* Zetterstedt, 1938 or *P. uliginosa* Enderlein, 1939, which were synonymized to *P. brunnipes* by earlier authors, were neither examined nor discussed.

We examined several specimens with and without hairs on lower eye-margin and found the male genitalia similar, with a visible shape of the sclerites strongly depending on the angle of view. Elberg's sketchy drawings of the hypopygium are not helpful. For example, the anterior surstylus doesn't really look as his drawings show (Figs 4–5) but it looks like in Fig. 6. Also the posterior surstylus looks like that in Fig. 5, but its central lobe may look not rounded but pointed more similar to Fig. 4 under some angle of view.

Type series of *P. stackelbergi* is stored in the Zoological Institute, Saint Petersburg, it is in good condition. Holotype: ♂ (Russia), Leningrad oblast (Saint Petersburg reg.), Luga distr., Yaschera (58.9°N 29.9°E), A. Stackelberg,



Figs 4–6. Hypopygium of *Pherbellia*: *4* — *stackelbergi* Elberg, 1965; *5* — *brunnipes* Meigen, 1838 (from Elberg 1965); *6* — anterior surstylus (*a.s.*) of *brunnipes* Meigen, 1838 (from Vala 1989, fig. 28c)

Рис. 4–6. Гипопигиум *Pherbellia*: *4* — *stackelbergi* Elberg, 1965; *5* — *brunnipes* Meigen, 1838 (из Elberg 1965); *6* — передний сурстиль (*a.s.*) *brunnipes* Meigen, 1838 (из Vala 1989: fig. 28c)

6 August 1959. Paratypes: same locality as the holotype, A. Stackelberg, 1953–1959, 8♂; Tyumen oblast (presently Khanty-Mansi reg.), Samarovo (presently Khanty-Mansiysk) on Irtysh R., 4 June 1925, F. Fridolin, 1♂. There are about 40 specimens collected later at Luga district by A. Stackelberg, partly they were identified as *P. brunnipes*, partly as *P. stackelbergi*.

We also examined representative materials from Zoological Museum, Moscow and Zoological Institute, Saint Petersburg. It is 140 ♂♀ from: BELARUS, *Vitebsk* reg.; KAZAKHSTAN, *Akmola* reg.; RUSSIA: *Amur, Arkhangelsk, Astrakhan, Kemerovo, Khakassia, Khanty-Mansi, Komi, Mordovia, Moscow, Novosibirsk, Omsk, Smolensk, Saint Petersburg, Tuva, Tver, Tyumen* and *Voronezh* regions. *P. brunnipes* varies in the amount of strong setae on the upper katepisternum (2 or 3), in body colouration (more brown or yellow) etc. The amount of small hairs along the lower frontal eye-margin (proposed as a diagnostic character of *P. stackelbergi*) gradually varies from 0 to 4 hairs, often the amount of these hairs is different on left and right sides of frons. Nothing indicates that *P. brunnipes* should be divided onto two or more species on the base of this character. Thus, *Pherbellia brunnipes* Meigen, 1838 = *P. stackelbergi* Elberg, 1965, **syn. nov**.

7. *Pherbellia cinerella* Fallen, 1820
Pushta vill. env., 54.71°N 43.22°E: 8–12 June 2020, M. Yanbulat, 2♂, 1♀; 22–24 June 2020, M. Yanbulat, 1♂; 20 km W of Saransk, 54.137°N 44.906°E, 21 June 2020, N. Vikhrev, 1♀.

8. *Pherbellia dubia* Fallen, 1820
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 2♀.

9. *Pherbellia griseola* Fallen, 1820
Pushta vill. env., 54.71°N 43.22°E: 18–22 May 2020, N. Vikhrev, 1♂, 1♀; 8–12 June 2020, M. Yanbulat, 1♂; 22–24 June 2020, M. Yanbulat, 1♀; 1–5 September 2020, N. Vikhrev, 1♀; Temnikov, Moksha R. sandy beach, 54.625°N 43.200°E, 3 August 2020, K. Tomkovich, 1♂.

10. *Pherbellia obtusa* Fallen, 1820
Inorskoe Lake, 54.728°N 43.15°E, 20 May 2020, N. Vikhrev, 1♀; Pushta vill. env., 54.71°N 43.22°E: 18–22 May 2020, N. Vikhrev, 2♂; 22–24 June 2020, M. Yanbulat, 2♂; Purdoshki env., 54.689°N 43.533°E, 6 September 2020, M. Esin, 1♂.

11. *Pherbellia pilosa* Hendel, 1902
Pushta vill. env., 54.71°N 43.22°E: 18–22 May 2020, N. Vikhrev, 1♂, 1♀; 8–12 June 2020, M. Yanbulat, 5♂, 6♀; 22–24 June 2020, M. Yanbulat, 10♂, 10♀; 1–5 September 2020, N. Vikhrev, 1♂, 1♀.

12. *Pherbellia schoenherri* Fallen, 1826
(Feoktistov 2011)
Common from May to October.
Pushta vill. env., 54.71°N 43.22°E: 6 October 2019, N. Vikhrev, 1♂, 1♀; 18–22 May 2020, N. Vikhrev, 2♂, 1♀; 1–5 September 2020, M. Yanbulat, 2♂, 1♀.

13. *Pherbellia scutellaris* von Roser, 1840
Taratinsky cordon, 54.74°N 43.09°E, 27–29 June 2020, K. Tomkovich, 2♀; Novenkovsky cordon, 54.931°N 43.421°E, 4–7 July 2020, K. Tomkovich, 1♂.

14. *Pherbellia sordida* Hendel, 1902
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 1♂.

15. *Pteromicra glabricula* Fallen, 1820
Temnikov, Moksha R. sandy beach, 54.625°N 43.200°E, 3 August 2020, K. Tomkovich, 1♂; Zubova Polyana env., 54.07°N 42.86°E, 30 August 2020, N. Vikhrev, 1♀; Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, M. Yanbulat, 3♂, 3♀.

16. *Pteromicra leucopeza* Meigen, 1838
Pushta R. bridge, 54.749°N 43.201°E, 1 September 2020, M. Yanbulat, 1♂.

Tetanocerini

17. *Anticheta atriseta* Loew, 1849
Pushta R. bridge, 54.749°N 43.201°E, 1 September 2020, M. Yanbulat, 1♀.

18. *Coremacera marginata* Fabricius, 1775
Pushta vill. env., 54.71°N 43.22°E: 18 July 2020, K. Tomkovich, 1♀; 1–5 September 2020, N. Vikhrev, 1♂; Steklyanny cordon, 54.894°N 43.601°E, 5–7 July 2020, G. Semishin, 1♂, 1♀.

19. *Dichetophora finlandica* Verbeke, 1964
Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, N. Vikhrev, 1♀; Moksha R.,

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54.60°N 43.20°E, YPT, 30–31 August 2020, M. Esin, 1♀.

20. *Elgiva cucularia* Linnaeus, 1767
Pushta vill. env., 54.71°N 43.22°E: 18–22 May 2020, N. Vikhrev, 1♀; 8–12 June 2020, N. Vikhrev, 1♂, 2♀; 1–5 September 2020, N. Vikhrev, 1♂.

21. *Elgiva solicita* Harris, 1780
(Feoktistov 2011, as *Elgiva sundewalli*)
Common from May to September.
Pushta vill. env., 54.71°N 43.22°E: 8–12 June 2020, M. Esin, M. Yanbulat, 5♂, 4♀; 1–5 September 2020, N. Vikhrev, 3♂.

22. *Ilione lineata* Fallen, 1820
Purdoshki env., 54.689°N 43.533°E, 6 September 2020, N. Vikhrev, 1♂.

23. *Limnia unguicornis* Scopoli, 1763
Common in June-August.
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, M. Yanbulat, 5♂, 3♀.

24. *Pherbina coryleti* Scopoli, 1763
Purdoshki env., 54.689°N 43.533°E, 6 September 2020, N. Vikhrev, 2♂; M. Yanbulat, 1♂.

25. *Psacadina vittigera* Schiner, 1864
20 km W of Saransk, 54.137°N 44.906°E, 21 June 2020, N. Vikhrev, 1♂, 4♀.

26. *Psacadina zernyi* Mayer, 1953
Purdoshki, 54.689°N 43.533°E, 25 June 2020, N. Vikhrev, 1♂, 1♀; Zubova Polyana env., 54.07°N 42.86°E, 30 August 2020, N. Vikhrev, 1♂; Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, N. Vikhrev, 1♀.

27. *Renocera pallida* Fallen, 1820
Common from May to August.
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 3♀; Inorskoe Lake, 54.728°N 43.15°E, 20 May 2020, M. Esin, 2♂, 4♀.

28. *Sepedon sphegea* Fabricius, 1775
Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, N. Vikhrev, 1♂, 2♀.
REMARK. In the field season 2020 this common species was never recorded from May to August. However, we found it in many localities in early September.

29. *Sepedon spinipes* Scopoli, 1763
Common from May to September.
Pushta vill. env., 54.71°N 43.22°E: 18–22 May 2020, N. Vikhrev, 1♂, 1♀; 1 July 2020, K. Tomkovich, 1♂; 1–5 September 2020, N. Vikhrev, 1♂, 1♀; Zubova Polyana env., 54.07°N 42.86°E, 30 August 2020, N. Vikhrev, 1♀.

30. *Tetanocera arrogans* Meigen, 1830
Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, M. Yanbulat, 1♀.

31. *Tetanocera elata* Fabricius, 1781
(Plavilschikov 1964)
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, M. Yanbulat, 1♀.

32. *Tetanocera ferruginea* Fallen, 1820
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 1♂, 1♀.

33. *Tetanocera hyalipennis* von Roser, 1840
(Plavilschikov 1964)
Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, M. Yanbulat, 1♂.

34. *Tetanocera robusta* Loew, 1847
Smolny National Park (16 km NE of Kemlya), 54.76°N 45.47°E, 6 August 2018, G. Semishin, 1♂.

35. *Trypetoptera punctulata* Scopoli, 1763
(Feoktistov 2011)
Common in July-August.
Pushta vill. env., 54.71°N 43.22°E: 22–26 June 2020, M Yanbulat, 1♀; 1–5 September 2020, N. Vikhrev, 1♀.

Fanniidae

1. *Fannia armata* Meigen, 1826
Common in June-August.
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020: N. Vikhrev, 3♂; M. Esin, 1♂.

2. *Fannia canicularis* Linnaeus, 1761
Common.
Pushta vill. env., 54.71°N 43.22°E: beer traps (hereinafter see the description of this method of collecting in Ruchin et al. 2020), 1–14 July 2019, A. Ruchin, 4♀; 8–12 June 2020, N. Vikhrev, 3♂, 1♀.

3. *Fannia corvina* Verrall, 1892
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N Vikhrev, 2♂.

4. *Fannia fuscula* Fallen, 1825
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020, N. Vikhrev, 1♂; Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 1♂, 1♀.

5. *Fannia genualis* Stein, 1895
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 5♂.

6. *Fannia incisurata* Zetterstedt, 1838
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 1♂.

7. *Fannia lustrator* Harris, 1780
Inorskoe Lake, 54.728°N 43.15°E, 9 June 2020, N. Vikhrev, 1♀.

8. *Fannia manicata* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E, 1 May 2020, M. Esin, 1♂.

9. *Fannia metallipennis* Zetterstedt, 1838
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 1♂.

10. *Fannia monilis* Haliday, 1838
Inorskoe Lake, 54.728°N 43.15°E, YPT on carrion, 17–22 June 2020, A. Ruchin, 1♂; Taratinsky cordon, 54.74°N 43.09°E, 27–29 June 2020, K. Tomkovich, 1♂; Krasnoslobodsky distr., Selischi, 54.481°N 43.522°E, forest edge, YPT, 1–4 September 2020, K. Tomkovich, M. Esin, 1♂.

11. *Fannia parva* Stein, 1895
Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, N. Vikhrev, 4♂.

12. *Fannia pauli* Pont, 1997
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 1♂.

13. *Fannia polychaeta* Stein, 1895
Purdoshki, 54.689°N 43.533°E, 25 June 2020, M. Esin, 3♂; Taratinsky cordon, 54.74°N 43.09°E, 27–29 June 2020, K. Tomkovich, 4♂.

14. *Fannia posticata* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, N. Vikhrev, 2♀.

15. *Fannia rondanii* Strobl, 1893
Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 1♂; Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, N. Vikhrev, 1♂.

16. *Fannia scalaris* Fabricius, 1794
Pushta vill. env., 54.71°N 43.22°E, beer traps, 1–14 July 2019, A. Ruchin, 3♂.

17. *Fannia serena* Fallen, 1825
Common in May-July.
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 6♂.

18. *Fannia similis* (Stein, 1895)
Common in June — July.
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020, N. Vikhrev, 3♂.

19. *Fannia sociella* Zetterstedt, 1845
Common from June to September.
Pushta vill., 54.71°N 43.22°E: 8–12 June 2020, N. Vikhrev, 2♂; 1–5 September 2020, N. Vikhrev, 2♂; Taratinsky cordon, 54.74°N 43.09°E, 27–29 June 2020, K. Tomkovich, 1♂.

20. *Fannia spathiophora* Malloch, 1918
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020, N. Vikhrev, 3♂, 1♀; Novenkovsky cordon, 54.931°N 43.421°E, 4–7 July 2020, K. Tomkovich, 3♂.

21. *Fannia umbrosa* Stein, 1895
Pushta vill. env., 54.71°N 43.22°E: 8–12 June 2020, N. Vikhrev, 1♂; 27 June 2020, M. Esin, 1♂; 1–5 September 2020, N. Vikhrev, 1♂.

22. *Fannia vespertilionis* Ringdahl, 1934
Pushta vill. env., 54.71°N 43.22°E, beer traps, 1–14 July 2019, A. Ruchin, 5♂, 1♀.
REMARK. This uncommon species was collected by beer traps only.

23. *Piezura graminicola* Zetterstedt, 1846
Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 1♀.

Muscidae

Achanthipterinae

1. *Achanthiptera rohrelliformis* Robineau-Desvoidy, 1830
Rosstanye, 54.831°N 43.135°E, YPT, 10–19 June 2019, A. Ruchin, M. Esin, 1♀;
Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 5♀; Torbeevo env., 54.04°N 43.21°E, YPT, 1–4 August 2020, K. Tomkovich, M. Esin, 1♀.

Azeliinae

Azeliini

2. *Azelia aterrima* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E: 6–12 June 2020, M. Yanbulat, 1♂; 29 July 2020, M. Esin, 1♂; 1–5 September 2020, N. Vikhrev, 1♂; Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 1♂.

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REMARKS. Uncommon species, occurs in moist forest thickets. Widely distributed from W Europe to Russian Far East and N Vietnam (Vikhrev 2015), recently reported for Altai Mts (Vikhrev, Sorokina 2017).

3. *Azelia gibbera* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, N. Vikhrev, 1♂.

4. *Azelia cilipes* Haliday, 1838
Inorskoe Lake, 54.728°N 43.15°E, 20 May 2020, N. Vikhrev, 1♂; Pushta vill. env., 54.71°N 43.22°E: 22–26 June 2020, N. Vikhrev, 1♂; 1–5 September 2020, N. Vikhrev, 1♂.

5. *Azelia monodactyla* Loew, 1874
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, horse dung, N. Vikhrev, 5♂; Taratinsky cordon, 54.74°N 43.09°E, 27–29 June 2020, K. Tomkovich, 1♂.

6. *Azelia nebulosa* Robineau-Desvoidy, 1830
Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 1♂.

7. *Azelia trigonica* Hennig, 1956
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, horse dung, N. Vikhrev, 3♂.

8. *Azelia zetterstedtii* Rondani, 1866
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, horse dung, N. Vikhrev, 3♂.

9. *Drymeia vicana* Harria, 1780
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020, on pasture, attracted by human body, N. Vikhrev, 3♀.

10. *Hydrotaea (Ophyra) aenescens* Wiedemann, 1830
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020, on carrion, N. Vikhrev, 3♂, 1♀.

11. *Hydrotaea armipes* Fallen, 1825
Pushta vill. env., 54.71°N 43.22°E: 22–26 June 2020, M. Esin, 1♂; 1–5 September 2020, N. Vikhrev, 2♂.

12. *Hydrotaea borussica* Stein, 1899
Novenkovsky cordon, 54.931°N 43.421°E, 4–7 July 2020, K. Tomkovich, 3♀.
REMARKS. Vikhrev (2013) reviewed *Hydrotaea irritans* group. In "Notes on identification of females" he suggested that the generally accepted understanding of females of *H. borussica* as having dark abdomen with a pair of shining spots on tergite 3 is erroneous. According to Vikhrev (2013, 287), the presence of shining spots on tergite 3 is not a genetic character but a result of wiping of abdominal dusting by wings in aged female specimens. Without paying attention to the presence or absence of shining spots, females of *H. pandelei* and *H. irritans* have the abdomen entirely dark, while females of *H. borussica* have part of the abdomen yellow.

Females of *H. pellucens* collected in Mordovia in 2020 have the abdomen translucent yellow only at lateral sides of syntergite 1+2 (Fig. 8) as well as those collected in 2019 in Belarus. Such abdominal pattern for females of *H. pellucens* was also indicated by Gregor et al. (2002). However, three females from the *Hydrotaea irritans* group collected in early July have sides of abdomen extensively yellow (Fig. 7). We identified these females as *H. borussica* though some doubt remains unless male specimen(s) are collected.

13. *Hydrotaea* (*Ophyra) capensis* Wiedemann, 1818
Pushta vill. env., 54.71°N 43.22°E, 21 July 2020, K. Tomkovich, 4♂.
REMARK. One of the northernmost record of the species.

14. *Hydrotaea cyrtoneurina* Zetterstedt, 1845
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020, on carrion, N. Vikhrev, 2♂.

15. *Hydrotaea dentipes* Fabricius, 1805
Common.
Pushta vill. env., 54.71°N 43.22°E: 18–22 May 2020, N. Vikhrev, 2♂; 1–5 September 2020, M. Esin, 1♂.

16. *Hydrotaea diabolus* Harris, 1780
Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, M. Yanbulat, 1♀, M. Esin, 1♂.

17. *Hydrotaea floccosa* Macquart, 1835
Krasnoslobodsky distr., Selischi, 54.481°N 43.522°E, forest edge, YPT, 1–4 August 2020, K. Tomkovich, M. Esin, 1♂.

18. *Hydrotaea glabricula* Fallen, 1825
Pushta vill. env., 54.71°N 43.22°E: 6–12 June 2020, N. Vikhrev, 1♀; 6 August 2020, K. Tomkovich, 1♂, 14♀.
REMARK. According to Gregor et al. (2002)

Figs 7–8. Abdominal patterns of females of the *Hydrotaea irritans* group collected in Mordovia: *7 — H. borussica*; *8 — H. pellucens*

Рис. 7–8. Окраска брюшка самок группы *Hydrotaea irritans*, собранных в Мордовии: *7 — H. borussica*; *8 — H. pellucens*

the species is attracted by rotting meat. Mordovian specimens were collected near cattle burial ground. However, they were attracted not by carrion but by human body, mostly legs.

19. *Hydrotaea (Ophyra) ignava* Harris, 1780
Common on carrion.
Pushta vill. env., 54.71°N 43.22°E, on carrion: 22–26 June 2020, N. Vikhrev, 1♂, 1♀; 1–5 September 2020, N. Vikhrev, 1♀.

20. *Hydrotaea irritans* Fallen, 1823
(Vikhrev 2013)
Pushta vill. env., 54.71°N 43.22°E: 6–12 June 2020, N. Vikhrev, 1♂; 22–26 June 2020, M. Esin, 2♂, K. Tomkovich, 1♂.

21. *Hydrotaea meteorica* Linnaeus, 1758
Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, N. Vikhrev, 1♂.

22. *Hydrotaea militaris* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E, 6–12 June 2020, M. Esin, 1♂, N. Vikhrev, 3♀; Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 1♂.

23. *Hydrotaea palaestrica* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E, on carrion, 6–12 June 2020, M. Esin, 1♂, N. Vikhrev, 3♂.

24. *Hydrotaea pandellei* Stein, 1899
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, N. Vikhrev, 2♂, 1♀; Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 4♂, 3♀.

25. *Hydrotaea parva* Meade, 1889
Pushta vill. env., 54.71°N 43.22°E, horse dung: 6–12 June 2020, N. Vikhrev, 3♂; 1–5 September 2020, N. Vikhrev, 1♂.

26. *Hydrotaea pellucens* Porchinskiy, 1879
Inorskoe Lake, 54.728°N 43.15°E, on carrion, 20 May 2020, N. Vikhrev, 1♂, M. Esin, 1♂; Pushta vill. env., 54.71°N 43.22°E, on carrion, 6–12 June 2020, N. Vikhrev, 1♂, 4♀.
REMARKS. An interesting finding. *H. pellucens* is a European species originally described from Belarus, vicinity of Mogilev. The species may be reliably identified by males while identification of females is more doubtful as discussed above in remarks to *H. borussica* and in (Vikhrev 2013).

In main Russian entomological collections males of *H. pellucens* are represented by two series: the first series are the specimens from NW of European Russia (in Zoological Institute, Saint Petersburg) and the other series are specimens recently collected in Belarus,

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Gomel region (Zoological Museum of Moscow University), see Makovetskaya & Vikhrev (2020). According to hitherto known records, *H. pellucens* did not extend beyond 31°E, so the Mordovian record moves the known eastern distributional limit by almost 1000 km.

There are several records of *H. pellucens* from Ural and W Siberia (Sorokina, Pont 2010) based on Russian regional publications in which this species was identified by females. We believe that these records most probably are misidentifications of *H. borussica* which extends far in Siberia till at least 93°E.

27. *Hydrotaea pilipes* Stein, 1903
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 4♂, 4♀.

28. *Hydrotaea similis* Meade, 1887
Pushta vill. env., 54.71°N 43.22°E, 17–20 July 2020, M. Esin, 1♂.

29. *Hydrotaea tuberculata* Rondani, 1866
Smolny National Park (16 km NE of Kemlya), 54.76°N 45.47°E, 22 June 2018, G. Semishin, 1♂.

30. *Hydrotaea velutina* Robineau-Desvoidy, 1830
Common in June.
Inorskoe Lake, 54.728°N 43.15°E, 9 June 2020, N. Vikhrev, 2♂; Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, N. Vikhrev, 2♂.

31. *Potamia littoralis* Robineau-Desvoidy, 1830
Pushta vill. env., 54.71°N 43.22°E: beer traps, 1–14 July 2019, A. Ruchin, 1♂, 2♀; 1–5 September 2020, N. Vikhrev, 1♀.

32. *Thricops cunctans* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E, 6–12 June 2020, M. Yanbulat, 1♂.
REMARK. Seems to be the southernmost record of *T. cunctans* in lowlands of European Russia (not counting finds in the mountains of the Urals or the Caucasus).

33. *Thricops nigrifrons* Robineau-Desvoidy, 1830
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, N. Vikhrev, 2♂.

34. *Thricops nigritellus* Zetterstedt, 1838
Purdoshki, 54.689°N 43.533°E, 25 June 2020, M. Esin, 1♂.
REMARK. Seems to be the southernmost record of *T. nigritellus* in lowlands of European Russia (not counting finds in the mountains of the Urals or the Caucasus).

35. *Thricops semicinereus* Wiedemann, 1817
Common in June-July.
Pushta vill. env., 54.71°N 43.22°E: beer traps, 1–14 July 2019, A. Ruchin, 1♀; 6–12 June 2020, M. Esin, 1♂, 1♀; Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 1♂.

36. *Thricops simplex* Wiedemann, 1817
Common late summer and autumn species.
Pushta vill. env., 54.71°N 43.22°E: beer traps, 1–14 July 2019, A. Ruchin, 3♂, 1♀; on light, 6 October 2019, N. Vikhrev, 3♀; 8–12 June 2020, N. Vikhrev, 2♂, 2♀; 20–27 July, YPT, K. Tomkovich, 3♂, 2♀.

37. *Thricops sudeticus* Schnabl, 1888
Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 1♀.
REMARK. Distinguishing of *T. sudeticus* from *T. albibasalis* by female is not reliable.

Reinwardtiini

38. *Muscina levida* Harris, 1780
(Plavilschikov 1964, as *M. assimilis*)
Pushta vill. env., 54.71°N 43.22°E, beer traps, 1–14 July 2019, A. Ruchin, 3♂.

39. *Muscina pascuorum* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E: beer traps, 1–14 July 2019, A. Ruchin, 2♀; 1–5 September 2020, N. Vikhrev, 1♀.

40. *Muscina stabulans* Fallen, 1817
Pushta vill. env., 54.71°N 43.22°E, beer traps, 1–14 July 2019, A. Ruchin, 1♂, 4♀.

Muscinae
Muscini

41. *Eudasyphora cyanicolor* Zetterstedt, 1845
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 2♀; 6–12 June 2020, N. Vikhrev, 1♂.

42. *Mesembrina meridiana* Linnaeus, 1758
(Feoktistov 2011)
Rosstanye, 54.831°N 43.135°E, YPT, 10–19 June 2019, A. Ruchin, M. Esin, 2♂; Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, M. Esin, 1♀.

43. *Mesembrina mystacea* Linnaeus, 1758
(Plavilschikov 1964)
Novenkovsky cordon, 54.931°N 43.421°E, 7 July 2020, K. Tomkovich, 1♀.

44. *Morellia aenescens* Robineau-Desvoidy, 1830
Pushta vill. env., 54.71°N 43.22°E, horse dung, 22–26 June 2020, N. Vikhrev, 2♂.

45. *Morellia podagrica* Loew, 1857
Pavlovsky cordon, 54.75°N 43.40°E, 16 August 2018, G. Semishin, 1♂.

46. *Musca autumnalis* De Geer, 1776
(Plavilschikov 1964, as *M. corvina*)
Common.
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, M. Yanbulat, 1♂.

47. *Musca domestica* Linnaeues, 1758
(Plavilschikov 1964)
Common.
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020, N. Vikhrev, 1♂, 1♀.

48. *Musca tempestiva* Fallen, 1817
(Plavilschikov 1964)

49. *Neomyia cornicina* Fabricius, 1781
(Plavilschikov 1964, as *Cryptolucilia caesarion*)

50. *Neomyia viridescens* Robineau-Desvoidy, 1830
Pushta vill. env., 54.71°N 43.22°E: 18–22 May 2020, N. Vikhrev, 1♂, 2♀; 1–5 September 2020, N. Vikhrev, 1♀.

51. *Polietes domitor* Harris, 1780
Common on faeces or horse dung.
Pushta vill. env., 54.71°N 43.22°E: 18–22 May 2020, N. Vikhrev, 2♂; 1–5 September 2020, N. Vikhrev, 1♀.

52. *Polietes lardarius* Fabricius, 1781
Common on faeces or horse dung.
Pushta vill. env., 54.71°N 43.22°E: 8–12 June 2020, N. Vikhrev, 1♂, 2♀; 1–5 September 2020, N. Vikhrev, 1♀.

53. *Polietes steinii* Ringdahl, 1913
Pushta vill. env., 54.71°N 43.22°E, horse dung: 18–22 May 2020, M. Esin, 1♂; N. Vikhrev, 1♂, 1♀; 1–5 September 2020, N. Vikhrev, 1♂, 1♀; Taratinsky cordon, 54.74°N 43.09°E, 27–29 June 2020, K. Tomkovich, 4♂.

54. *Pyrellia rapax* Harris, 1780
Pushta vill. env., 54.71°N 43.22°E, horse dung: 8–12 June 2020, N. Vikhrev, 1♂, 1♀; 22–26 June 2020, N. Vikhrev, 1♀.

55. *Pyrellia vivida* Robineau-Desvoidy, 1830
(Feoktistov 2011, as *P. cadaverina*)

Stomoxyini

56. *Haematobia irritans* Linnaeus, 1758
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, N. Vikhrev, 1♀.

57. *Haematobosca stimulans* Meigen, 1824
(Plavilschikov 1964)

58. *Stomoxys calcitrans* Linnaeus, 1758
(Plavilschikov 1964)
Common on the walls of the cattle pens.
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, N. Vikhrev, 3♂, 1♀.

Phaoniinae
Eginiini

59. *Eginia ocypterata* Meigen, 1826
Novenkovsky cordon, 54.931°N 43.421°E, 4–7 July 2020, K. Tomkovich, 1♂, 1♀; Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 1♂.

Phaoniini

60. *Helina confinis* Fallen, 1825
Pushta vill. env., 54.71°N 43.22°E, beer traps, 1–14 July 2019, A. Ruchin, 2♂; Novenkovsky cordon, 54.931°N 43.421°E, 4–7 July 2020, K. Tomkovich, 4♂, 2♀; Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 6♂, 4♀.

61. *Helina cothurnata* Rondani, 1866
Pushta R. bridge, 54.749°N 43.201°E, 21 May 2020, N. Vikhrev, 1♀.

62. *Helina evecta* Harris, 1780
Smolny National Park (16 km NE of Kemlya), 54.76°N 45.47°E, 4 July 2018, G. Semishin, 1♀; Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, N. Vikhrev, 1♀.

63. *Helina depuncta* Fallen, 1825
Pushta vill. env., 54.71°N 43.22°E, beer traps, 1–14 July 2019, A. Ruchin, 4♂, 6♀.

64. *Helina impuncta* Fallen, 1825
Common.
Pushta vill. env., 54.71°N 43.22°E, beer traps,

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1–14 July 2019, A. Ruchin, 29♂, 20♀; Taratinsky cordon, 54.74°N 43.09°E, 27–29 June 2020, K. Tomkovich, 1♂, 3♀.

65. *Helina maculipennis* Zetterstedt, 1845
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020, N. Vikhrev, 1♂.

66. *Helina obscurata* Meigen, 1826
Temnikov env., Endovische Lake, 54.648°N 43.228°E, 3 September 2020, N. Vikhrev, 1♂.

67. *Helina pertusa* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E, 6–12 June 2020, N. Vikhrev, 1♀; Taratinsky cordon, 54.74°N 43.09°E, 27–29 June 2020, K. Tomkovich, 1♀.

68. *Helina setiventris* Ringdahl, 1924
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, N. Vikhrev, 2♂.

69. *Helina sexmaculata* Preyssler, 1791
Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 1♂, 1♀.

70. *Helina tetrastigma* Meigen, 1826
54.782°N 43.183°E, burned forest, YPT, 23–26 July 2020, K. Tomkovich, M. Esin, 1♂.

71. *Helina trivittata* Zetterstedt, 1860
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, K. Tomkovich, 4♂.

72. *Phaonia aeneiventris* Zetterstedt, 1845
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020, N. Vikhrev, 2♀.

73. *Phaonia angelicae* Scopoli, 1763
Common in June — August.
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, M. Esin, 1♀, 1♀; Novenkovsky cordon, 54.931°N 43.421°E, 4–7 July 2020, K. Tomkovich, 1♀.

74. *Phaonia canescens* Stein, 1916
Taratinsky cordon, 54.74°N 43.09°E, 27–29 June, K. Tomkovich, 2♀; Novenkovsky cordon, 54.931°N 43.421°E, 4–7 July 2020, K. Tomkovich, 1♀.

75. *Phaonia cincta* Zetterstedt, 1846
(Vikhrev et al. 2020)

76. *Phaonia errans* Meigen 1826
Temnikov env., Endovische Lake, 54.648°N 43.228°E, 3 September 2020, N. Vikhrev, 1♀.

77. *Phaonia falleni* Michelsen, 1977
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 1♂, 1♀.

78. *Phaonia fuscata* Fallen, 1825
Pushta vill. env., 54.71°N 43.22°E, beer traps, 1–14 July 2019, A. Ruchin, 2♀.

79. *Phaonia gobertii* Mik, 1881
Taratinsky cordon, 54.74°N 43.09°E, 27–29 June, K. Tomkovich, 1♀.

80. *Phaonia incana* Wiedemann, 1817
Pushta vill. env., 54.71°N 43.22°E: 22–26 June 2020, N. Vikhrev, 2♂, M. Esin, 1♂; 1–5 September 2020, N. Vikhrev, 1♀.

81. *Phaonia kowarzii* Schnabl, 1887
Pushta vill. env., 54.71°N 43.22°E, 22 July 2020, M. Esin, 1♀.

82. *Phaonia laeta* Fallen, 1823
Pushta vill. env., 54.71°N 43.22°E, beer traps, 1–14 July 2019, A. Ruchin, 1♂, 1♀.

83. *Phaonia magnicornis* Zetterstedt, 1845
Inorskoe Lake, 54.728°N 43.15°E, 9 June 2020, N. Vikhrev, 1♂; Purdoshki env., 54.689°N 43.533°E, 6 September 2020, N. Vikhrev, 1♀.

84. *Phaonia nymphaearum* Robineau-Desvoidy, 1830
Pushta vill. env., 54.71°N 43.22°E: 18–22 May 2020, M. Esin, 1♂, N. Vikhrev, 5♂, 5♀; 8–12 June 2020, N. Vikhrev, 3♀; 22–26 June 2020, M. Yanbulat, 1♂, 1♀.

85. *Phaonia pallida* Fabricius, 1787
Common in July.
Pushta vill. env., 54.71°N 43.22°E: beer traps, 1–14 July 2019, A. Ruchin, 111♂, 280♀; 1–5 September 2020, N. Vikhrev, 1♀.

86. *Phaonia palpata* Stein, 1897
Pushta vill. env., 54.71°N 43.22°E: 8–12 June 2020, N. Vikhrev, 1♀; 22–26 June 2020, N. Vikhrev, 1♂, 2♀.

87. *Phaonia rufiventris* Scopoli, 1763
Pushta vill. env., 54.71°N 43.22°E: 8–12 June 2020, N. Vikhrev, 1♀; 1–5 September 2020, N. Vikhrev, 3♀.

88. *Phaonia serva* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020, N. Vikhrev, 4♂, 6♀.

89. *Phaonia subventa* Harris, 1780
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020, N. Vikhrev, 1♂, 1♀.

90. *Phaonia tiefii* Schnabl, 1888
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, M. Esin, 1♂.

91. *Phaonia tuguriorum* Scopoli, 1763
Pushta vill. env., 54.71°N 43.22°E, 6–12 June 2020, M. Esin, 1♀; Taratinsky cordon, 54.74°N 43.09°E, 27–29 June, K. Tomkovich, 1♀.

92. *Phaonia valida* Harris, 1780
Pushta vill. env., 54.71°N 43.22°E, YPT, 25–29 July 2020, K. Tomkovich, 1♀.

93. *Phaonia zugmayeriae* Schnabl, 1888
Smolny National Park (16 km NE of Kemlya), 54.76°N 45.47°E, 17 September 2019, G. Semishin, 1♀.

Mydaeinae

94. *Graphomya maculata* Scopoli, 1763
Pushta vill. env., 54.71°N 43.22°E: 8–12 June 2020, N. Vikhrev, 1♀; 1–5 September 2020, M. Esin, 1♂.

95. *Gymnodia humilis* Zetterstedt, 1860
Pushta vill. env., 54.71°N 43.22°E, horse dung: 8–12 June 2020, N. Vikhrev, 1♀; 22–26 June 2020, N. Vikhrev, 3♂, 1♀.

96. *Gymnodia polystigma* Meigen, 1826
(Plavilschikov 1964, as *Limnophora polystigma*)

97. *Hebecnema umbratica* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E, horse dung, 18–22 May 2020, N. Vikhrev, 2♂.

98. *Hebecnema vespertina* Fallen, 1823
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 2♂.

99. *Mydaea affinis* Meade, 1891
Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 8♀.

100. *Mydaea ancilla* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E: 8–12 June 2020, N. Vikhrev, 1♂, 2♀; YPT, 26–30 June 2020, K. Tomkovich, 1♂, 1♀, identified by Elena Erofeeva.

101. *Mydaea corni* Scopoli, 1763
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020, N. Vikhrev, 1♂, M. Esin, 2♀.

102. *Mydaea electa* Zetterstedt, 1860
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020, N. Vikhrev, 2♂; Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 1♂, 1♀, identified by Elena Erofeeva.

103. *Mydaea humeralis* Robineau-Desvoidy, 1830
Pushta vill. env., 54.71°N 43.22°E: 8–12 June 2020, M. Esin, 1♂; 22–26 June 2020, M. Esin, 1♂; 24 July 2020, K. Tomkovich, 1♂, 1♀.

104. *Mydaea nebulosa* Stein, 1893
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020, M. Esin, 1♂, 1♀, identified by Elena Erofeeva.

105. *Mydaea nubila* Stein, 1916
Torbeevo env, 54.04°N 43.21°E, YPT, 1–4 August 2020, K. Tomkovich, M. Esin, 1♂, 1♀, identified by Elena Erofeeva.

106. *Mydaea orthonevra* Macquart, 1835
Sredn. Melnitsa cordon, 54.902°N 43.232°E, 15 June 2020, G. Semishin, 1♂, 1♀, identified by Elena Erofeeva.

107. *Mydaea setifemur* Ringdahl, 1924
Pushta vill. env., 54.71°N 43.22°E, horse dung, 8–12 June 2020, N. Vikhrev, 1♂, identified by Elena Erofeeva.

108. *Mydaea urbana* Meigen, 1826
Common.
Pushta vill. env., 54.71°N 43.22°E, 8–12 June 2020, N. Vikhrev, 4♂, 2♀.

109. *Myospila meditabunda* Fabricius, 1781
Pushta vill. env., 54.71°N 43.22°E, horse dung, 18–22 May 2020, N. Vikhrev, 2♀.

Coenosiinae
Limnophorini

110. *Limnophora maculosa* Meigen, 1826
Andreevka env., 54.62°N 43.34°E, 1 September 2020, M. Esin, 1♂.

111. *Limnophora pollinifrons* Stein, 1916
Temnikov, Moksha R. sandy beach, 54.625°N 43.200°E, 3 August 2020, K. Tomkovich, 2♂, 3♀, M. Esin, 3♂, 2♀.

112. *Limnophora riparia* Fallen, 1824
Purdoshki env., 54.689°N 43.533°E, 25 June 2020, N. Vikhrev, 3♂, 3♀.

113. *Limnophora tigrina* Am Stein, 1860
20 km W of Saransk, 54.137°N 44.906°E, 21 June 2020, N. Vikhrev, 1♂, 2♀.

114. *Limnophora triangula* Fallen, 1825
Pushta vill. env., 54.71°N 43.22°E: 6–12 June 2020, N. Vikhrev, 1♂, 1♀; 1–5 September, M. Esin, 1♂.

115. *Lispe consanguinea* Loew, 1858
Common on beach of the Moksha River.
20 km W of Saransk, 54.137°N 44.906°E, 21 June 2020, N. Vikhrev, 1♂; Purdoshki env.,

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54.689°N 43.533°E, 25 June 2020, M. Esin, 3♂, 3♀.

116. *Lispe melaleuca* Loew, 1847
20 km W of Saransk, 54.137°N 44.906°E, 21 June 2020, N. Vikhrev, 1♂.

117. *Lispe nana* Macquart, 1835
Purdoshki env., 54.689°N 43.533°E: 25 June 2020, N. Vikhrev, 1♂; 6 September 2020, N. Vikhrev, 1♂; Chumartovo, 54.677°N 43.339°E, 1 September 2020, N. Vikhrev, 1♂.

118. *Lispe pygmaea* Fallen, 1825
Purdoshki env., 54.689°N 43.533°E, 25 June 2020, N. Vikhrev, 3♀.

119. *Lispe superciliosa* Loew, 1861
20 km W of Saransk, 54.137°N 44.906°E, 21 June 2020, N. Vikhrev, 6♂, 2♀; Chumartovo, 54.677°N 43.339°E, 1 September 2020, N. Vikhrev, 1♀.

120. *Lispe tentaculata* De Geer, 1776
Common.
Temnikov, pool, 54.644°N 43.193°E, 10 June 2020, M. Esin, 2♂; Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, M. Esin, 1♂.

121. *Spilogona aerea* Fallen, 1825
(Plavilschikov 1964, as *Limnophora aerea*)

122. *Spilogona contractifrons* Zetterstedt, 1838
Pushta R. bridge, on *Rubus idaeus*, 54.749°N 43.201°E, 5 August 2020, K. Tomkovich, 1♂, identified by Vera Sorokina.

123. *Spilogona depressula* Zetterstedt, 1845
Temnikov, Moksha R. sandy beach, 54.625°N 43.200°E, 3 August 2020, K. Tomkovich, 1♂, 1♀, identified by Vera Sorokina.

124. *Spilogona surda* Zetterstedt, 1845
Purdoshki env., 54.689°N 43.533°E, 25 June 2020, N. Vikhrev, 4♂, 1♀; Temnikov, Moksha R. sandy beach, 54.625°N 43.200°E, 3 August 2020, K. Tomkovich, 2♂.

Coenosiini

125. *Coenosia agromyzina* Fallen, 1825
Common from May to September.
Pushta vill. env., 54.71°N 43.22°E: 6–12 June 2020, N. Vikhrev, 1♀; 5 August 2020, K. Tomkovich, 1♀; 1–5 September 2020, N. Vikhrev, 1♂; Taratinsky cordon, 54.74°N 43.09°E, 27–29 June 2020, K. Tomkovich, 1♂.

126. *Coenosia atra* Meigen, 1830
Steklyanny env., 54.89°N 43.60°E, 12–15 July 2020, K. Tomkovich, 3♀.

127. *Coenosia humilis* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, N. Vikhrev, 2♂, 1♀, M. Esin, 2♂; Steklyanny env., 54.89°N 43.60°E, 9–15 July 2020, K. Tomkovich, 1♂.

128. *Coenosia lineatipes* Zetterstedt, 1845
Krasnoslobodsky distr., Selischi, 54.481°N 43.522°E, forest edge, YPT, 1–4 August 2020, K. Tomkovich, M. Esin, 1♂, identified by Vera Sorokina.

129. *Coenosia mollicula* Fallen, 1825
Common in summer.
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, K. Tomkovich, 2♂, 2♀; Novenkovsky cordon, 54.931°N 43.421°E, 4–7 July 2020, K. Tomkovich, 3♂, 2♀.

130. *Coenosia pudorosa* Collin, 1953
Pushta vill. env., 54.71°N 43.22°E, 1–5 September 2020, N. Vikhrev, 1♂.
REMARKS. This is the easternmost record for this species (were Belarus and vicinity of Saint Petersburg).

C. pudorosa has a characteristic chaetotaxy of hind tibia: there is fine and long seta in *v* position instead of the typical for *Coenosia* short and strong *av* seta. This character is helpful for reliable identification of *C. pudorosa*. It was mentioned in Collin's (1953) original description and in Hennig's (1962) redescription.

131. *Coenosia pumila* Fallen, 1825
Common from May to September.
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 1♂; Zubova Polyana env., 54.07°N 42.86°E, 30 August 2020, N. Vikhrev, 1♂; Purdoshki env., 54.689°N 43.533°E, 6 September 2020, M. Yanbulat, 1♂.

132. *Coenosia pygmaea* Zetterstedt, 1845
Purdoshki env., 54.689°N 43.533°E, 6 September 2020, M. Yanbulat, 1♂.
REMARKS. In Hennig's (1962, 597–598) redescription of *C. pygmaea* it is clearly stated that "Fore tarsus yellow with the exception of the two dark segments." However, from his key to males (Hennig 1962, 529) it is not

obvious that both apical fore tarsomeres are dark. In their key (for ♂ *C. pygmaea*) Gregor et al. (2002, 75) use absolutely clear but erroneous wording: "Only last tarsomere of fore leg black", though in their descriptive notes (Gregor et al. 2002, 192) they correctly wrote that "two distal tarsomeres of fore tarsi darkened". The error makes identification of *C. pygmaea* by Gregor's key impossible. Males of two closely related species we recorded in Mordovia may be distinguished as follows:

— Fore tarsus with two distal tarsomeres abruptly black, three basal tarsomeres yellow. *f2* entirely yellow; *f3* yellow or slightly darkened at apex .... *pygmaea* Zetterstedt

— Fore tarsus more widely darkened, at least three distal tarsomeres dark, only one or two basal tarsomeres yellow; border between dark and yellow parts is fuzzy. *f2* with dark apical ring, *f3* darkened in apical third ..... *verralli* Collin

133. *Coenosia rufipalpis* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, K. Tomkovich, 1♂.

134. *Coenosia strigipes* Stein, 1916
Pushta vill. env., 54.71°N 43.22°E, 6–12 June 2020, N. Vikhrev, 1♂, 2♀.

135. *Coenosia testacea* Robineau-Desvoidy, 1830
Purdoshki env., 54.689°N 43.533°E, 25 June 2020, K. Tomkovich, 1♂.

136. *Coenosia trilineela* Zetterstedt, 1838
Pushta vill. env., 54.71°N 43.22°E, 6–12 June 2020, N. Vikhrev, 1♂, 2♀.

137. *Coenosia verralli* Collin, 1953
Zubova Polyana env., 54.07°N 42.86°E, 30 August 2020, N. Vikhrev, 3♂.

138. *Lispocephala alma* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E: 18–22 May 2020, N. Vikhrev, 2♀; 1–5 September 2020, N. Vikhrev, 1♂, 1♀.

139. *Lispocephala erythrocera* Robineau-Desvoidy, 1830
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 2♀; Steklyanny cordon, 54.894°N 43.601°E, 9–15 July 2020, K. Tomkovich, 1♂; 1–5 September 2020, N. Vikhrev, 1♂, 1♀.

140. *Lispocephala verna* Fabricius, 1794
Pushta vill. env., 54.71°N 43.22°E: 6–12 June 2020, N. Vikhrev, 1♂; 1–5 September 2020, N. Vikhrev, 1♂; Purdoshki env., 54.689°N 43.533°E, 6 September 2020, M. Yanbulat, 1♀.

141. *Schoenomyza litorella* Fallen, 1823 (Plavilschikov 1964)
Pushta vill. env., 54.71°N 43.22°E: 22–26 June 2020, N. Vikhrev, 2♀; 1–5 September 2020, N. Vikhrev, 1♂.

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