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.
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. Redikorsetsev, 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)
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
Taratsinski 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
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 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,

— Hypopygium as in Fig. 5. Row of small hairs along lower frontal eye-margin extends only slightly beyond anterior orbital setae ...................... *brunnipes*
6 August 1959. Paratypes: same locality as the holotype, A. Stackelberg, 1953–1959, 8♂; Tuymen oblast (presently Khanty-Mansi reg.), Samarovo (presently Khanty-Mansiysk) on Irtysk 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, Vitsebsk reg.; KAZAKHSTAN, Akmola reg.; RUSSIA: Amur, Arkhangelsk, Astrakhan, Kemerovo, Khakassia, Khanty-Mansi, Komi, Mordovia, Moscow, Novosibirsk, Omsk, Smolensk, Saint Petersburg, Tiwa, Tver, Tuymen 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♂; 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♀.

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

20. *Elgiva cucularia* Linnaeus, 1767
Pusha 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.
Pusha 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
Puroshki env., 54.689°N 43.533°E, 6 September 2020, N. Vikhrev, 1♂.

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

24. *Pherbina coryleti* Scopoli, 1763
Puroshki 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
Puroshki, 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♂; Pusha 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.
Pusha 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 sphega* Fabricius, 1775
Pusha 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.
Pusha 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
Pusha vill. env., 54.71°N 43.22°E, 1–5 September 2020, M. Yanbulat, 1♀.

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

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

33. *Tetanocera hyalipennis* von Roser, 1840
(Plavilschikov 1964)
Pusha 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.
Pusha vill. env., 54.71°N 43.22°E, 8–12 June 2020: N. Vikhrev, 3♂; M. Esin, 1♂.

2. *Fannia canicaris* Linnaeus, 1761
Common.
Pusha 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
Pusha vill. env., 54.71°N 43.22°E, 18–22 May 2020, N Vikhrev, 2♂.

4. *Fannia fuscula* Fallen, 1825
Pusha 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
Puhta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 5♀.

6. *Fannia incisurata* Zetterstedt, 1838
Puhta 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
Puhta vill. env., 54.71°N 43.22°E, 1 May 2020, M. Esin, 1♀.

9. *Fannia metallipennis* Zetterstedt, 1838
Puhta 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 carri-on, 17–22 June 2020, A. Ruchin, 1♀; Taratinsky cordon, 54.74°N 43.09°E, 27–29 June 2020, K. Tomkovich, 1♂; Krasnoslobodsky distr., Selisky, 54.481°N 43.522°E, forest edge, YPT, 1–4 September 2020, K. Tomkovich, M. Esin, 1♀.

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

12. *Fannia pauli* Pont, 1997
Puhta 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
Puhta vill. env., 54.71°N 43.22°E, 1–5 September 2020, N. Vikhrev, 2♀.

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

16. *Fannia scalaris* Fabricius, 1794
Puhta 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.
Puhta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 6♀.

18. *Fannia similis* (Stein, 1895)
Common in June — July.
Puhta 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.
Puhta 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
Puhta 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
Puhta 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
Puhta 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
Puhta 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♂.
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
Pusha 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, 22–26 June 2020, N. Vikhrev, 1♂. 

5. Azelia monodactyla Loew, 1874
Pusha 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
Pusha vill. env., 54.71°N 43.22°E, 18–22 May 2020, horse dung, N. Vikhrev, 3♀.

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

9. Drymeia vicana Harria, 1780
Pusha 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
Pusha vill. env., 54.71°N 43.22°E, 8–12 June 2020, on carrion, N. Vikhrev, 3♂, 1♀.

11. Hydrotaea armipes Fallen, 1825
Pusha 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 Morocco 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
Pusha 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
Pusha vill. env., 54.71°N 43.22°E, 8–12 June 2020, on carrion, N. Vikhrev, 2♂.

15. Hydrotaea dentipes Fabricius, 1805
Common.
Pusha 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
Pusha 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., Selisch, 54.481°N 43.522°E, forest edge, YPT, 1–4 August 2020, K. Tomkovich, M. Esin, 1♂.

18. Hydrotaea glabricula Fallen, 1825
Pusha 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)
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, 4♂, 3♀.

23. *Hydrotaea palaestrica* Meigen, 1826
Pushta vill. env., 54.71°N 43.22°E, 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,
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. *Hydrotæa pilipes* Stein, 1903
Pushta vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 4♂, 4♀.

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

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

30. *Hydrotæa 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
Pushta vill. env., 54.71°N 43.53°E, 25 June 2020, M. Esin, 1♂.

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.

**Reinwardtiiini**

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**

41. *Eudasphora 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♀.
A list of the Sciomyzidae, Fanniidae and Muscidae (Diptera) of Mordovia

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 Linnaeus, 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)

Stomoxyni

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♀.

Phaoniiniae

Egiini

59. Eginia ocypterata Meigen, 1826
Novenkovsky cordon, 54.931°N 43.421°E, 4–7 July 2020, K. Tomkovich, 1♂, 1♀; Stekylyanny 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♀; Stekylyanny 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,
1–14 July 2019, A. Ruchin, 2♀, 2♂; 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 aeneventris 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 Schnabl, 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 tieffi Schnabl, 1888
Pushta vill. env., 54.71°N 43.22°E, 22–26 June 2020, M. Esin, 1♂.
A list of the Sciomyzidae, Fanniidae and Muscidae (Diptera) of Mordovia

91. *Phaonia tuguriorum* Scopoli, 1763
   Pushta vill. env., 54.71°N 43.22°E, 6–12 June 2020, M. Esin, 1♂; Taratinisky 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♀.

**Mydaea**

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. *Gymnedia 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. *Gymnedia 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 Efroeeva.

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 Efroeeva.

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 Efroeeva.

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 Efroeeva.

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

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 Efroeeva.

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
    Purdoshki env., 54.71°N 43.22°E, horse dung, 18–22 May 2020, N. Vikhrev, 2♀.

**Coenosiinae**

**Limmophorini**

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

111. *Limmophora 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. *Limmophora riparia* Fallen, 1824
    Purdoshki env., 54.689°N 45.353°E, 25 June 2020, N. Vikhrev, 3♂, 3♀.

113. *Limmophora tigrina* Am Stein, 1860
    20 km W of Saransk, 54.137°N 44.906°E, 21 August 2020, K. Tomkovich, M. Esin, 1♂.

114. *Limmophora 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.,
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♂; Pusha vill. env., 54.71°N 43.22°E, 1–5 September 2020, M. Esin, 1♂.

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

122. *Spilogona contractifrons* Zetterstedt, 1838
Pusha 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♂.

**Coenossoini**

125. *Coenosia agromyzina* Fallen, 1825
Common from May to September.
Pusha 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
Pusha 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., Selisch, 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.
Pusha 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
Pusha 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) re-description.

131. *Coenosia pumila* Fallen, 1825
Common from May to September.
Pusha vill. env., 54.71°N 43.22°E, 18–22 May 2020, N. Vikhrev, 1♂; Zubova Poliana 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) re-description 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 Pushhta vill. env., 54.71°N 43.22°E, 22–26 June 2020, K. Tomkovich, 1♂. 134. Coenosia strigipes Stein, 1916 Pushhta 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 Pushhta 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. Lispecephala alma Meigen, 1826 Pushhta vill. env., 54.71°N 43.22°E: 18–22 May 2020, N. Vikhrev, 2♀; 1–5 September 2020, N. Vikhrev, 1♂, 1♀. 139. Lispecephala erythrocerca Robineau-Desvoidy, 1830 Pushhta 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. Lispecephala verna Fabricius, 1794 Pushhta 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 Fabricius, 1823 Pushta vill. env., 54.71°N 43.22°E: 22–26 June 2020, N. Vikhrev, 2♀; 1–5 September 2020, N. Vikhrev, 1♂. ACKNOWLEDGEMENTS We thank Vera Sorokina and Elena Erofeeva for their help in the identification of several specimens. Oleg Kosterin, Igor Shamshev and Ekaterina Makovetskaya offered us several valuable corrections. We thank Konstantin Tomkovich and Gennady Semishin for collecting interesting Mordovian material.

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