

Ladybird beetles fauna (Coleoptera: Coccinellidae) of the Republic of Mordovia, Russia

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Abstract. Ruchin AB, Egorov LV, Semishin GB. 2019. Ladybird beetles fauna (Coleoptera: Coccinellidae) of the Republic of Mordovia, Russia. *Biodiversitas* 20: 316-327. The paper presents the first overview of Coccinellidae fauna of the Republic of Mordovia, Russia. Nowadays 46 species are reliably known in Mordovia. Of these, three species have firstly been registered in the Republic of Mordovia in recent years, namely *Nephus bipunctatus*, *Hyperaspis erythrocephala*, and *Oenopia conglobata*. In addition, three species were recommended to be excluded from the list of regional fauna.

Keywords: Coccinellidae, Coleoptera, distribution, biology, population, ladybird beetles, Russia, Republic of Mordovia

INTRODUCTION

Biodiversity is a data-intensive science, drawing as it does on data from a large number of disciplines in order to build up a coherent picture of the extent and trajectory of life on earth (Grebennikov 2016). The Republic of Mordovia is located in the center of the East European Plain in the south-western periphery of the Volga basin in the interfluvium of Moksha river and Sura river (Ruchin et al. 2018). Therefore, it is expected that region's biodiversity should be high enough. In the last decade as a result of invertebrate fauna inventory, 4000 species were found in the Republic of Mordovia for the first time (Ruchin and Kurmaeva 2010; Chikhlyayev and Ruchin 2014; Chikhlyayev et al. 2016; Ruchin and Artaev 2016; Egorov and Shapovalov 2017; Ruchin and Makarkin 2017; Chursina and Ruchin 2018a, 2018b; Ruchin 2018; Ruchin and Egorov 2017, 2018a, 2018b, 2018c; Ruchin and Grishutkin 2018; Ruchin and Mikhailenko 2018; Ruchin et al. 2018, 2019; Tomaszewska et al. 2018). In doing so, some of these findings are rare species. These findings are of great interest for the researchers.

Coccinellidae (Coleoptera) is a relationally non-numerous family. It consists of about 6000 species in the world fauna (Bouchard et al. 2017); while in Russia more than 160 species are known (Iablokoff-Khnzorian 1983; Korotyaev and Lobanov 2019). The Coccinellidae is one of the most useful in practice among Coleoptera families. Some species of ladybird beetles can regulate the abundance of populations of Cimicidae, Aphidoidea, Coccoidea (Delucchi 1954; Booth 1991; Cheah and McClure 2000; Iftikhar et al. 2018), as well as members of Aleyrodidae, Thripidae (Satti and Mahgoub 2018) and many other soft-bodied insect pests. Therefore, it is widely used for plant protection as a part of biological methods (Evans 1991; Félix and Soares 2004; Soares and Serpa

2007; Khan and Yoldas 2018). On the other hand, few Coccinellidae species are considered as invasive beetles causing visible damage to agriculture (Kajita et al. 2000; Mizell 2007; Soares et al. 2008; Orlova-Bienkowskaja and Bienkowski 2017).

To date, Coccinellidae fauna of the Middle Volga Region consists of about 90 species. The Mordovia State Nature Reserve staff has started the research of Coccinellidae fauna in the Republic of Mordovia. So, Plavilshchikov (1964) has registered 15 species of Coccinellidae species in the Mordovia State Nature Reserve. Later Timraleev (1989) has noted 19 species from 16 genera in the Republic of Mordovia. But the author didn't take into account the article of Plavilshchikov (1964). The relations between Coccinellidae and their potential prey have been studied in agrocoenoses (Antsiferova et al. 1966; Antsiferova and Dobrosmyslov 1966; Antsiferova 1979). Ten Coccinellidae species have been registered on cereal crops (Timraleev 1992). According to the latest data of Timraleev et al. (2007), 20 Coccinellidae species have been found in Mordovia. The main part of these results has already been published (Ruchin 2015; Egorov and Ruchin 2009a). This study was aimed to generalize data on Coccinellidae fauna in the Republic of Mordovia.

MATERIALS AND METHODS

The study has been carried out during 2003-2018 (most intensively in 2008-2018). We used the generally accepted entomological field methods (Fasulati 1971). Finally, more than 4300 specimens were examined.

The description of each species in the annotated list below includes following data: (i) literature devoted to a species within the study area (if it contains a reliable

location of species' record); (ii) newly found locations which have not been published before; (iii) date of collecting; (iv) number of collected specimens; (v) full name of a collector; (vi) notes (if any). If species' location has been found by authors, full name of a collector is not mentioned. The following information is written separately: biology of a species in the Republic of Mordovia, characteristics of habitats preferred by a Coccinellidae species; selected observations of the species' phenology. Species newly registered in Mordovia are marked by asterisk (*). Dash «-» is used to mark the species excluded from the list of regional fauna for different reasons (mentioned to Remarks). The question mark «?» is used for species whose presence in Mordovia needs to be proved by modern data.

Nomenclature of Coccinellidae species is used according to the last edition of Catalogue of Palaearctic Coleoptera (Kovář 2007). Specimen collections are stored in Zoological Museum of Moscow University (Moscow), Zoological Institute of the Russian Academy of Sciences (ZIN) (Saint Petersburg), Museum of the Mordovia State Nature Reserve (Pushta), Biological Museum of the Mordovia State University (Saransk) and private collections. There are abbreviations used in the article: MSNR - Mordovia State Nature Reserve, NPS - National Park «Smolny», exemplar - ex.

Coccinellidae Latreille, 1807

Epilachninae Mulsant, 1846

Subcoccinella vigintiquatuorpunctata (Linnaeus, 1758)

Literature. Temnikov Distr. (Ruchin et al. 2009a; Feoktistov 2011; Egorov and Ruchin 2013, 2014; Egorov et al. 2015, 2017). Ichalki Distr. (Ruchin et al. 2007b; Ruchin 2008b).

Materials. Tengushevo Distr., Khlebino, 18.VII.2015, 1 ex. Temnikov Distr., MSNR, quarter 442, 3.VI.2017, 1 ex.; MSNR, quarter 368, 27.V.2018, 1 ex.; MSNR, quarter 19, 8.VII.2018, 1 ex. Krasnoslobodsk Distr., Penkovo, 31.VIII.2008, 1 ex. Ruzaevka Distr., Levzhenskiy, 22.VII.2008, 1 ex. Atyashevo Distr., Selishchi, 24.VI.2016, 1 ex. Dubenki Distr., 8 km SW Yengalychevo, 1.VII.2009, 1 ex. Kochkurovo Distr., Mordovskoe Davydovo, 23.VII.2008, 1 ex., Kurmaeva D.K. Saransk, 25.VII.2006, 1 ex.

Habitat. It is known on steppe slopes, in mixed and deciduous forests.

Coccinellinae Latreille, 1807

Anisosticta novemdecimpunctata (Linnaeus, 1758)

Literature. Temnikov Distr. (Plavilshchikov 1964; Ruchin et al. 2009a; Egorov and Ruchin 2012, 2013, 2014; Egorov et al. 2015, 2016, 2017).

Materials. Temnikov Distr., MSNR, cordon Dolgiy Most, quarter 408, 13.V.2017, 1 ex., Egorov L.V.; MSNR, quarter 37, 16.V.2018, Egorov L.V.; MSNR, quarter 368, 27.V.2018, 3 ex.; quarter 368, 18.VI.2018, 2 ex., Semishin

G.B. Bolshie Berezniki Distr., 9 km S Simkino, 1.VI.2004, 1 ex.

Habitat. It is known in wet biotopes: on river banks, lake shores, in mature pine sphagnum forests with participation of *Picea* and *Betula*, near forest puddles.

Coccinula quatuordecimpustulata (Linnaeus, 1758) (Figure 1)

Literature. Temnikov Distr. (Plavilshchikov 1964; Ruchin et al. 2009a; Egorov and Ruchin 2012, 2013, 2014; Egorov et al. 2015, 2016, 2017). Ichalki Distr. (Ruchin et al. 2007b; Ruchin 2008b). Romodanovo Distr., Bolshie Berezniki Distr. (Antsiferova 1979).

Materials. Tengushevo Distr., 6 km west of Barashevo, 18.VII.2015, 1 ex.; Barashevo, 3.V.2008, 1 ex. Temnikov Distr., Temnikov, 1.VI.2008, 1 ex.; Saryi Gorod, 17.VIII.2008, 1 ex., Kurmaeva D.K.; Alkaevo, 15.VIII.2015, 1 ex.; Polyanki, 24.VII.2016, 1 ex.; MSNR, quarter 424, 13.V.2017, 1 ex.; MSNR, cordon Inorskiy, 13.V.2017, 1 ex., Egorov L.V., 23-24.VIII.2017, 2 ex., Semishin G.B.; MSNR, quarter 436, 1-15.VI.2017, 1 ex., Egorov L.V., Semishin G.B.; MSNR, quarter 442, 3.VI.2017, 1 ex., MSNR, cordon Drozhdenovkiy, 4.VI.2017, 2 ex.; MSNR, quarter 324, 13.VII.2017, 1 ex.; MSNR, cordon Podrubnyi, 16.VII.2017, 1 ex.; MSNR, quarter 86, 20.IV.2018, 1 ex., Semishin G.B.; MSNR, Pushta, 1.V.2018, 1 ex.; MSNR, quarter 368, 18.V.2018, 27.V.2018, 2 ex., Egorov L.V.; MSNR, quarter 330, 26.V.2018, 1 ex.; MSNR, quarter 332, 23.VI.2018, 1 ex.; quarter 19, 8.VII.2018, 1 ex. Zubova Polyana Distr., Udevo, 8.VI.2008, 1 ex.; 8 km SW Vysha, 31.VII.2009, 1 ex.; Tenishevo, 2.VIII.2015, 1 ex.; Lesnoy, 2.VIII.2015, 1 ex. Aturyevo Distr., Strelnikovo, 2.VII.2016, 2 ex.; Pichopolonga, 2.VII.2016, 1 ex. Torbeevo Distr., Drakino, 26.VII.2016, 2 ex. Elniki Distr., Malye Mordovskie Poshaty, 19.VII.2015, 23.VII.2016, 4 ex.; Novye Shaly, 19.VII.2015, 22.VII.2017, 3 ex.; Svobodnyi, 31.VII.2008, 6 ex. Krasnoslobodsk Distr., Staroe Sindrovo, 1.VIII.2008, 2 ex.; Penkovo, 31.VIII.2008, 3 ex.; Krasnoslobodsk, 8.V.2009, 1 ex.; 5 km NE of Staraya Avgura, 8.VII.2017, 1 ex. Kovylnino Distr., Chepurnovka, 29.VI.2017, 2 ex. Staroe Shaygovo Distr., Staroe Akshino, 11.V.2008, 16.VIII.2008, 30.IV.2017, 4 ex.; Lesnichestvo, 17.V.2008, 1 ex.; Ingener-Pyatina, 10.VII.2016, 1 ex. Ichalki Distr., NPS, Barakhmanovskoe forestry, quarter 108, 20.VI.-4.VII.2017, 1 ex., Semishin G.B., quarter 74, 6.VI.2017, 12.IX.2017, 13.IX.2017, 5 ex., Semishin G.B.; NPS, Kemlyanskoe forestry, quarter 22, 11.VIII.2018, 1 ex., Ручин А.Б.; quarter 105, 12.VII.2018, 2 ex. Ichalki Distr., Sosnovka, 6.VIII.2008, 2 ex.; Khanineevka, 23.VII.2008, 2 ex.; NPS, Lvovskoe forestry, Obrezki, 12.VII.2006, 27.VI.2008, IV-V.2008, IV-V.2008, 21.VI.2008, 6 ex. Romodanovo Distr., Pushkino, 17.VIII.2017, 1 ex.; Zarechnyi, 3.VIII.2018, 3 ex. Lyambir Distr., Atemar, 24.VI.2017, 7.V.2016, 2 ex.; Novaya Uda, 29.VII.2016, 2 ex. Insar Distr., Verkhnyaya Lukhma, 19.VIII.2017, 2 ex. Ardatov Distr., Sosnovoe, 18.VIII.2008, 1 ex. Dubenki Distr., Yavleyka, IV.2008, 10.VIII.2017, 4 ex.; Krasnye Luga, 11.VI.2017, 1 ex.; Olevka, 26.V.2017, 2 ex.; Oktyabrskiy, 26.V.2017, 1 ex.; Bolshoe Kuzmino,

26.V.2017, 1 ex. Chamzinka Distr., Komsomolskiy, VIII.2009, 1 ex., Ryzhov M.K.; Gorbunovka, 24.VI.2016, 1 ex.; Mokshalei, 28.VII.2018, 1 ex. Atyashevo Distr., Atyashevo, 24.VI.2016, 1 ex.; Selishchi, 10.VIII.2017, 2 ex. Ruzaevka Distr., 3 km N of Streletskaya Sloboda, 19.V.2009, 1 ex.; Levzhenskiy, 15.V.2007, 13.VI.2015, 28.VII.2016, 4 ex., 22.VII.2008, 1 ex. Bolshie Berezniki Distr., 9 km S Simkino, 6.VI.2007, 1 ex.; Gart, 19.VII.2008, 2 ex.; Simkino, 12.VIII.2017, 2 ex.; Simkinskoe lesnichestvo, 12.VIII.2017, 1 ex. Kochkurovo Distr., Starye Turdaki, 12.VI.2008, 2 ex.; Sabaev, 3.IX.2009, 14.VII.2018, 3 ex.; Kachelay, 3.IX.2009, 3 ex.; Podlesnaya Tavla, 8.V.2016, 1 ex.; Kochkurovo, 8.V.2016, 2 ex.; Novaya Pyрма, 11.VIII.2017, 1 ex.; Krasnaya Zorka, 29.VII.2017, 1 ex. Saransk, 28.VI.2006, 22.IV.2008, 12.V.2009, 27.VIII.2009, 5 ex.

Habitat. It is known in different open habitats, predominantly in steppe slopes and dry grasslands.

- *Coccinula sinuatomarginata* (Faldermann, 1837)

Remarks. It is noted by Timraleev (1998) and Timraleev et al. (2007) without indication of localities. It inhabits dry steppes, predominantly cretaceous ones (Isaev and Egorov 2006). This species is not presented in the materials. Its presence in Mordovia is highly unreliable. Hence we recommended to exclude this species from the list of regional fauna.

Tytthaspis gebleri (Mulsant 1850)

Literature. Temnikov Distr. (Egorov and Ruchin 2013; Egorov et al. 2016).

Materials. Temnikov Distr., MSNR, cordon Dolgiy Most, 13.V.2017, 1 ex., Egorov L.V. Zubova Polyana Distr., 8 km SW Vysha, 31.VII.2009, 1 ex.; Tenishevo, 2.VIII.2015, 1 ex. Elniki Distr., Malye Mordovskie Poshaty, 19.VII.2015, 1 ex. Atyashevo Distr., Kamenka, 24.VI.2016, 1 ex.

Habitat. It is known in pine forest edges, dry grasslands, steppe slopes.

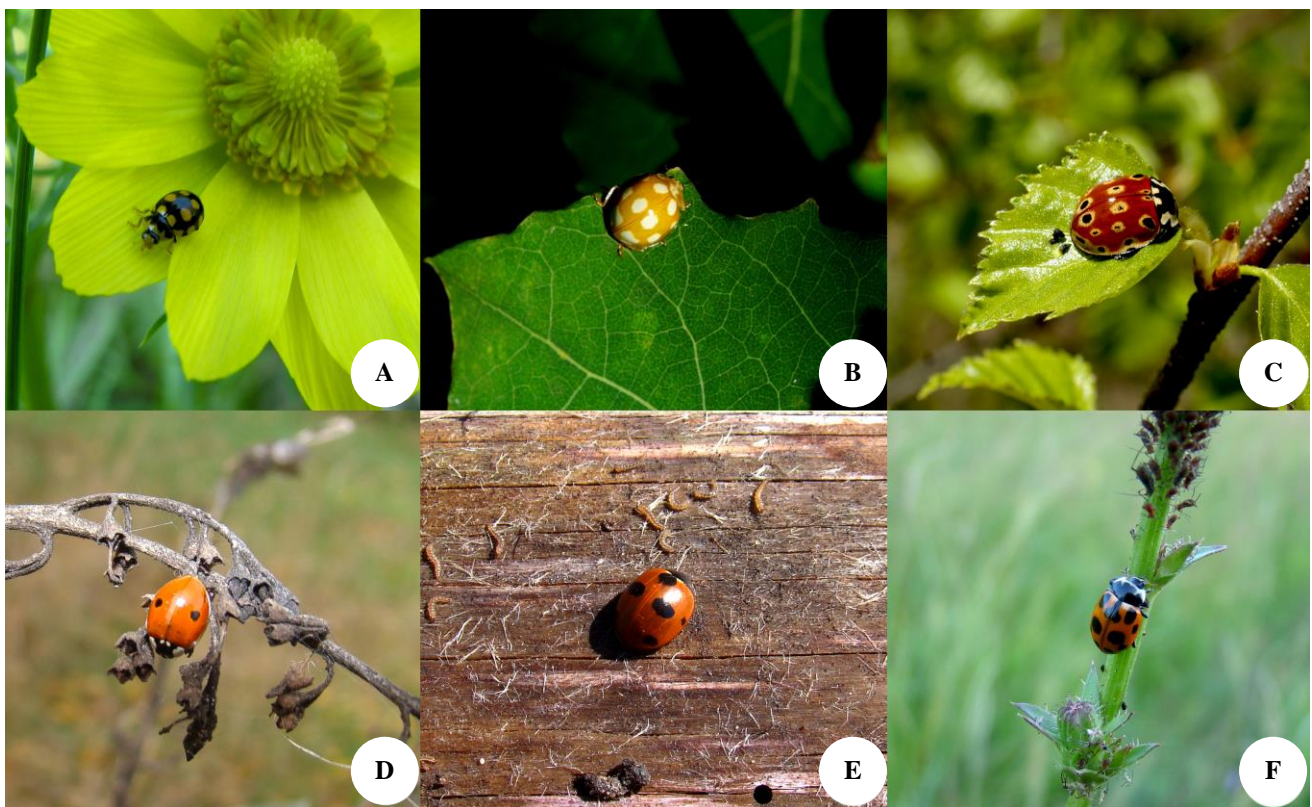


Figure 2. Photo of ladybirds beetles. A. *Coccinula quatuordecimpustulata* (Ruzaevka Distr., Levzhenskiy, photograph by A.B. Ruchin); B. *Calvia decemguttata* (Temnikov Dist., MSNR, cordon Inorskiy, photograph by G.B. Semishin); C. *Anatis ocellata* (Temnikov Dist., MSNR, cordon Pavlovskiy, photograph by G.B. Semishin); D. *Adalia bipunctata* (Ichalki Distr., NPS, Kemlyanskoe forestry, photograph by A.B. Ruchin); E. *Coccinella magnifica* (Temnikov Dist., MSNR, Pushta, photograph by A.B. Ruchin); F. *Ceratomegilla notata* (Krasnoslobodsk Distr., Staroe Sindrovo, photograph by A.B. Ruchin)

Tytthaspis sedecimpunctata (Linnaeus, 1760)

Literature. Temnikov Distr. (Egorov and Ruchin 2013; Egorov et al. 2015, 2016, 2017). Ichalki Distr. (Ruchin 2008b).

Materials. Tengushevo Distr., 6 km W Barashevo, 18.VII.2015, 1 ex. Temnikov Distr., Tarkhany, 10.V.2009, 1 ex. Zubova Polyana Distr., 8 km SW Vysha, 31.VII.2009, 1 ex. Elniki Distr., Malye Mordovskie Poshaty, 19.VII.2015, 1 ex. Bolshoe Ignatovo Distr., NPS, Aleksandrovskoe forestry, Lesnoy, V.2007, 1 ex. Ardatov Distr., Olevka, 26.V.2017, 1 ex. Insar Distr., Verkhnyaya Lukhma, 19.VIII.2017, 1 ex. Lyambir Distr., Ekaterinovka, V.2007, 1 ex. Ruzaevka Distr., 3 km N Streletskaia Sloboda, V-VI.2009, 1 ex. Bolshie Berezniki Distr., Simkino, 9.VII.2009, 1 ex. Kochkurovo Distr., Sabaev, 3.IX.2009, 1 ex.; Starye Turdaki, 8.IX.2009, 1 ex.

Habitat. It is known in floodplain meadows and steppe slopes, oak (*Quercus*) forest edges, mixed forest glades and spruce forests with participation of alder (*Alnus*) and birch (*Betula*), along the streams.

Calvia decemguttata (Linnaeus, 1767) (Figure 1)

Literature. Temnikov Distr. (Plavilshchikov 1964; Egorov and Ruchin 2012, 2014; Egorov et al. 2015, 2016, 2017). Ichalki Distr. (Egorov and Ruchin 2009).

Materials. Temnikov Distr., MSNR, quarter 442, 3.VI.2017, 1 ex.; MSNR, quarter 19, 15-16.V.2018, 18 ex., Egorov L.V.; MSNR, quarter 35, 16.V.2018, 1 ex., Egorov L.V.; MSNR, quarter 434, 18.VI.2018, 1 ex., Semishin G.B. Ichalki Distr., NPS, Barakhmanovskoe forestry, quarter 93, 1.VIII.2017, 1 ex., Semishin G.B. Ardatov Distr., Kozlovka, 2007, in spider-web on the electrical station, 2 ex. Lyambir Distr., Ekaterinovka, 29.V.2007, 1 ex. Saransk, 21.VIII.2008, 12.V.2009, 2 ex.

Habitat. It is known in forests of different types: mixed, deciduous, pine forests, forest plantations. The species individuals fly to the light.

Calvia quatuordecimguttata (Linnaeus, 1758)

Literature. Temnikov Distr. (Ruchin et al. 2009a; Feoktistov 2011; Egorov and Ruchin 2012, 2013, 2014; Egorov et al. 2015, 2016, 2017).

Materials. Temnikov Distr., Tatarskoe Karaevo, 20.IX.2008, 16.IV.2017, 2 ex.; MSNR, quarter 436, 2.VI.2017, 1 ex., Semishin G.B.; cordon Podrubnyi, 16.VII.2017, 1 ex.; cordon Inorskiy, 26.VII.2017, 1 ex., Semishin G.B.; MSNR, Pushta, 1.V.2018, 1 ex., Ручин А.Б.; MSNR, quarter 19, 15.V.2018, 27.VI.-12.VII.2018, 2 ex., Semishin G.B., Egorov L.V.; MSNR, quarter 86, 17.V.2018, 3 ex., Egorov L.V.; MSNR, quarter 349, 23.VI.2018, 1 ex.; MSNR, quarter 37, 8.VII.2018, 1 ex. Zubova Polyana Distr., Tenishevo, 2.V.2008, 1 ex. Krasnoslobodsk Distr., Penkovo, 31.VIII.2008, 1 ex. Ichalki Distr., NPS, Barakhmanovskoe forestry, quarter 112, 28.VIII.-19.IX.2017, 1 ex., Semishin G.B. Bolshie Berezniki Distr., 5 km SE Permissi, 12.VI.2015, 2 ex. Saransk, 6.VII.2007, 1 ex.

Habitat. As a rule, it inhabits forest associations: mature pine forests with participation of spruce, birch; deciduous forests; floodplain oak forests. In addition, it is

observed along shores of water bodies, in floodplain meadows. It has been caught on inflorescences of *Aegopodium podagraria* L., on *Padus avium* Mill., leaves of *Alnus glutinosa*, *Salix* sp., *Urtica* sp.

Calvia quindecimguttata (Fabricius, 1777)

Literature. Temnikov Distr. (Egorov et al. 2015, 2016).

Habitat. Two specimens were found along the lakeshore in the Mordovia State Nature Reserve.

Propylea quatuordecimpunctata (Linnaeus, 1758)

Literature. Temnikov Distr. (Plavilshchikov 1964; Ruchin et al. 2009a; Egorov and Ruchin 2012, 2013, 2014; Egorov et al. 2015, 2016, 2017). Romodanovo Distr., Ruzaevka Distr., Bolshie Berezniki Distr. (Antsiferova et al. 1966; Antsiferova 1979). Ichalki Distr. (Ruchin et al. 2007; Ruchin 2008b).

Materials. Temnikov Distr., Temnikov, 1.VI.2008, 2 ex.; Veselyi, 6.VI.2015, 1 ex.; Alkayevo, 15.VIII.2015, 1 ex.; MNSR, quarter 436, 13.V.2017, 1 ex.; cordon Dolgiy Most, 13.V.2017, 1 ex., Egorov L.V.; quarter 442, 3.VI.2017, 1 ex.; cordon Pavlovskiy, quarter 420, 16.VI.2017, 1 ex.; cordon Inorskiy, 23-24.VIII.2017, 1 ex., Semishin G.B.; quarter 436, 12.V.2018, 1 ex., Semishin G.B.; quarter 19, 15.V.2018, 1 ex., Egorov L.V.; quarter 37, 16.V.2018, 1 ex., Egorov L.V.; quarter 381, 28.V.2018, 1 ex.; quarter 37, 8.VII.2018, 1 ex. Torbeev Distr., Vindrey, 6.VI.2008, 1 ex. Torbeev Distr., Drakino, 26.VII.2016, 1 ex. Elniki Distr., Novoyamskaya Sloboda, 23.VII.2016, 1 ex. Krasnoslobodsk Distr., Penkovo, 31.VIII.2008, 1 ex. Kovylkino Distr., Andreevka, 30.VII.2008, 5 ex. Staroe Shaygovo Distr., Staroe Akshino, 11.V.2008, 16.VIII.2008, 5 ex.; Staroe Akshino, 30.VII.2017, 1 ex. Kadoshkino Distr., Latyshovka, 4.VI.2016, 1 ex. Insar Distr., Kochetovka, 4.VI.2016, 1 ex.; Vasina Polyana, 4.VI.2016, 1 ex.; Novley, 19.VIII.2017, 1 ex. Ichalki Distr., Khanineevka, 23.VII.2008, VI-VII.2009, 2 ex.; NPS, Barakhmanovskoe forestry, 2 km NE of Tashkino, 6.IX.2009, 1 ex.; NPS, Lvovskoe forestry, quarter 53, 23.V.2017, 24.V.2017, 2 ex., Semishin G.B.; NPS, Barakhmanovskoe forestry, quarter 74, 13.IX.2017, 1 ex., Semishin G.B. Ardatovo Distr., Piksyasi, 10.VIII.2018, 1 ex. Romodanovo Distr., Pushkino, 17.VIII.2017, 4 ex. Ardatov Distr., Sosnovoe, 18.VIII.2008, 3 ex.; Svetotekhnika, 18.V.2008, 2 ex. Chamzinka Distr., Komsomolskiy, VI.2008, 1 ex., Ryzhov M.K.; Gorbunovka, 24.VI.2016, 1 ex.; Picheury, 28.VII.2018, 1 ex. Atyashevo Distr., Selishchi, 10.VIII.2017, 6 ex. Dubenki Distr., Yavleyka, 10.VIII.2017, 2 ex. Lyambir Distr., Ekaterinovka, 9.V.2008, 29.V.2008, 3 ex.; Belogorskoe, 29.VII.2016, 2 ex. Ruzaevka Distr., Levzhenskiy, 22.VII.2008, 28.VII.2016, 1.V.2016, 9.V.2016, 8 ex.; Yakovshchina, 26.VI.2016, 2 ex.; Khovanshchina, 12.VI.2017, 1 ex. Bolshie Berezniki Distr., 9 km S Simkino, 24.VI.2005, 1 ex., 20.V.2007, 1 ex.; Gart, 19.VII.2008, 1 ex.; Nerley, 5.VI.2016, 1 ex.; Permissi, 5.VI.2016, 1 ex.; Simkino, 12.VIII.2017, 2 ex.; Simkinskoe lesnichestvo, 12.VIII.2017, 2 ex. Kochkurovo Distr., Kachelay, 22.VII.2008, 2 ex., Kurmaeva D.K.; Starye

Turdaki, 12.VI.2008, 1 ex.; Kochkurovo, 8.V.2016, 2 ex.; Novaya Pyrma, 11.VIII.2017, 1 ex.; Krasnaya Zorka, 29.VII.2017, 1 ex. Saransk, 6.VII.2007, 1 ex., 22.IV.2008, 16.V.2008, 10.V.2008, 21 ex.

Habitat. It is known in different biotopes (agrocenoses, mixed, deciduous forests, floodplain meadows, steppe slopes, dry grasslands, abandoned lands, birch forests, forest plantations, wastelands, shores of water bodies. It was caught on *Lathyrus sylvestris* L., *Padus avium* Mill., *Salix* sp.

Harmonia quadripunctata (Pontoppidan, 1763)

Literature. Temnikov Distr. (Egorov and Ruchin 2014). Ichalki Distr. (Ruchin and Egorov 2013). Bolshie Berezniki Distr. (Ruchin et al. 2009b). Kochkurovo Distr. (Ruchin et al. 2009b). Saransk (Ruchin et al. 2009b).

Materials. Ichalki Distr., NPS, Barakhmanovskoe forestry, quarter 93, 4.VII.2017, 1 ex., Semishin G.B. Temnikov Distr., MNSR, quarter 86, 30.VIII.-27.IX.2018, 1 ex., Semishin G.B., Egorov L.V.

Habitat. It inhabits coniferous and mixed forests. The species individuals fly to the light.

**Oenopia conglobata* (Linnaeus, 1758)

Materials. Temnikov Distr., MSNR, cordon Dolgiy Most, 13.V.2017, 1 ex., Egorov L.V.

Habitat. This species has been found in the glade along the mixed forest.

Myrrha octodecimguttata (Linnaeus, 1758)

Literature. Temnikov Distr. (Ruchin et al. 2009a; Feoktistov 2011; Egorov and Ruchin 2012).

Habitat. It has been found in glades along the mixed and pine forests, at forest edges.

Sospita vigintiguttata (Linnaeus, 1758)

Literature. Temnikov Distr. (Ruchin et al. 2009a; Feoktistov 2011; Egorov et al. 2015).

Materials. Temnikov Distr., MSNR, cordon Inorskiy, 13.V.2017, 1 ex., Egorov L.V.; MSNR, Pushta, 1.V.2018, 2 ex.; quarter 448, 19.V.2018, 1 ex., Egorov L.V.

Habitat. It inhabits floodplain meadows and mixed forests.

Myzia oblongoguttata (Linnaeus, 1758)

Literature. Temnikov Distr. (Redikortsev 1938; Ruchin et al. 2009a; Feoktistov 2011; Egorov and Ruchin 2014; Egorov et al. 2015, 2017).

Materials. Temnikov Distr., MSNR, Pushta, 14.VI.2017, 1 ex. Saransk, 4.VII.2007, 1 ex.

Habitat. It has been found in glades along mature pine forests with participation of spruce, birch, aspen (*Populus tremula* L.).

Anatis ocellata (Linnaeus, 1758) (Figure 1)

Literature. Temnikov Distr. (Ruchin et al. 2009a; Feoktistov 2011; Egorov and Ruchin 2012, 2013, 2014; Egorov et al. 2015, 2016).

Materials. Temnikov Distr., MSNR, quarter 19, 15.V.2018, 1 ex., Egorov L.V. Elniki Distr., Starye

Pichingushi, 25.VI.2012, 1 ex., Semishin G.B. Krasnoslobodsk Distr., Penkovo, 31.VIII.2008, 1 ex. Ichalki Distr., NPS, Kemlyanskoe forestry, Smolny, V.2009, 1 ex. Dubenki Distr., Nikolaevka, 27.VIII.2005, 1 ex. Lyambir Distr., Ekaterinovka, 2.VI.2009, 1 ex. Bolshie Berezniki Distr., 9 km S Simkino, 14.VII.1996, 1 ex. Saransk, 22.VI.2006, 1 ex.

Habitat. It has been found in glades, edges, narrow clearings in mixed and coniferous forests. The species individuals fly to the light.

Adalia bipunctata (Linnaeus, 1758) (Figure 1)

Literature. Temnikov, Krasnoslobodsk, Bolshie Berezniki, Ruzaevka districts (Red Data Book of the Republic of Mordovia 2005; Ruchin et al. 2007a; Timraleev et al. 2007). Saransk (Bienkowski and Orlova-Bienkowskaja 2008). Temnikov Distr. (Plavilshchikov 1964; Ruchin et al. 2009a; Egorov and Ruchin 2009b, 2012, 2013, 2014). Ichalki Distr. (Ruchin et al. 2007, 2008; Ruchin 2008b; Egorov and Ruchin 2009b). Lyambir Distr. (Egorov and Ruchin 2009b).

Materials. Temnikov Distr., MSNR, Pushta, 24.IV.2018, 4 ex., Semishin G.B.

Habitat. It has been found in floodplain meadows, steppe slopes, mixed and deciduous (including ones of secondary origin) forests, parks. The species is frequently found in high abundance during the wintering in houses. The species is often observed in heated wooden buildings and flats.

Adalia decempunctata (Linnaeus, 1758)

Literature. Temnikov Distr. (Plavilshchikov 1964; Egorov et al. 2017).

Materials. Bolshie Berezniki Distr., 9 km S Simkino, 23.VI.2005, 1 ex. Ichalki Distr., Khanineevka, VI-VII.2009, 1 ex. Temnikov Distr., MSNR, Pushta, 17.V.2018, 1 ex. Zubova Polyana Distr., Yavas, 22.VI.2018, 1 ex.

Habitat. It inhabits deciduous and mixed forests.

Coccinella hieroglyphica Linnaeus, 1758

Literature. Temnikov Distr. (Ruchin et al. 2009a; Feoktistov 2011). Bolshoe Ignatovo Distr. (Ruchin 2008a). Ichalki Distr. (Ruchin et al. 2007; Ruchin 2008a, b). Bolshie Berezniki Distr. (Ruchin 2008a).

Materials. Staroe Shaygovo Distr., Lesnichestvo, 17.VII.2009, 1 ex. Ichalki Distr., NPS, Barakhmanovskoe forestry, 2 km NW Tashkino, 6.IX.2009, 1 ex.; NPS, Lvovskoe forestry, quarter 53, 22.VI.2017, 1 ex., Semishin G.B. Kochkurovo Distr., Mordovskoe Davydovo, 23.VII.2008, 1 ex., Kurmaeva D.K. Temnikov Distr., MSNR, quarter 86, 20.IV.2018, 6 ex., Semishin G.B.

Habitat. It is known in floodplain meadows and mixed forests.

Coccinella magnifica L. Redtenbacher, 1843 (Figure 1)

Literature. Temnikov Distr. (Egorov et al. 2015, 2017). Ichalki Distr. (Egorov and Ruchin 2009a).

Materials. Temnikov Distr., MSNR, Pushta, 27.IV.2009, 1 ex. Zubova Polyana Distr., 5 km SW

Bystrishchi, 1.V.2008, 1 ex. Bolshoe Ignatovo Distr., NPS, Aleksandrovskoe forestry, quarter 39, 11.VIII.2018, 1 ex.

Habitat. It has been found in glades of mixed and pine forests.

Coccinella quinquepunctata Linnaeus, 1758

Literature. Temnikov Distr. (Plavilshchikov 1964; Ruchin et al. 2009a; Egorov and Ruchin 2012, 2013). Romodanovo Distr., Ruzaevka Distr., Bolshie Berezniki Distr. (Antsiferova and Dobrosmyslov 1966; Antsiferova 1979). Ichalki Distr. (Ruchin et al. 2007; Ruchin 2008b). Ichalki Distr., Temnikov Distr., Chamzinka Distr., Zubova Polyana Distr., Kovytkino Distr., Torbeevo Distr., Ruzaevka Distr., Elniki Distr., Krasnoslobodsk Distr., Saransk, Staroe Shaygovo Distr., Ardatov Distr., Kochkurovo Distr. (Egorov and Ruchin 2009b).

Materials. Temnikov Distr., Alkaevo, 15.VIII.2015, 1 ex.; MSNR, Pushta, 23.VI.2016, 19.V.2018, 2 ex., Egorov L.V.; MSNR, quarter 427, 10.VIII.2016, 1 ex. Elniki Distr., Novoyamskaya Sloboda, 23.VIII.2016, 1 ex.

Habitat. It has been found in floodplain meadows, mixed forests and secondary deciduous forests, parks.

Coccinella septempunctata Linnaeus, 1758

Literature. Temnikov Distr. (Plavilshchikov 1964; Ruchin et al. 2009a; Egorov and Ruchin 2012, 2013, 2014; Egorov et al. 2015, 2016, 2017). Ichalki Distr. (Ruchin et al. 2007; Ruchin 2008b). Romodanovo Distr., Ruzaevka Distr., Bolshie Berezniki Distr. (Antsiferova et al. 1966; Antsiferova and Dobrosmyslov 1966; Antsiferova 1979).

Materials. Temnikov Distr., MSNR, quarter 354, 20.V.2017, 1 ex.; MSNR, quarter 403, 20.V.2017, 1 ex.; MSNR, quarter 111, 1.VIII.2017, 3 ex.; MSNR, quarter 413, 4.VIII.2017, 1 ex.; MSNR, quarter 397, 6.VIII.2017, 1 ex.; MSNR, quarter 86, 21.IV.-17.V.2018, 17.V.2018, 18.V.2018, 30.VIII.-27.IX.2018, 4 ex., Semishin G.B., Egorov L.V.; MSNR, quarter 35, 16.V.2018, 2 ex., Egorov L.V.; MSNR, quarter 383, 17.V.2018, 1 ex.; MSNR, quarter 368, 27.V.2018, 2 ex. Zubova Polyana Distr., 5 km SW Bystrishchi, 1.V.2008, 4 ex.; Tenishevo, 2.V.2008, 5 ex.; Mordovskaya Polyana, 7.VI.2008, 4 ex.; Udevo, 8.VI.2008, 3 ex.; Izvest, 8.VI.2008, 2 ex.; Vysha, 8.VI.2008, 1 ex. Aturyevo Distr., Chudinka, 7.VI.2008, 5 ex.; Pichepolonga, 2.VII.2016, 2 ex. Torbeevo Distr., Vindrey, 14.V.2008, 6.VI.2008, 6 ex.; Surgod, 21.VI.2016, 1 ex. Elniki Distr., Novye Shaly, 22.VII.2017, 1 ex. Elniki Distr., Malye Mordovskie Poshaty, 22.VII.2017, 1 ex. Krasnoslobodsk Distr., Krasnaya Podgora, 16.VII.2009, 2 ex. Kovytkino Distr., Novoe Mamangino, 6.V.2008, 3 ex. Staroe Shaygovo Distr., Staroe Akshino, 11.V.2008, 8 ex.; Staraya Terizmorga, 17.VII.2009, 1 ex.; Staroe Akshino, 30.VII.2017, 2 ex. Bolshoe Ignatovo Distr., NPS, Aleksandrovskoe forestry, quarter 39, 11.VIII.2018, 1 ex. Ichalki Distr., NPS, Barakhmanovskoe forestry, quarter 113, 28.VIII.-19.IX.2017, 3 ex., Semishin G.B. Ardatovo Distr., Piksyasi, 10.VIII.2018, 1 ex. Romodanovo Distr., Pushkino, 17.VIII.2017, 3 ex.; Zarechnyi, 3.VIII.2018, 1 ex. Ardatov Distr., Svetotekhnika, 18.V.2008, 11 ex.; 3 km N Sosnovoe, 18.VIII.2008, 1 ex. Chamzinka Distr., Kamenka, 6.IV.2008, 5 ex. Atyashevo Distr., Selishchi,

10.VIII.2017, 2 ex. Dubenki Distr., Yavleyka, 5.IV.2008, 10.VIII.2017, 5 ex.; Nikolaevka, 5.IV.2008, 7 ex. Insar Distr., Novley, 19.VIII.2017, 1 ex.; Verkhnyaya Lukhma, 19.VIII.2017, 1 ex. Lyambir Distr., Ekaterinovka, V.2007, 3 ex. Ruzaevka Distr., Levzhenskiy, 22.VII.2008, 3 ex.; 3 km N Streletskaya Sloboda, 19.V.2009, 1 ex. Bolshie Berezniki Distr., Gart, 5.IV.2008, numerous ex. Kochkurovo Distr., Starye Turdaki, 12.VI.2008, 4 ex.; Muran, 29.VII.2017, 2 ex.; Novaya Pyrma, 11.VIII.2017, 2 ex. Saransk, 15.V.2005, 23.V.2006, numerous ex.

Habitat. It has been found in different biotopes (agrocoenoses, mixed and deciduous forests, steppe slopes, dry grasslands, abandoned lands, forest plantations, wastelands, shores of water bodies). The species is observed in high abundance on cereal crops (Antsiferova 1978; Timraleev 1992) and on fodder bean crops. It depends directly on quantity of *Aphidoidea* (Antsiferova et al. 1966).

- *Coccinella undecimpunctata* Linnaeus, 1758

Remarks. Timraleev (1992) has noted it without indication of localities. It is not presented in the materials. This species is not presented in the materials from Mordovia. Its presence in Mordovia is highly unreliable. Hence, we recommend to exclude this species from the list of regional fauna.

? *Hippodamia septemmaculata* (DeGeer, 1775)

Remarks. Timraleev (1992) has noted it without indication of localities. This species is not presented in the materials from Mordovia. Its presence in Mordovia needs to be confirmed by modern data.

Habitat. According to literature (Isaev and Egorov 2006; Nikitsky and Ukrainsky 2016), this species is known nearby of water bodies, in wet meadows and wet forest edges.

Hippodamia tredecimpunctata (Linnaeus, 1758)

Literature. Temnikov Distr. (Plavilshchikov 1964; Ruchin et al. 2009a; Egorov and Ruchin 2012, 2013, 2014; Egorov et al. 2015, 2016, 2017). Ichalki Distr. (Ruchin et al. 2007; Ruchin 2008b).

Materials. Temnikov Distr., MSNR, quarter 424, 13.V.2017, 1 ex., Egorov L.V.; MSNR, quarter 442, 2.V.2018, 1 ex.; quarter 368, 27.V.2018, 1 ex.; MSNR, quarter 368, 18.VI.2018, 1 ex.; MSNR, quarter 19, 19.VI.2018, 1 ex., Semishin G.B. Zubova Polyana Distr., Krutets, 17.VII.2008, 1 ex.; Kargashino, 29.VII.2009, 1 ex.; Tenishevo, 2.VIII.2015, 1 ex. Elniki Distr., Starye Pichingushi, 16.VIII.2008, 1 ex., Kurmaeva D.K. Staroe Shaygovo Distr., Staroe Akshino, 11.V.2008, 1 ex. Ichalki Distr., NPS, Barakhmanovskoe forestry, 2 km NE of Tashkino, 6.IX.2009, 1 ex.; NPS, Barakhmanovskoe forestry, quarter 74, 13.IX.2017, 1 ex., Semishin G.B.; NPS, Kemlyanskoe forestry, quarter 22, 11.VIII.2018, 1 ex. Kochkurovo Distr., Sabaevo, 3.IX.2009, 1 ex. Romodanovo Distr., Pushkino, 17.VIII.2017, 1 ex. Saransk, 3.VII.2004, 1 ex.

Habitat. In our expedition, we have caught this species in riverbanks and lakeshores, wet glades of mixed and

deciduous forests, floodplain meadows. The species individuals fly to the light.

Hippodamia variegata (Goeze, 1777)

Literature. Temnikov Distr. (Plavilshchikov 1964; Ruchin et al. 2009a; Egorov and Ruchin 2012, 2014; Egorov et al. 2015, 2016, 2017). Ichalki Distr. (Ruchin et al. 2007; Ruchin 2008b).

Materials. Temnikov Distr., MSNR, quarter 368, 18.V.2018, 1 ex., Egorov L.V.; Karaevo, 25.V.1984, 1 ex., Volkov O.G.; Polyanski, 24.VII.2016, 1 ex. Zubova Polyana Distr., Krutets, 17.VII.2008, 1 ex.; Tenishevo, 2.VIII.2015, 1 ex. Aturyevo Distr., Pichopolonga, 2.VII.2016, 1 ex. Torbeevo Distr., Surgod, 21.VI.2016, 1 ex.; Drakino, 26.VII.2016, 3 ex. Elniki Distr., Malye Mordovskie Poshaty, 23.VII.2016, 1 ex.; Svobodnyi, 31.VII.2008, 1 ex.; Novoyamskaya Sloboda, 23.VII.2016, 2 ex. Kovylkino Distr., Andreevka, 30.VII.2008, 1 ex. Staroe Shaygovo Distr., Ingener-Pyatina, 10.VII.2016, 2 ex.; Konopat, 9.VII.2016, 1 ex.; Govorovo, 10.VII.2016, 1 ex. Chamzinka Distr., Gorbunovka, 24.VI.2016, 1 ex. Atyashevo Distr., Kamenka, 24.VI.2016, 1 ex.; Atyashevo, 24.VI.2016, 1 ex. Lyambir Distr., Atemar, 7.V.2016, 1 ex.; Novaya Uda, 29.VII.2016, 1 ex.; Belogorskoe, 29.VII.2016, 3 ex. Insar Distr., Verkhnyaya Lukhma, 19.VIII.2017, 2 ex. Ruzaevka Distr., Levzhenskiy, 28.VII.2016, 2 ex.; Palaevka, 26.VI.2016, 1 ex. Bolshie Berezniki Distr., Gart, 6.VII.2007, 1 ex.; 9 km S Simkino, 29.IX.2007, 1 ex. Kochkurovo Distr., Kachelay, 22.VII.2008, 14.VII.2018, 2 ex., Kurmaeva D.K.; Mordovskoe Davydovo, 23.VII.2008, 1 ex., Kurmaeva D.K.; Mordovskoe Davydovo, 25.VI.2016, 1 ex.; Sabaev, 3.IX.2009, 1 ex.; Starye Turdaki, 8.IX.2009, 1 ex.; 5 km east of Sabaev, 25.VI.2016, 1 ex.; Krasnaya Zorka, 4.VIII.2018, 1 ex. Saransk, 25.V.2007, 14.VII.2008, 2 ex.

Habitat. It is known in different open biotopes (birch forest glades, mixed and deciduous forests, mature pine forests with participation of spruce, birch, floodplain and dry meadows, steppe grasslands, abandoned lands, forest plantations). The species individuals fly to the light.

Ceratomegilla notata (Laicharting, 1781) (Figure 1)

Literature. Temnikov Distr. (Redikortsev 1938; Ruchin et al. 2009a; Egorov and Ruchin 2012, 2013, 2014; Egorov et al. 2015, 2016, 2017). Ichalki Distr. (Ruchin et al. 2007; Ruchin 2008b).

Materials. Tengushevo Distr., Barashevo, V.2008, 1 ex.; 6 km west of Barashevo, 18.VII.2015, 1 ex. Temnikov Distr., MSNR, cordon Dolgiy Most, 13.V.2017, meadow, 1 ex., Egorov L.V.; MSNR, cordon Inorskiy, 1-3.VI.2017, 1 ex., Semishin G.B.; MSNR, cordon Inorskiy, 13.V.2017, 14.V.2018, 29.V.2018, 4 ex., Egorov L.V., Semishin G.B.; MSNR, cordon Inorskiy, 21.V.2017, 1 ex.; MSNR, quarter 442, 3.VI.2017, 1 ex.; MSNR, cordon Drozhdenovskiy, 4.VI.2017, 1 ex.; MSNR, quarter 437, 28.VI.2017, 1 ex.; MSNR, Pushta, 19.V.2018, 1 ex., Egorov L.V.; MSNR, quarter 19, 15.V.2018, 1 ex., Egorov L.V.; MSNR, quarter 37, 16.V.2018, 3 ex., Egorov L.V.; MSNR, quarter 420, 18.V.2018, 1 ex., Egorov L.V.; MSNR, quarter 368, 18.V.2018, 2 ex., Egorov L.V.; MSNR, quarter 435,

14.VI.2018, 2 ex.; MSNR, quarter 434, 22.VII.2018, 2 ex. Zubova Polyana Distr., Udevo, 8.VI.2008, 1 ex. Torbeevo Distr., Vindrey, 6.VI.2008, 4 ex. Elniki Distr., Malye Mordovskie Poshaty, 23.VII.2016, 1 ex.; Cherlyay, 23.VII.2016, 1 ex. Krasnoslobodsk Distr., Staroe Sindrovo, 1.VIII.2008, 1 ex. Bolshoe Ignatovo Distr., NPS, Aleksandrovsкое forestry, Lesnoy, V.2007, 1 ex.; 4 km S Barakhmany, 22.V.2008, 2 ex. Ichalki Distr., Sosnovka, 6.VIII.2008, 1 ex.; NPS, Barakhmanovskoe forestry, 2 km NE of Tashkino, 6.IX.2009, 1 ex.; NPS, Lvovskoe forestry, quarter 53, 23.V.2017, 24.V.2017, 7.VI.2017, 6 ex., Semishin G.B. Chamzinka Distr., Komsomolskiy, VII.2008, 1 ex., Ryzhov M.K. Ardatov Distr., Turgenevo, 19.V.2008, 2 ex. Lyambir Distr., Ekaterinovka, 29.V.2008, 1 ex., 11.V.2009, 2.VI.2009, 4 ex. Bolshie Berezniki Distr., Simkinskoe forestry, 12.VIII.2017, 1 ex.; 5 km SE Permisi, 24.VII.2008, 1 ex., Kurmaeva D.K. Kochkurovo Distr., Kachelay, 3.IX.2009, 1 ex.

Habitat. It has been found in different wet biotopes (mixed and deciduous forests: linden *Tilia*, birch forests, floodplain meadows, shores of water bodies).

Ceratomegilla undecimnotata (D.H. Schneider, 1792)

Literature. Timraleev (1989) has noted it without indication of localities.

Materials. Bolshie Berezniki Distr., Simkino, 12.VIII.2017, 1 ex. Atyashevo Distr., Selishchi, 30.VI.2018, 1 ex.

Habitat. It has been found once on a steppe slope.

Halyzia sedecimguttata (Linnaeus, 1758)

Literature. Temnikov Distr. (Ruchin et al. 2009a; Feoktistov 2011; Egorov et al. 2015, 2017). Ichalki Distr. (Ruchin et al. 2007; Ruchin 2008a,b).

Materials. Temnikov Distr., MSNR, quarter 19, 15.V.2018, 2 ex., Egorov L.V.; MSNR, quarter 37, 16.V.2018, 2 ex., Egorov L.V.; MSNR, quarter 86, 17.V.2018, 1 ex., Egorov L.V. Zubova Polyana Distr., Mordovskaya Polyana, 7.VI.2008, 1 ex. Torbeevo Distr., Drakino, 26.VI.2017, 1 ex. Ichalki Distr., NPS, Barakhmanovskoe forestry, quarter 74, 13.IX.2017, 1 ex., Semishin G.B. Chamzinka Distr., Komsomolskiy, VII.2008, 1 ex., Ryzhov M.K. Insar Distr., Novley, 27.V.2017, 1 ex. Ruzaevka Distr., Yakovshchina, 26.VI.2016, 1 ex.; Russkoe Baymakovo, 29.IV.2017, 1 ex. Saransk, 10.VI.2008, 1 ex.

Habitat. It is known in immature pine forests with participation of birch, mixed forests, but mostly in deciduous forests of different origins. In addition, it has been found in meadows. The species individuals fly to the light.

Psyllobora vigintiduopunctata (Linnaeus, 1758)

Literature. Temnikov Distr. (Redikortsev 1938; Ruchin et al. 2009a; Egorov and Ruchin 2012, 2013, 2014; Egorov et al. 2015, 2016, 2017). Ichalki Distr. (Ruchin 2008b). Saransk (Botanical Garden of the Mordovia State University) (Timraleev 1989).

Materials. Temnikov Distr., Temnikov, 1.VI.2008, 2 ex.; MSNR, cordon Drozhdenovskiy, 18.VI.2017, 1 ex.;

MSNR, cordon Inorskiy, 26.VII.2017, 3 ex., Semishin G.B.; MSNR, quarter 35, 16.V.2018, 1 ex., Egorov L.V.; MSNR, quarter 19, 17.V.2018, 1 ex., Egorov L.V.; MSNR, quarter 34, 28.VI.-17.VII.2018, 1 ex., Semishin G.B., Egorov L.V. Zubova Polyana Distr., Vysha, VI.2008, 1 ex.; Vadovo-Sosnovka, 30.VII.2009, 1 ex. Aturyevo Distr., Chudinka, 7.VI.2008, 1 ex. Torbeevo Distr., Vindrey, 6.VI.2008, 1 ex. Elniki Distr., Novye Shaly, 19.VII.2015, 1 ex.; Novoyamskaya Sloboda, 23.VII.2016, 1 ex. Krasnoslobodsk Distr., Penkovo, 31.VIII.2008, 1 ex.; Krasnoslobodsk, 5.VI.2009, 1 ex. Kovytkino Distr., Andreevka, 30.VII.2008, 1 ex. Staroe Shaygovo Distr., Staroe Akshino, 16.VIII.2008, 2 ex.; Staroe Akshino, 30.VII.2017, 1 ex.; Ingener-Pyatina, 10.VII.2016, 1 ex. Bolshoe Ignatovo Distr., NPS, Aleksandrovskoe forestry, Lesnoy, 6.V.2007, 1 ex. Ichalki Distr., NPS, Lvovskoe forestry, quarter 53, 23.V.2017, 7.VI.2017, 22.V.2017, 24.V.2017, 7.VII.2017, 6 ex., Semishin G.B. Ardatov Distr., Ardatov, 6.VII.2003, 1 ex.; Oktyabrskiy, 26.V.2017, 1 ex. Chamzinka Distr., Komsomolskiy, VII.2008, 1 ex., Ryzhov M.K. Atyashevo Distr., Kamenka, 24.VI.2016, 1 ex. Lyambir Distr., Ekaterinovka, V.2008, 1 ex.; Atemar, 7.V.2016, 2 ex.; Belogorskoe, 29.VII.2016, 1 ex.; Novaya Uda, 24.VI.2017, 1 ex. Insar Distr., Kochetovka, 4.VI.2016, 2 ex.; Vasina Polyana, 4.VI.2016, 1 ex.; Verkhnyaya Lukhma, 19.VIII.2017, 1 ex.; Novley, 27.V.2017, 1 ex. Ruzaevka Distr., Levzhenskiy, 5.V.2004, 9.V.2016, 28.VII.2016, 4 ex.; Yakovshchina, 26.VI.2016, 1 ex.; 3 km N Streletskaya Sloboda, 19.V.2009, 1 ex.; Khovanshchina, 12.VI.2017, 1 ex. Bolshie Berezniki Distr., 9 km S Simkino, 4.VII.2005, 20.V.2007, 2 ex.; Gart, 19.VII.2008, 1 ex. Kochkurovo Distr., Kachelay, 22.VII.2008, 1 ex., Kurmaeva D.K.; Starye Turdaki, 12.VI.2008, 2 ex.; Kochkurovo, 8.V.2016, 2 ex.; Podlesnaya Tavla, 8.V.2016, 1 ex.

Habitat. It is known in different biotopes (steppe slopes, agrocenoses, mixed, deciduous forests, floodplain and dry meadows, abandoned lands, forest plantations, wastelands).

Vibidia duodecimguttata (Poda, 1761)

Literature. Temnikov Distr. (Egorov and Ruchin 2014).

Materials. Chamzinka Distr., Komsomolskiy, VIII.2009, 1 ex., Ryzhov M.K. Dubenki Distr., Yavleyka, 11.VI.2017, 1 ex.

Habitat. It has been found in mixed forests and steppeficated sites with carbonate outcrops. The species individuals fly to the light.

Coccidulinae Mulsant, 1846

Coccidula rufa (Herbst 1783)

Literature. Temnikov Distr. (Egorov and Ruchin 2012; Egorov et al. 2015, 2016).

Habitat. It is known in semiaquatic habitats.

Scymninae Mulsant, 1846

* *Nephus bipunctatus* (Kugelann, 1794)

Materials. Temnikov Distr., MSNR, cordon Inorskiy, 12.V.-1.VI.2017, 1 ex., Egorov L.V., Semishin G.B.

Habitat. It was caught once in the mixed forest using window traps.

Nephus redtenbacheri (Mulsant, 1846)

Literature. Temnikov Distr. (Egorov and Ruchin 2012; Egorov et al. 2015).

Habitat. It is known in wet glades of pine forests with participation of spruce, birch.

Scymnus ferrugatus (Moll, 1785)

Literature. Temnikov Distr. (Egorov and Ruchin 2013, 2014; Egorov et al. 2015, 2016). Staroe Shaigovo Distr. (Ruchin et al. 2009b).

Materials. Temnikov Distr., MSNR, cordon Inorskiy, 13.V.2017, 2 ex., Egorov L.V.; MSNR, Pushta, 19.V.2018, 1 ex., Egorov L.V. Ichalki Distr., NPS, Lvovskoe forestry, quarter 53, 24.V.2017, 8 ex., Semishin G.B.

Habitat. It is known in glades of pine and deciduous forests (especially in birch forests), in floodplain meadows. This species is often caught at the individuals of *Padus avium*.

Scymnus frontalis (Fabricius, 1787)

Literature. Temnikov Distr. (Egorov and Ruchin 2014; Egorov et al. 2015).

Materials. Bolshie Berezniki Distr., Simkino, 1.VII.2008, M.Ya. & A.O. Bieńkowski - 1 female (the collection of A. Bieńkowski), A.S. Ukrainskiy det., 2013.

Habitat. It has been found in mixed forest edges, steppe cretaceous slopes.

Scymnus haemorrhoidalis Herbst, 1797

Literature. Temnikov Distr. (Egorov and Ruchin 2012, 2013, 2014; Egorov et al. 2015, 2016).

Habitat. It is known in pine forests with participation of spruce and birch, mixed forests, along the shores of water bodies.

Scymnus nigrinus Kugelann, 1794

Literature. Temnikov Distr. (Egorov and Ruchin 2013; Egorov et al. 2015).

Materials. Temnikov Distr., MSNR, cordon Inorskiy, 12.V.-1.VI.2017, 1 ex., Egorov L.V., Semishin G.B.

Habitat. It is known only in the Mordovia State Nature Reserve - in edges of pine forests with participation of spruce, birch, aspen and in mixed forests.

Scymnus suturalis Thunberg, 1795

Literature. Temnikov Distr. (Egorov and Ruchin 2013).

Habitat. It has been found in forest edges.

Hyperaspidae Mulsant, 1846*Hyperaspis campestris* (Herbst, 1783)**Literature.** Ardatov Distr. (Ruchin et al. 2009b).**Habitat.** It has been found once in the wet glade of mixed forest.*Hyperaspis concolor* (Suffrian, 1843) (= *inexpectata* Guenther, 1959)**Literature.** Temnikov Distr. (Egorov and Ruchin 2013).**Habitat.** It has been found once in the pine forest with participation of spruce, birch, aspen.* *Hyperaspis erythrocephala* (Fabricius, 1787)**Materials.** Aturyevo Distr., Pichopolonga, 2.VII.2016, 1 ex. Elniki Distr., Novye Shaly, 19.VII.2015, 1 ex.**Habitat.** It has been found in immature thinned-out pine forests with participation of birch.*Hyperaspis pseudopustulata* Mulsant, 1853**Literature.** Lyambir Distr. (Ruchin et al. 2009b).**Habitat.** It has been found once in the birch forest.*Hyperaspis reppensis* (Herbst, 1783)**Literature.** Temnikov Distr. (Egorov and Ruchin 2012; Egorov et al. 2017).**Materials.** Temnikov Distr., MSNR, cordon Inorskiy, 12.V.-1.VI.2017, 1-15.VI.2017, 15-29.VI.2017, 13-27.VII.2017, 10 ex., Egorov L.V., Semishin G.B.; MSNR, quarter 19, 15.V.2018, 1 ex. Egorov L.V.; MSNR, quarter 34, 16.V.-28.VI.2018, 2 ex., Semishin G.B., Egorov L.V.; MSNR, quarter 19, 27.VI.-12.VII.2018, 1 ex., Semishin G.B., Egorov L.V.**Habitat.** It has been found in floodplain oak forests with participation of linden, mixed forests, and nearby of water bodies.**Chilocorinae Mulsant, 1846***Platynaspis luteorubra* (Goeze, 1777)**Literature.** Temnikov Distr. (Egorov and Ruchin 2012; Egorov et al. 2015). Lyambir Distr. (Ruchin 2008a).**Materials.** Kochkurovo Distr., Kochkurovo, 8.V.2016, 1 ex.**Habitat.** It has been found in mixed and pine forests with participation of spruce, birch, aspen, in glades and forest edges, floodplain meadows.*Exochomus quadripustulatus* (Linnaeus, 1758)**Literature.** Temnikov Distr. (Plavilshchikov 1964; Ruchin et al. 2009a; Egorov and Ruchin 2012; Egorov et al. 2017).**Materials.** Temnikov Distr., Tatarskoe Karaevo, 20.IX.2008, 16.IV.2017, 2 ex.; MSNR, Pushta, 19.V.2018, 1 ex., Egorov L.V. Ichalki Distr., NPS, Barakhmanovskoe forestry, quarter 74, 11.IX.2017, 13.IX.2017, 3 ex., Semishin G.B.**Habitat.** It has been found in pine forests with participation of spruce, birch.- *Parexochomus nigromaculatus* (Goeze, 1777)**Remarks.** Timraleev (1989) has noted it without indication of localities. This xerophilic species (Nikitsky and Ukrainsky 2016) is not presented in the materials. Its presence in Mordovia is highly unreliable. Hence, we recommend to exclude this species from the list of regional fauna.*Chilocorus bipustulatus* (Linnaeus, 1758)**Literature.** Temnikov Distr. (Ruchin et al. 2009a; Feoktistov 2011; Egorov and Ruchin 2012).**Habitat.** It has been found in mixed and pine forests with participation of spruce, birch.*Chilocorus renipustulatus* (L.G. Scriba, 1791)**Literature.** Temnikov Distr. (Redikortsev 1938; Ruchin et al. 2009a; Egorov and Ruchin 2014; Egorov et al. 2015).**Materials.** Temnikov Distr., MSNR, cordon Inorskiy, 12.V.-1.VI.2017, 29.VI.-13.VII.2017, 9-27.IX.2017, 13.V.2018, 4 ex., Egorov L.V., Semishin G.B.; MSNR, cordon Pavlovskiy, quarter 420, 9.IX.2017, 1 ex., Egorov L.V. MSNR, quarter 19, 15.V.2018, 29.VIII.-27.IX.2018, 5 ex., Semishin G.B., Egorov L.V.; MSNR, quarter 420, 18.V.2018, 1 ex., Egorov L.V.; MSNR, Pushta, 19.V.2018, 1 ex., Egorov L.V.; MSNR, quarter 448, 19.V.2018, 1 ex., Egorov L.V. Ichalki Distr., NPS, Lvovskoe forestry, Obrezki, 19.IV.2009, 1 ex.; Obrezki, 24.V.2017, 1 ex., Semishin G.B.; NPS, Barakhmanovskoe forestry, quarter 74, 13.IX.2017, 1 ex., Semishin G.B. Saransk, 24.V.2007, 12.V.2009, 2 ex.**Habitat.** It has been found in glades of deciduous and mixed forests, in mature pine forests with participation of spruce, birch, along streams in spruce forests with participation of alder, birch, sometimes - nearby of water bodies.As a result of the long-term studies conducted in the Republic of Mordovia, to date, the list of Coccinellidae fauna noted for the region is presented by 49 species. Three of them (*C. sinuatomarginata*, *C. undecimpunctata*, *P. nigromaculatus*) are recommended to be excluded from the regional fauna. The presence of one species needs to be proved by modern data. In recent years, three species (*N. bipunctatus*, *H. erythrocephala*, *O. conglobata*) have been registered for the first time in the Republic of Mordovia. Thus, nowadays Coccinellidae fauna of the Republic of Mordovia includes 46 species.

The obtained species number of fauna is comparable to fauna of other regions of European Russia. For instance, Coccinellidae fauna of Penza region consists of 38 species (Ukrainsky and Pronina 2012), 49 species in Chuvash Republic (Isaev and Egorov 2006; Egorov 2008, 2012, 2013, 2014a,b, 2016), 57 species in Ulyanovsk region (Isaev and Egorov 2006), 56 species in Samara region (Isaev and Egorov 2006), 62 species in Saratov region (Ukrainsky and Sazhnev 2012), 60 species in Moscow region (Nikitsky and Ukrainsky 2016), 35 species in Nizhny region (Anufriev and Volovik 1980; Anufriev and Potanin 1997), 42 species in Vladimir region (Anufriev and Volovik 1980; Semenov 2009), 46 species in Kirov region

(Shernin 1974; Yuferev 2001), 56 species in Orenburg region (Khristina and Ukrainsky 2016), 43 species in Lipetsk region (Tsurikov 2009, 2018; Sazhnev and Aksenenko 2018).

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