

Notes on the fauna of beetles (Insecta, Coleoptera) adjacent to the territory of the Mordovia State Nature Reserve

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Abstract. The paper presents the results of the study of findings made in the adjacent of the Mordovia State Nature Reserve (Republic of Mordovia, Russia) in 2012–2019 (partly, from previous years). The geography of the collection includes 6 districts of the Nizhny Novgorod Region (Vyksa, Voznesenskoe, and Pervomaisk districts as well as Sarov and its surroundings) and the Republic of Mordovia (Temnikov, Elniki, and Tengushevo districts). Collection was carried out manually as well as by soil traps and crown traps with fermenting baits. In total, 260 species from 29 families of Coleopterans were found.

Keywords: beetles, Coleoptera, fauna, biodiversity, Mordovia State Nature Reserve, Republic of Mordovia, Nizhny Novgorod Region.

Материалы к фауне жесткокрылых (Insecta, Coleoptera) окрестностей Мордовского заповедника

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Аннотация. Приводятся результаты изучения сборов 2012–2019 гг. (частично — предыдущих лет) на территориях, прилегающих к Мордовскому заповеднику (Республика Мордовия, Россия). География сборов включает 6 районов Нижегородской области (Выксунский, Вознесенский, Первомайский районы и г. Саров с окрестностями) и Республики Мордовия (Темниковский, Ельниковский, Теньгушевский районы). Сборы осуществлялись вручную, а также с помощью почвенных и кроновых ферментных ловушек. В общей сложности обнаружено 260 видов из 29 семейств жесткокрылых.

Ключевые слова: жесткокрылые, Coleoptera, фауна, биоразнообразие, Мордовский заповедник, Республика Мордовия, Нижегородская область.

Introduction

Biodiversity conservation is a very important issue, especially, in the face of challenges posed by environmental pollution, climate change, and urbanization (Oppenheimer 1989; Bengtsson et al. 2000; Dossou, Glehouenou-Dossou 2007; Kovats, Akhtar 2008; Gebremedihin et al. 2018; Kopoteva, Kuptsova 2019). It is generally accepted that the protection of life on Earth is not possible through individual efforts of dedicated teams — it is a responsibility of humanity at large and, at the same time, a condition of our survival on the planet. The most effective way to preserve biological diversity is through specially protected areas (PA) (Akpatou et al 2018; Xavier da Silva et al. 2018). Russia has several categories of protected areas with reserves and national parks subject to the strictest regulation. They are designed to preserve biodiversity in certain areas of land and sea (Grebennikov 2016; Markevich, Esin 2018; Bakirova, Zharkikh 2019; Kirilyuk et al. 2019; Uligova et al. 2019).

The Mordovia State Nature Reserve is surrounded by a diversity of landscapes and interesting biotopes. The coleopterofauna found in these areas has also been studied to a certain extent (Ruchin et al. 2013; 2018; 2019c; Ruchin, Egorov 2018e). Border landscapes are also habitats for a range of species, and, in some cases, they are home to certain ecological groups. For example, the forest area of the reserve includes few meadow (open) stations, while open biotopes are widespread at the edge of the reserve. The Mordovia State Nature Reserve is located in the Temnikov District of the Republic of Mordovia (Fig. 1) on the wooded right bank of the Moksha river. The Reserve covers an area of 321,62 km². This is one of the first nature reserves in Russia. According to palaeoecological reconstructions, broad-leaved forests have dominated suitable habitats in the reserve since 5,000 years ago. The Western border is along the Chernaya, Satis and Moksha rivers. Forest-steppe near the southern border naturally delineates the border of the protected area (Khapugin, Ruchin 2019). The forest structure of the reserve includes coniferous-broadleaf forests

with forest-steppe at its edges. Forest communities cover 89,3% of the total territory. In general, the herb layer of the Mordovia State Nature Reserve has plants typical for taiga. However, it also includes species of flora common for broad-leaved forests. Pine (*Pinus sylvestris* L.) is the main forest-forming species in the reserve. It forms pure or mixed plant communities in the Southern, Central and Western parts of the Mordovia State Nature Reserve. Birch (*Betula pendula* Roth) occupies the second largest forest area in the reserve. These are mainly secondary post-fire and post-felling communities that have replaced pine forests. There are especially many young birch trees in forest areas heavily damaged by fire in 2010 (Ruchin et al. 2019a). Lime forest is found mainly in the Northern part of the Mordovia State Nature Reserve. These are secondary plant communities that have emerged on the site of pine and lime-spruce forests. Spruce (from *Picea abies* L.) and alder trees (from *Alnus glutinosa* (L.) Gaertn.) are located mainly in floodplains of rivers and streams (Pushta, Vyaz-Pushta, Vorsklyai, Arga, etc.) and occupy small areas. Vegetation communities of small-leaved species (birch, aspen, alder) are formed in post-fire areas (Khapugin et al. 2016). The reserve borders the Nizhny Novgorod Region in the North (Pervomaisk, Diveevo, and Voznesenskoe districts, and Sarov). The rest of the border passes through the Republic of Mordovia (Temnikov and Yelniki districts).

The diversity of Coleoptera (Insecta, Coleoptera) of the Mordovia State Nature Reserve has been studied since its foundation (Redikortsev 1938). However, the last 15 years have showed an ever-increasing interest in research (Egorov, Ruchin 2012; 2014; Egorov et al. 2010; 2015; 2016; 2017; 2018; 2019; 2020b). The studies explore separate families (Feoktistov 2008; Semenov 2015; 2016; 2017; Ruchin et al. 2018; 2019; Kovalev, Egorov 2017; Mandelshtam, Egorov 2018; 2019) as well as some of the most interesting species (Egorov 2017; Egorov, Shapovalov 2017; Ruchin, Egorov 2018a; 2018b; 2018c; 2018d; 2018f; Tomaszewska et al. 2018; Kazantsev et

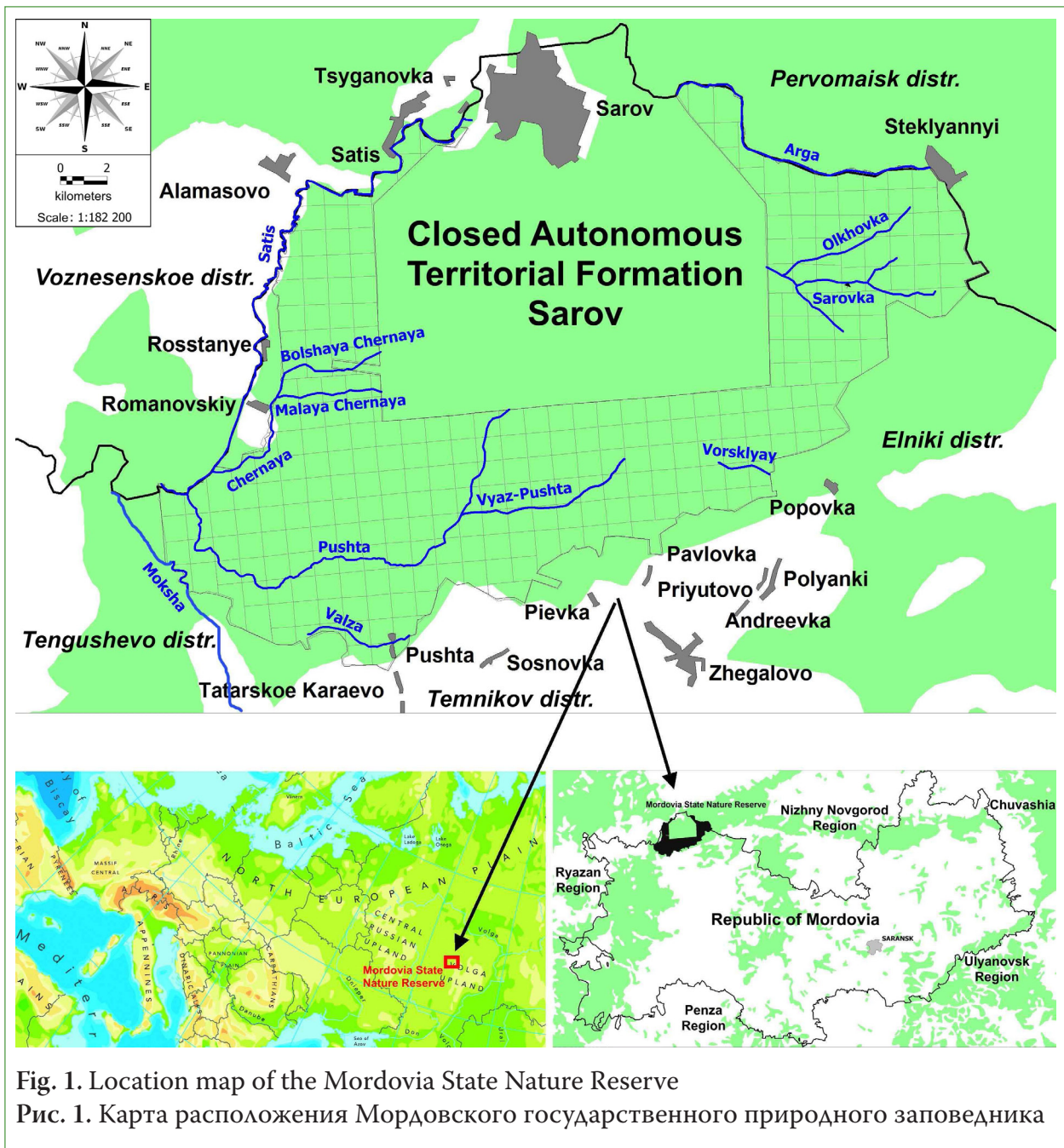


Fig. 1. Location map of the Mordovia State Nature Reserve

Рис. 1. Карта расположения Мордовского государственного природного заповедника

al. 2019; Ruchin et al. 2019a, 2019b), including those from the Red Books (Ruchin, Kurmaeva 2010; Ruchin, Egorov 2017; Ruchin, Khapugin 2019). To date, according to our data, 2,145 species from 88 Coleoptera families have been recorded from the Mordovia State Nature Reserve (Egorov et al. 2020a).

This article provides additional information on the Coleoptera fauna of the surrounding area of the Mordovia State Nature Reserve, including the territories of the Nizhny Novgorod Region and the Republic of Mordovia.

Material and methods

The material was collected in 2012–2019 using entomological methods of field research (Fasulati 1971) and crown traps with fermenting baits (Ruchin et al. 2020). The paper also publishes previously unreleased results from earlier years.

The paper provides an annotated list of discovered species (see below). For each of the species the list specifies the location of collection (previously unpublished data), dates of collection, biotopes (upon the availability of data), the number of collected specimens, names of collectors (AR — A. B. Ruchin, GS — G. B. Semi-

shin, ME — M. N. Esin, PC — P. V. Cherenkov, OA — O. N. Artaev, DK — D. K. Kurmaeva).

The Coleoptera system, volume, and nomenclature of most taxa are taken primarily from the Catalogue of Coleoptera of the Palearctic (Löbl, Smetana 2007; 2008; 2010; Löbl, Löbl 2015; 2016; 2017); the volume of families and nomenclature of Curculionoidea from, from (Alonso-Zarazaga et al. 2017). Most species were defined by L. V. Egorov (not marked in the text) and S. K. Alekseev (most of the Carabidae, marked in the text). The sequence of taxa within families is given in alphabetical order. The studied material is partially stored in the collection of the reserve (Pushta). Abbreviations used in the text: RM — Republic of Mordovia, NNR — Nizhny Novgorod Region, district — distr, vill. — vilage, sett. — settlement, ex. — exemplar.

ANNOTATED LIST

Coleoptera

Adephaga

Carabidae

Acupalpus meridianus (Linnaeus, 1760)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 12 ex., det. S. K. Alekseev (OA); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 1 ex., det. S. K. Alekseev (ME).

Agonum fuliginosum (Panzer, 1809)

Material: NNR: Sarov, 05–08.2013, 5 ex. (OA).

Agonum gracilipes (Duftschmid, 1812)

Material: RM: Temnikov distr., Mikhailovka vill., 06–07.2012, coppice, 1 ex., det. S. K. Alekseev (OA). Elniki distr., Peredovoi sett., 05–09.2014, broad-leaved forest, 1 ex., det. S. K. Alekseev (OA); Novye Pichingushi vill., 04–06.2014, birch planting, 11 ex., det. S. K. Alekseev (OA).

Agonum sexpunctatum (Linnaeus, 1758)

Material: RM: Temnikov distr., Veselyi sett., 25.05.2013, mixed forest, 1 ex., det. S. K. Alekseev (AR). Elniki distr., Starye Shaly vill., 05–06.2014, pine forest, 2 ex., det. S. K. Alekseev (OA). NNR: Sarov, northeast, on wet sand in a ditch on the side of a highway running through the woods, 26.05.2018, 12.06.2018, 2 ex. (PC).

Agonum versutum Sturm, 1824

Material: RM: Temnikov distr., Andreevka vill., 11.05.2013, the edge of the forest, 1 ex., det. S. K. Alekseev (AR).

Amara aenea (De Geer, 1774)

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 18 ex., det. S. K. Alekseev; Peredovoi sett., 05–09.2014, broad-leaved forest, 1 ex., det. S. K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 8 ex., det. S.K. Alekseev; Novye Shaly vill., 05–06.2014, young pine forest, 1 ex., det. S. K. Alekseev (OA); Cherlyai vill., 15.05–28.06.2019, deciduous forest, 4 ex. (ME); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 1 ex. (ME). NNR: Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 1 ex. (OA).

Amara aulica (Panzer, 1796)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 3 ex., det. S. K. Alekseev (OA).

Amara bifrons (Gyllenhal, 1810)

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 1 ex., det. S. K. Alekseev (OA); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 1 ex. (ME).

Amara communis (Panzer, 1797)

Material: RM: Tengushevo distr., Kleme-schshei vill., 14.05–21.06.2019, mixed forest, 11 ex., det. S. K. Alekseev (ME). Elniki distr., Peredovoi sett., 05–09.2014, broad-leaved forest, 3 ex., det. S. K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 7 ex., det. S. K. Alekseev; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 1 ex., det. S. K. Alekseev (OA); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 57 ex. (ME); Cherlyai vill., 31.07–16.09.2019, deciduous forest, 1 ex. (ME). NNR: Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 7 ex. (OA). Voznesenskoe distr., Baranovka vill., 16.05–18.06.2019, meadow, 5 ex., det. S. K. Alekseev (ME).

Amara consularis (Duftschmid, 1812)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 5 ex., det. S. K. Alekseev (OA).

Amara curta Dejean, 1828

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 2 ex., det. S. K. Alekseev (OA).

Amara eurynota (Panzer, 1796)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 4 ex., det. S. K. Alekseev; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 1 ex., det. S. K. Alekseev (OA); Cherlyai vill., 15.05–28.06.2019, deciduous forest, 1 ex. (ME).

Amara familiaris (Duftschmid, 1812)

Material: RM: Elniki distr., Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 1 ex., det. S. K. Alekseev; Starye Shaly vill., 05–06.2014, pine forest, 1 ex., det. S. K. Alekseev (OA).

Amara fulva (O.F. Müller, 1776)

Material: NNR: Vyksa distr., NE Vyksa, dirt (sandy) road to Rizadeevskoe lake, 13.08.2017, 1 ex. (PC). Voznesenskoe distr., Baranovka vill., 16.05–18.06.2019, meadow, 1 ex., det. S. K. Alekseev (ME).

Amara ingenua (Duftschmid, 1812)

Material: NNR: Voznesenskoe distr., Baranovka vill., 16.05–18.06.2019, meadow, 2 ex., det. S. K. Alekseev (ME).

Amara ovata (Fabricius, 1792).

Material: RM: Temnikov distr., Andreevka vill., 11.05.2013, the edge of the forest, 1 ex. (AR).

Amara majuscula (Chaudoir, 1850)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 1 ex., det. S. K. Alekseev (OA).

Amara ovata (Fabricius, 1792)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 12 ex., det. S. K. Alekseev (OA). NNR: Voznesenskoe distr., Baranovka vill., 16.05–18.06.2019, meadow, 1 ex., det. S. K. Alekseev (ME).

Amara similata (Gyllenhal, 1810)

Material: RM: Elniki distr., Novye Shaly vill., 05–06.2014, young pine forest, 2 ex., det. S. K. Alekseev (OA). NNR: Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 1 ex., det. S. K. Alekseev (OA).

Amara tibialis (Paykull, 1798)

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 5 ex., det. S. K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 3 ex.; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 2 ex., det. S. K. Alekseev; Starye Shaly vill., 05–06.2014, pine forest, 2 ex., det. S. K. Alekseev (OA).

Anchomenus dorsalis (Pontoppidan, 1763)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 15 ex., det. S. K. Alekseev (OA).

Anisodactylus binotatus (Fabricius, 1787)

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 12 ex., det. S. K. Alekseev; Peredovoi sett., 05–09.2014, broad-leaved forest, 1 ex., det. S. K. Alekseev (OA).

Anisodactylus nemorivagus (Duftschmid, 1812)

Material: RM: Temnikov distr., Kitsaevka vill., 12.05.2013, mixed forest, 1 ex. (AR). NNR: Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 1 ex., det. S. K. Alekseev (OA).

Anisodactylus signatus (Panzer, 1796)

Material: RM: Temnikov distr., Kitsaevka vill., 12.05.2013, mixed forest, 1 ex., det. S. K. Alekseev (AR). Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 1 ex., det. S. K. Alekseev (OA).

Asaphidion flavipes (Linnaeus, 1760)

Material: RM: Elniki distr., Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 4 ex., det. S. K. Alekseev (OA). NNR: Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 1 ex., det. S. K. Alekseev (OA).

Badister bullatus (Schrank, 1798) (= *bipustulatus* (Fabricius, 1792) nec (Fabricius, 1775))

Material: RM: Temnikov distr., Mikhailovka vill., 06–07.2012, coppice, 1 ex., det. S. K. Alekseev (OA). Elniki distr., Peredovoi sett., 05–09.2014, broad-leaved forest, 2 ex., det. S. K. Alekseev; Novye Shaly vill., 05–06.2014, young pine forest, 2 ex., det. S. K. Alekseev (OA).

Badister collaris Motschulsky 1844

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 1 ex., det. S. K. Alekseev (OA).

Badister lacertosus Sturm, 1815

Material: RM: Elniki distr., Starye Shaly vill., 05–06.2014, pine forest, 5 ex., det. S. K. Alekseev; Svobodnyi sett., 04–06.2014, disturbed meadow, 1 ex., det. S. K. Alekseev; Peredovoi sett., 05–09.2014, broad-leaved forest, 1 ex., det. S. K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 1 ex., det. S. K. Alekseev; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 2 ex., det. S. K. Alekseev; Novye Shaly vill., 05–06.2014, young pine forest, 2 ex. (OA); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 11 ex. (ME). NNR: Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 2 ex., det. S. K. Alekseev (OA).

Badister meridionalis Puel, 1925

Material: NNR: Sarov, 05–08.2013, 1 ex. (OA).

Bembidion articulatum (Panzer, 1796)

Material: NNR: Sarov, northeast, on wet sand in a ditch on the side of a highway running through the woods, 9.06.2017, 1 ex. (PC).

Bembidion gilvipes Sturm, 1825

Material: RM: Elniki distr., Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 1 ex. (ME).

Bembidion lampros (Herbst, 1784)

Material: RM: Elniki distr., Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 41 ex., det. S. K. Alekseev (OA); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 2 ex. (ME).

Bembidion obliquum Sturm, 1825

Material: NNR: Vyksa distr., Vyksa, Ryzadeevskoe lake, near a puddle, 29.07.2018, 1 ex. (PC).

Bembidion properans (Stephens, 1828)

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 32 ex., det. S. K. Alekseev; Peredovoi sett., 05–09.2014, broad-leaved forest, 1 ex., det. S. K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 9 ex., det. S. K. Alekseev; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 5 ex., det. S. K. Alekseev (OA); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 10 ex. (ME).

Bembidion quadrimaculatum (Linnaeus, 1760)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 33 ex., det. S. K. Alekseev (OA).

Blemus discus (Fabricius, 1792)

Material: NNR: Sarov, northeast, on wet sand in a ditch on the side of a highway running through the woods, 17.08.2018, 1 ex. (PC).

Broscus cephalotes (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Alamasovo vill., on a dacha plot, in the ground, 6.06.2014, 1.05.2015, 2 ex. (PC).

Calathus ambiguus (Paykull, 1790)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 89 ex., det. S. K. Alekseev (OA).

Calathus erratus (C.R. Sahlberg, 1827)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 25 ex., det. S. K. Alekseev; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 1 ex., det. S. K. Alekseev (OA). NNR: Sarov, 05–08.2013, 2 ex., det. S. K. Alekseev (OA). Voznesenskoe distr., Shaprikha vill., 16.05–18.06.2019, mixed forest, 5 ex., det. S. K. Alekseev (ME).

Calathus fuscipes (Goeze, 1777)

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 6 ex., det. S. K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 139 ex., det. S. K. Alekseev (OA).

Calathus melanocephalus (Linnaeus, 1758)

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 5 ex., det. S. K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 6 ex., det. S. K. Alekseev (OA); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 1 ex. (ME). NNR: Voznesenskoe distr., Baranovka vill., 16.05–18.06.2019, meadow, 3 ex., det. S. K. Alekseev (ME).

Calathus micropterus (Duftschmid, 1812)

Material: RM: Elniki distr., Starye Shaly vill., 05–06.2014, pine forest, 2 ex.; Novye Shaly vill., 05–06.2014, young pine forest, 6 ex., det. S. K. Alekseev; Peredovoi sett., 05–

09.2014, broad-leaved forest, 3 ex., det. S. K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 2 ex., det. S. K. Alekseev; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 7 ex., det. S. K. Alekseev (OA). NNR: Sarov, 05–08.2013, 28 ex., det. S. K. Alekseev (OA).

Calosoma inquisitor (Linnaeus, 1758)

Material: RM: Tengushevo distr., Klemeschshei vill., 14.05–21.06.2019, mixed forest, 1 ex., det. S. K. Alekseev (ME). Elniki distr., Cherlyai vill., 15.05–28.06.2019, deciduous forest, 1 ex. (ME).

Carabus arvensis Herbst, 1784

Material: RM: Elniki distr., Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 4 ex., det. S.K. Alekseev; Starye Shaly vill., 05–06.2014, pine forest, 30 ex., det. S. K. Alekseev (OA). Tengushevo distr., Klemeschshei vill., 14.05–21.06.2019, mixed forest, 51 ex., det. S. K. Alekseev (ME).

Carabus cancellatus Illiger, 1798

Material: RM: Elniki distr., Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 4 ex., det. S.K. Alekseev; Peredovoi sett., 05–09.2014, broad-leaved forest, 11 ex., det. S. K. Alekseev (OA); Cherlyai vill., 15.05–28.06.2019, deciduous forest, 7 ex. (ME). NNR: Voznesenskoe distr., Alamasovo vill., 17.10.2015, 30.04.2016, 16.08.2016, 3 ex. (PC); Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 7 ex., det. S. K. Alekseev (OA).

Carabus clathratus Linnaeus, 1760

Material: RM: Tengushevo distr., Khlebinno vill., 14.05–20.06.2019, meadow, 1 ex., det. S. K. Alekseev (ME).

Carabus convexus Fabricius, 1775

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 5 ex., det. S. K. Alekseev; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 2 ex., det. S. K. Alekseev (OA).

Carabus coriaceus Linnaeus, 1758

Material: RM: Elniki distr., Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 2 ex., det. S. K. Alekseev (OA); Cherlyai vill., 31.07–16.09.2019, deciduous forest, 1 ex.

(ME). NNR: Voznesenskoe distr., Alamasovo vill., mixed forest, 13.09.2015, 1 ex. (PC); Sarov, 05–08.2013, 3 ex., det. S. K. Alekseev (OA).

Carabus glabratus Paykull, 1790

Material: RM: Elniki distr., Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 11 ex., det. S. K. Alekseev; Starye Shaly vill., 05–06.2014, pine forest, 3 ex., det. S. K. Alekseev; Peredovoi sett., 05–09.2014, broad-leaved forest, 4 ex., det. S. K. Alekseev (OA). Temnikov distr., Andreevka vill., 14.05–21.06.2019, mixed forest, 2 ex. (ME). NNR: Sarov, 05–08.2013, 13 ex., det. S. K. Alekseev (OA). Voznesenskoe distr., Shaprikha vill., 16.05–18.06.2019, mixed forest, 1 ex., det. S. K. Alekseev (ME).

Carabus granulatus Linnaeus, 1758

Material: RM: Elniki distr., Starye Shaly vill., 05–06.2014, pine forest, 1 ex., det. S. K. Alekseev; Peredovoi sett., 05–09.2014, broad-leaved forest, 7 ex., det. S. K. Alekseev; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 1 ex., det. S. K. Alekseev (OA). NNR: Sarov, 05–08.2013, 35 ex., det. S. K. Alekseev (OA). NNR: Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 21 ex., det. S. K. Alekseev (OA).

Carabus hortensis Linnaeus, 1758

Material: RM: Temnikov distr., Kitsaevka vill., 12.05.2013, mixed forest, 1 ex. (AR); Mikhailovka vill., 06–07.2012, coppice, 9 ex., det. S. K. Alekseev (OA); Andreevka vill., 31.07–16.09.2019, mixed forest, 1 ex. (ME). Elniki distr., Novye Shaly vill., 05–06.2014, young pine forest, 5 ex., det. S. K. Alekseev; Starye Shaly vill., 05–06.2014, pine forest, 5 ex., det. S. K. Alekseev; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 26 ex., det. S. K. Alekseev; Peredovoi sett., 05–09.2014, broad-leaved forest, 6 ex., det. S. K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 5 ex., det. S. K. Alekseev (OA). NNR: Voznesenskoe distr., Alamasovo vill., 17.08.2014, 1 ex. (PC); Sarov, 05–08.2013, 11 ex., det. S. K. Alekseev (OA); Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 1 ex., det. S. K. Alekseev (OA).

Cicindela campestris Linnaeus, 1758

Material: RM: Temnikov distr., Kitsaevka vill., 12.05.2013, mixed forest, 2 ex. (AR). Tengushevo distr., Khlebino vill., 14.05–20.06.2019, meadow, 1 ex., det. S. K. Alekseev (ME). Elniki distr., Cherlyai vill., 15.05–28.06.2019, deciduous forest, 3 ex. (ME). NNR: Voznesenskoe distr., Alamasovo vill., 30.05.2015, 14.06.2015, 30.04.2017, 20.05.2017, 6 ex. (PC); Baranovka vill., 16.05–18.06.2019, meadow, 4 ex., det. S. K. Alekseev (ME).

Cicindela hybrida Linnaeus, 1758

Material: RM: Temnikov distr., Andreevka vill., 11.05.2013, the edge of the forest, 1 ex. (AR). NNR: Sarov, 2.06.2015, 10.07.2015, 18.04.2016, 4.06.2016, 4 ex.; Voznesenskoe distr., Alamasovo vill., 25.07.2015, 2.08.2016, 29.04.2017, 3 ex. (PC).

Cicindela sylvatica Linnaeus, 1758

Material: RM: Temnikov distr., Purdoshki vill., 15.08.2015, 1 ex. (AR). Elniki distr., Novye Shaly vill., 26.05.2013, pine forest, 1 ex. (AR). NNR: Voznesenskoe distr., Alamasovo vill., 18.07.2015, 19.07.2015, 25.07.2015, 9.05.2016, 30.07.2016, 29.04.2017, 2.05.2018, 7 ex. (PC).

Clivina fossor (Linnaeus, 1758)

Material: NNR: Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 1 ex., det. S. K. Alekseev (OA).

Cychnus caraboides (Linnaeus, 1758)

Material: NNR: Sarov, 05–08.2013, 4 ex., det. S. K. Alekseev (OA).

Cylindera arenaria viennensis (Schrank, 1781)

Material: NNR: Vyksa, 17.08.2017, 18.08.2017, 31.07.2018, 4 ex. (PC).

Note. Psammophile. This is a very rare local species. It inhabits floodplain areas with extensive sandy banks and sand and mud banks (Gebert 2014), open sandy areas of anthropogenic origin (Spitzer et al. 2014).

Cymindis angularis Gyllenhal, 1810

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 5 ex., det. S. K. Alekseev (OA).

Dolichus halensis (Schaller, 1783)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 3 ex., det. S. K. Alekseev (OA).

Dromius schneideri Crotch, 1871

Material: NNR: Voznesenskoe distr., Alamasovo vill., 14.05.2016, 1 ex. (PC).

Elaphrus cupreus Duftschmid, 1812

Material: RM: Tengushevo distr., Klemeschshei vill., 14.05–21.06.2019, mixed forest, 1 ex., det. S. K. Alekseev (ME). NNR: Voznesenskoe distr., Alamasovo vill., 11.06.2017, 1 ex. (PC); Sarov, 05–08.2013, 3 ex., det. S. K. Alekseev (OA).

Elaphrus riparius (Linnaeus, 1758)

Material: NNR: Sarov, northeast, on wet sand in a ditch on the side of a highway running through the woods, 9.06.2017, 12.06.2017, 20.06.2017, 3 ex. (PC).

Harpalus affinis (Schrank, 1781)

Material: RM: Temnikov distr., Mikhailovka vill., 06–07.2012, coppice, 1 ex., det. S. K. Alekseev (OA). Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 26 ex., det. S. K. Alekseev; Svobodnyi sett., 04–06.2014, disturbed meadow, 3 ex., det. S. K. Alekseev (OA). NNR: Sarov, 05–08.2013, 1 ex., det. S. K. Alekseev (OA). Voznesenskoe distr., Baranovka vill., 16.05–18.06.2019, meadow, 4 ex., det. S. K. Alekseev (ME).

Harpalus distinguendus (Duftschmid, 1812)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 11 ex., det. S. K. Alekseev; Svobodnyi sett., 04–06.2014, disturbed meadow, 4 ex., det. S. K. Alekseev (OA).

Harpalus griseus (Panzer, 1796)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 7 ex., det. S. K. Alekseev (OA).

Harpalus laevipes Zetterstedt, 1828

Material: RM: Elniki distr., Peredovoi sett., 05–09.2014, broad-leaved forest, 2 ex., det. S. K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 1 ex., det. S. K. Alekseev; Malye Mordovskie Poshty vill., 05–06.2014, broad-leaved forest, 6 ex., det. S. K. Alekseev; Novye Shaly vill., 05–06.2014, young pine forest, 8 ex., det. S. K. Alekseev; Starye Shaly vill., 05–06.2014, pine forest, 9 ex., det. S. K. Alekseev (OA). NNR: Sarov, 05–08.2013, 9 ex., det. S. K. Alekseev

(OA). Voznesenskoe distr., Shaprikha vill., 16.05–18.06.2019, mixed forest, 3 ex., det. S. K. Alekseev (ME).

Harpalus latus (Linnaeus, 1758)

Material: RM: Temnikov distr., Mikhailovka vill., 06–07.2012, coppice, 1 ex., det. S. K. Alekseev (OA); Andreevka vill., 31.07–16.09.2019, mixed forest, 7 ex. (ME). Tengushevo distr., Klemeschshei vill., 14.05–21.06.2019, mixed forest, 5 ex., det. S. K. Alekseev (ME); Khlebinno vill., 14.05–20.06.2019, meadow, 22 ex., det. S. K. Alekseev (ME). Elniki distr., Peredovoi sett., 05–09.2014, broad-leaved forest, 1 ex.; Novye Pichingushi vill., 04–06.2014, birch planting, 1 ex., det. S. K. Alekseev; Malye Mordovskie Poshty vill., 05–06.2014, broad-leaved forest, 4 ex., det. S. K. Alekseev (OA); Cherlyai vill., 15.05–28.06.2019, deciduous forest, 5 ex. (ME); Starye Russkie Poshty vill., 15.05–28.06.2019, meadow, 17 ex. (ME). NNR: Sarov, 05–08.2013, 2 ex., det. S. K. Alekseev (OA). Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 21 ex. (OA).

Harpalus picipennis (Duftschmid, 1812)

Material: NNR: Voznesenskoe distr., Shaprikha vill., 16.05–18.06.2019, mixed forest, 2 ex., det. S. K. Alekseev (ME).

Harpalus progrediens Schauburger, 1922

Material: RM: Temnikov distr., Mikhailovka vill., 06–07.2012, coppice, 1 ex., det. S. K. Alekseev (OA). Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 7 ex., det. S. K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 2 ex., det. S. K. Alekseev (OA). NNR: Voznesenskoe distr., Baranovka vill., 16.05–18.06.2019, meadow, 6 ex., det. S. K. Alekseev (ME).

Harpalus pumilus Sturm, 1818

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 3 ex., det. S. K. Alekseev (OA).

Harpalus rubripes (Duftschmid, 1812)

Material: RM: Tengushevo distr., Khlebinno vill., 14.05–20.06.2019, meadow, 2 ex., det. S. K. Alekseev (ME). Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 11 ex., det. S. K. Alekseev; Peredovoi sett., 05–

09.2014, broad-leaved forest, 1 ex., det. S. K. Alekseev; Malye Mordovskie Poshty vill., 05–06.2014, broad-leaved forest, 1 ex., det. S. K. Alekseev; Novye Shaly vill., 05–06.2014, young pine forest, 1 ex., det. S. K. Alekseev; Starye Shaly vill., 05–06.2014, pine forest, 1 ex., det. S. K. Alekseev (OA); Starye Russkie Poshty vill., 15.05–28.06.2019, meadow, 9 ex. (ME). NNR: Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 1 ex., det. S. K. Alekseev (OA). Voznesenskoe distr., Baranovka vill., 16.05–18.06.2019, meadow, 4 ex., det. S. K. Alekseev (ME).

Harpalus rufipes (De Geer, 1774)

Material: RM: Temnikov distr., Mikhailovka vill., 06–07.2012, coppice, 39 ex., det. S. K. Alekseev (OA). Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 378 ex., det. S. K. Alekseev; Peredovoi sett., 05–09.2014, broad-leaved forest, 23 ex., det. S. K. Alekseev; Malye Mordovskie Poshty vill., 05–06.2014, broad-leaved forest, 4 ex., det. S. K. Alekseev; Starye Shaly vill., 05–06.2014, pine forest, 1 ex., det. S. K. Alekseev (OA); Cherlyai vill., 15.05–28.06.2019, deciduous forest, 2 ex. (ME); Starye Russkie Poshty vill., 15.05–28.06.2019, meadow, 5 ex. (ME). NNR: Voznesenskoe distr., Alamasovo vill., on a dacha plot, in the ground, 7.09.2014, 16.08.2015, 2 ex. (PC); Baranovka vill., 16.05–18.06.2019, meadow, 5 ex., det. S. K. Alekseev (ME); Shaprikha vill., 16.05–18.06.2019, mixed forest, 4 ex., det. S. K. Alekseev (ME). Sarov, 05–08.2013, 2 ex., det. S. K. Alekseev (OA).

Harpalus signaticornis (Duftschmid, 1812)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 1 ex., det. S. K. Alekseev (OA).

Harpalus smaragdinus (Duftschmid, 1812)

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 1 ex., det. S. K. Alekseev (OA).

Harpalus tardus (Panzer, 1796)

Material: RM: Temnikov distr., Kitsaevka vill., 12.05.2013, mixed forest, 1 ex. (AR). Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 10 ex., det. S. K. Alekseev; Malye Mordovskie Poshty vill., 05–06.2014, broad-leaved

forest, 4 ex., det. S. K. Alekseev (OA). NNR: Voznesenskoe distr., Baranovka vill., 16.05–18.06.2019, meadow, 3 ex., det. S. K. Alekseev (ME); Shaprikha vill., 16.05–18.06.2019, mixed forest, 2 ex., det. S. K. Alekseev (ME).

Harpalus xanthopus winkleri Schauberger, 1923

Material: RM: Tengushevo distr., Khlebino vill., 14.05–20.06.2019, meadow, 1 ex., det. S. K. Alekseev (ME). Elniki distr., Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 2 ex., det. S. K. Alekseev; Novye Shaly vill., 05–06.2014, young pine forest, 2 ex., det. S. K. Alekseev (OA); Cherlyai vill., 15.05–28.06.2019, deciduous forest, 2 ex. (ME); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 30 ex. (ME). NNR: Sarov, 05–08.2013, 1 ex., det. S. K. Alekseev (O). Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 1 ex., det. S. K. Alekseev (OA).

Lebia chlorocephala (J.J. Hoffmann, 1803)

Material: RM: Elniki distr., Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 1 ex. (ME).

Lebia cruxminor (Linnaeus, 1758)

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 2 ex., det. S. K. Alekseev (OA); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 1 ex. (ME).

Leistus terminatus (Panzer, 1793)

Material: NNR: Sarov, 05–08.2013, 1 ex., det. S. K. Alekseev (OA).

Licinus depressus (Paykull, 1790)

Material: RM: Elniki distr., Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 3 ex. (ME).

Limodromus assimilis (Paykull, 1790)

Material: RM: Elniki distr., Peredovoi sett., 05–09.2014, broad-leaved forest, 5 ex., det. S. K. Alekseev (OA). NNR: Sarov, 05–08.2013, 1 ex., det. S. K. Alekseev (OA).

Loricera pilicornis (Fabricius, 1775)

Material: RM: Elniki distr., Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 2 ex., det. S. K. Alekseev (ME). NNR: Sarov, 05–08.2013, 1 ex., det. S. K. Alekseev (OA).

Microlestes maurus (Sturm, 1827)

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 26 ex.,

det. S. K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 1 ex., det. S. K. Alekseev (OA); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 1 ex. (ME).

Microlestes minutulus (Goeze, 1777)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 5 ex., det. S. K. Alekseev; Starye Shaly vill., 05–06.2014, pine forest, 1 ex., det. S. K. Alekseev (OA).

Notiophilus aquaticus (Linnaeus, 1758)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 1 ex., det. S. K. Alekseev (OA). NNR: Sarov, 05–08.2013, 1 ex., det. S. K. Alekseev (OA).

Notiophilus palustris (Duftschmid, 1812)

Material: RM: Temnikov distr., Mikhailovka vill., 06–07.2012, coppice, 1 ex., det. S. K. Alekseev (OA). Elniki distr., Peredovoi sett., 05–09.2014, broad-leaved forest, 2 ex., det. S. K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 1 ex., det. S. K. Alekseev; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 1 ex., det. S. K. Alekseev; Starye Shaly vill., 05–06.2014, pine forest, 1 ex., det. S. K. Alekseev (OA).

Odacantha melanura (Linnaeus, 1767)

Material: NNR: Sarov, 13.03.2016, 1 ex. (PC).

Ophonus azureus (Fabricius, 1775)

Material: RM: Temnikov distr., Mikhailovka vill., 06–07.2012, coppice, 1 ex., det. S. K. Alekseev (OA). Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 13 ex., det. S. K. Alekseev (OA).

Ophonus rufibarbis (Fabricius, 1792)

Material: RM: Elniki distr., Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 3 ex. (ME). NNR: Voznesenskoe distr., Baranovka vill., 16.05–18.06.2019, meadow, 1 ex., det. S. K. Alekseev (ME).

Oxypselaphus obscurus (Herbst, 1784)

Material: RM: Temnikov distr., Mikhailovka vill., 06–07.2012, coppice, 1 ex., det. S. K. Alekseev (OA). Elniki distr., Novye Shaly vill., 05–06.2014, young pine forest, 6 ex., det. S. K. Alekseev (OA); Cherlyai vill., 15.05–28.06.2019, deciduous forest, 1 ex. (ME).

NNR: Sarov, 05–08.2013, 6 ex., det. S. K. Alekseev (OA). Voznesenskoe distr., Shaprikha vill., 16.05–18.06.2019, mixed forest, 1 ex., det. S. K. Alekseev (ME).

Panagaeus bipustulatus (Fabricius, 1775)

Material: RM: Elniki distr., Starye Shaly vill., 05–06.2014, pine forest, 1 ex., det. S. K. Alekseev (OA); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 1 ex. (ME). NNR: Sarov, 18.05.2017, 1 ex. (PC). Voznesenskoe distr., Baranovka vill., 16.05–18.06.2019, meadow, 1 ex., det. S. K. Alekseev (ME).

Panagaeus cruxmajor (Linnaeus, 1758)

Material: RM: Elniki distr., Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 2 ex. (ME).

Philorhizus sigma (P. Rossi, 1790)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 2 ex., det. S. K. Alekseev (OA); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 1 ex. (ME).

Poecilus cupreus (Linnaeus, 1758)

Material: RM: Temnikov distr., Mikhailovka vill., 06–07.2012, coppice, 2 ex., det. S. K. Alekseev (OA). Tengushevo distr., Klemeschshei vill., 14.05–21.06.2019, mixed forest, 3 ex., det. S. K. Alekseev (ME). Elniki distr., Peredovoi sett., 05–09.2014, broad-leaved forest, 9 ex., det. S.K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 296 ex., det. S.K. Alekseev; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 7 ex., det. S.K. Alekseev; Novye Shaly vill., 05–06.2014, young pine forest, 1 ex., det. S.K. Alekseev; Starye Shaly vill., 05–06.2014, pine forest, 4 ex., det. S. K. Alekseev (OA); Cherlyai vill., 15.05–28.06.2019, deciduous forest, 3 ex. (ME); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 4 ex. (ME). NNR: Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 2 ex., det. S. K. Alekseev (OA). Voznesenskoe distr., Baranovka vill., 16.05–18.06.2019, meadow, 2 ex., det. S. K. Alekseev (ME).

Poecilus lepidus (Leske, 1785)

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 1 ex., det. S.

K. Alekseev (OA). NNR: Sarov, 05–08.2013, 2 ex., det. S. K. Alekseev (OA). Voznesenskoe distr., Shaprikha vill., 16.05–18.06.2019, mixed forest, 3 ex., det. S. K. Alekseev (ME).

Poecilus punctulatus (Schaller, 1783)

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 2 ex., det. S. K. Alekseev (OA).

Poecilus versicolor (Sturm, 1824)

Material: RM: Temnikov distr., Veselyi sett., 25.05.2013, mixed forest, 1 ex.; Kitsaevka vill., 12.05.2013, mixed forest, 1 ex. (AR); Mikhailovka vill., 06–07.2012, coppice, 97 ex., det. S. K. Alekseev (OA). Tengushevo distr., Klemeschshei vill., 14.05–21.06.2019, mixed forest, 99 ex., det. S. K. Alekseev (ME). Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 4 ex., det. S.K. Alekseev; Peredovoi sett., 05–09.2014, broad-leaved forest, 23 ex., det. S.K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 144 ex., det. S.K. Alekseev; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 5 ex., det. S. K. Alekseev (OA); Cherlyai vill., 15.05–28.06.2019, 31.07–16.09.2019, deciduous forest, 10 ex. (ME); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 45 ex. (ME). NNR: Sarov, 05–08.2013, 5 ex., det. S. K. Alekseev (OA). Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 36 ex., det. S. K. Alekseev (OA). Voznesenskoe distr., Baranovka vill., 16.05–18.06.2019, meadow, 6 ex., det. S. K. Alekseev (ME).

Pterostichus anthracinus (Illiger, 1798)

Material: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 2 ex., det. S. K. Alekseev; Novye Shaly vill., 05–06.2014, young pine forest, 5 ex., det. S. K. Alekseev (OA).

Pterostichus diligens (Sturm, 1824)

Material: NNR: Sarov, 05–08.2013, 8 ex., det. S. K. Alekseev (OA).

Pterostichus gracilis (Dejean, 1828)

Material: RM: Elniki distr., Starye Shaly vill., 05–06.2014, pine forest, 1 ex., det. S. K. Alekseev (OA); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 1 ex. (ME). NNR: Sarov, 05–08.2013, 1 ex., det. S. K. Alekseev

(OA). Voznesenskoe distr., Baranovka vill., 16.05–18.06.2019, meadow, 1 ex., det. S. K. Alekseev (ME).

Pterostichus minor (Gyllenhal, 1827)

Material: RM: Elniki distr., Novye Shaly vill., 05–06.2014, young pine forest, 6 ex., det. S.K. Alekseev; Peredovoi sett., 05–09.2014, broad-leaved forest, 1 ex., det. S.K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 1 ex.; Starye Shaly vill., 05–06.2014, pine forest, 1 ex., det. S. K. Alekseev (OA). Tengushevo distr., Khlebino vill., 14.05–20.06.2019, meadow, 1 ex., det. S. K. Alekseev (ME). NNR: Sarov, 05–08.2013, 11 ex., det. S. K. Alekseev (OA).

Pterostichus melanarius (Illiger, 1798)

Material: RM: Temnikov distr., Mikhailovka vill., 06–07.2012, coppice, 17 ex., det. S. K. Alekseev (OA). Elniki distr., Peredovoi sett., 05–09.2014, broad-leaved forest, 36 ex., det. S.K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 13 ex., det. S.K. Alekseev; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 30 ex., det. S. K. Alekseev (OA); Cherlyai vill., 15.05–28.06.2019, deciduous forest, 1 ex. (ME). NNR: Voznesenskoe distr., Alamasovo vill., on a dacha plot, in the ground, 23.08.2015, 12.09.2015, 2 ex. (PC). Sarov, 05–08.2013, 22 ex., det. S. K. Alekseev (OA). Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 46 ex., det. S. K. Alekseev (OA).

Pterostichus niger (Schaller, 1783)

Material: RM: Temnikov distr., Andreevka vill., 31.07–16.09.2019, mixed forest, 1 ex. (ME). Elniki distr., Starye Shaly vill., 05–06.2014, pine forest, 1 ex., det. S. K. Alekseev; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 22 ex., det. S. K. Alekseev; Svobodnyi sett., 04–06.2014, disturbed meadow, 2 ex., det. S. K. Alekseev; Peredovoi sett., 05–09.2014, broad-leaved forest, 23 ex., det. S. K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 1 ex., det. S. K. Alekseev (OA); Cherlyai vill., 15.05–28.06.2019, deciduous forest, 1 ex. (ME). NNR: Sarov, 05–08.2013, 66 ex., det. S. K. Alekseev (OA). Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 61 ex., det. S. K. Alekseev (OA).

Pterostichus nigrita (Paykull, 1790)

Material: RM: Elniki distr., Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 6 ex. (ME). NNR: Sarov, 05–08.2013, 9 ex., det. S. K. Alekseev (OA).

Pterostichus oblongopunctatus (Fabricius, 1787)

Material: RM: Temnikov distr., Andreevka vill., 31.07–16.09.2019, mixed forest, 2 ex. (ME). Elniki distr., Starye Shaly vill., 05–06.2014, pine forest, 85 ex., det. S. K. Alekseev; Novye Shaly vill., 05–06.2014, young pine forest, 3 ex., det. S. K. Alekseev; Peredovoi sett., 05–09.2014, broad-leaved forest, 44 ex., det. S. K. Alekseev; Novye Pichingushi vill., 04–06.2014, birch planting, 19 ex., det. S. K. Alekseev; Malye Mordovskie Poshaty vill., 05–06.2014, broad-leaved forest, 86 ex., det. S. K. Alekseev (OA); Cherlyai vill., 15.05–28.06.2019, deciduous forest, 1 ex. (ME). Tengushevo distr., Klemeschshei vill., 14.05–21.06.2019, mixed forest, 6 ex., det. S. K. Alekseev (ME). Temnikov distr., Andreevka vill., 14.05–21.06.2019, mixed forest, 3 ex. (ME). NNR: Sarov, 05–08.2013, 105 ex., det. S. K. Alekseev (OA). Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 131 ex., det. S. K. Alekseev (OA). Voznesenskoe distr., Shaprikha vill., 16.05–18.06.2019, mixed forest, 31 ex., det. S. K. Alekseev (ME).

Pterostichus quadrioveolatus Letzner, 1852

Material: RM: Elniki distr., Novye Shaly vill., 05–06.2014, young pine forest, 5 ex., det. S.K. Alekseev; Starye Shaly vill., 05–06.2014, pine forest, 6 ex., det. S. K. Alekseev (OA).

Pterostichus rhaeticus Heer, 1837

Material: NNR: Sarov, 05–08.2013, 19 ex., det. S. K. Alekseev (OA).

Pterostichus strenuus (Panzer, 1796)

Material: Elniki distr., Peredovoi sett., 05–09.2014, broad-leaved forest, 1 ex., det. S. K. Alekseev; Starye Shaly vill., 05–06.2014, pine forest, 5 ex., det. S. K. Alekseev (OA); Starye Russkie Poshaty vill., 15.05–28.06.2019, meadow, 7 ex. (ME). NNR: Pervomaisk distr., 4 km S Nikolaevka vill., 30.04–14.07.2014, 5 ex., det. S. K. Alekseev (OA). Voznesenskoe distr., Shaprikha vill., 16.05–18.06.2019, mixed forest, 3 ex., det. S. K. Alekseev (ME).

Pterostichus vernalis (Panzer, 1796)

Material: RM: Elniki distr., Starye Russkie Poshty vill., 15.05–28.06.2019, meadow, 1 ex., det. S. K. Alekseev (ME). NNR: Sarov, 05–08.2013, 6 ex., det. S. K. Alekseev (OA).

Sericoda quadripunctata (De Geer, 1774)

Material: RM: Temnikov distr., Mikhailovka vill., 06–07.2012, coppice, 1 ex., det. S. K. Alekseev (OA).

Stenolophus teutonius (Schrank, 1781)

Material: NNR: Sarov, northeast, on wet sand in a ditch on the side of a highway running through the woods, 3.06.2018, 1 ex. (PC).

Stomis pumicatus (Panzer, 1796)

Material: RM: Elniki distr., Starye Russkie Poshty vill., 15.05–28.06.2019, meadow, 4 ex. (ME). NNR: Sarov, 14.04.2016, 1 ex. (PC).

Synuchus vivalis (Illiger, 1798)

Material: RM: Temnikov distr., Mikhailovka vill., 06–07.2012, coppice, 1 ex., det. S. K. Alekseev (OA). Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 1 ex., det. S. K. Alekseev (OA). NNR: Sarov, 05–08.2013, 16 ex., det. S. K. Alekseev (OA).

Trechus quadristriatus (Schrank, 1781)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 1 ex., det. S. K. Alekseev (OA).

Trechus secalis (Paykull, 1790)

Material: NNR: Sarov, 05–08.2013, 24 ex., det. S. K. Alekseev (OA).

Polyphaga

Hydrophilidae

Hydrochara caraboides (Linnaeus, 1758)

Material: RM: Tengushevo distr., Klemeschshei vill., 14.05–21.06.2019, mixed forest, 1 ex. (ME).

Hydrophilus aterrimus Eschscholtz, 1822

Material: NNR: Sarov, 5.05.2017, 1 ex. (PC).

Histeridae

Gnathoncus buyssoni Auzat, 1917

Material: NNR: Voznesenskoe distr., Shaprikha vill., 19–24.06.2019, 1 ex. (AR).

Silphidae

Dendroxena quadrimaculata (Scopoli, 1771)

Material: NNR: Sarov, 26.05.2017, 1 ex. (PC).

Nicrophorus humator (Gleditsch, 1767)

Material: NNR: Sarov, 05–08.2013, 1 ex. (OA).

Nicrophorus vespillo (Linnaeus, 1758)

Material: RM: Tengushevo distr., Klemeschshei vill., 14.05–21.06.2019, mixed forest, 1 ex. (ME).

Nicrophorus vespilloides Herbst, 1783

Material: NNR: Alamasovo vill., 17.06.2017, mixed forest, 1 ex. (PC).

Oiceoptoma thoracicum (Linnaeus, 1758)

Material: NNR: Alamasovo vill., 20.05.2017, 1 ex. (PC).

Silpha carinata Herbst, 1783

Material: RM: Tengushevo distr., Klemeschshei vill., 14.05–21.06.2019, mixed forest, 5 ex. (ME).

Silpha obscura Linnaeus, 1758

Material: RM: Tengushevo distr., Klemeschshei vill., 14.05–21.06.2019, mixed forest, 1 ex. (ME).

Staphylinidae

Lordithon pulchellus (Mannerheim, 1830)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 2.10.2016, 1 ex. (PC).

Nudobius lentus (Gravenhorst, 1806)

Material: NNR: Sarov, 10.04.2016, 1 ex. (PC).

Ontholestes murinus (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 3.05.2015, 1 ex. (PC); Sarov, 25.07.2013, 1 ex. (AR).

Quedius dilatatus (Fabricius, 1787)

Material: RM: Temnikov distr., Tarkhany vill., 16–25.07.2019, 25.07–1.08.2019, 3 ex. (AR). NNR: Pervomaisk distr., 9 km E Bereschshino vill., 10–22.07.2019, 2 ex. (AR); Voznesenskoe distr., Shaprikha vill., 25.06–9.07.2019, 2 ex. (AR).

Scaphidium quadrimaculatum G.-A. Olivier, 1790

Material: NNR: Sarov, 19.05.2017, 1 ex. (PC).

Sepedophilus bipustulatus (Gravenhorst, 1802)

Material: NNR: Sarov, dry birch, on tinder, 9.05.2019, 1 ex. (PC).

Lucanidae

Platycerus caraboides (Linnaeus, 1758)

Material: RM: Tengushevo distr., Kleme-schshei vill., 14.05–21.06.2019, mixed forest, 3 ex. (ME). Elniki distr., Cherlyai vill., 15.05–28.06.2019, deciduous forest, 1 ex. (ME).

Geotrupidae

Anoplotrupes stercorosus (L.G. Scriba, 1791)

Material: NNR: Sarov, 05–08.2013, 2 ex. (OA).

Scarabaeidae

Aphodius fimetarius (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 30.04.2017, 1 ex. (PC).

Cetonia aurata (Linnaeus, 1758)

Material: RM: Temnikov distr., Tarkhany vill., 16–25.07.2019, 25.07–1.08.2019, 2 ex. (AR). NNR: Voznesenskoe distr., Svobodnyi sett., 2–19.06.2019, 5 ex. (AR), Shaprikha vill., 2–19.06.2019, 25.06–9.07.2019, 7 ex. (AR).

Chaetopteroplia segetum (Herbst, 1783)

Material: NNR: Sarov, 2.06.2015, 1 ex. (PC).

Gnorimus variabilis (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Shaprikha vill., 25.06.–9.07.2019, 1 ex. (AR).

Hoplia parvula Krynicki, 1832

Material: NNR: Voznesenskoe distr., Alamasovo vill., 13.06.2016, 1 ex. (PC).

Melolontha hippocastani Fabricius, 1801

Material: NNR: Voznesenskoe distr., Alamasovo vill., on a dacha plot, in the ground, 30.04.2015, 29.04.2016, 2 ex. (PC).

Oryctes nasicornis (Linnaeus, 1758)

Material: NNR: Sarov, 25.06.2016, 9.07.2016, 2 ex. (PC).

Oxythyrea funesta (Poda von Neuhaus, 1761)

Material: NNR: Sarov, 5.07.2014, 1 ex.; Voznesenskoe distr., Alamasovo vill., 2.07.2016, 24.06.2017, 2 ex. (PC).

Phyllopertha horticola (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 24.06.2017, 1 ex. (PC).

Protaetia fieberi (Kraatz, 1880)

Material: RM: Temnikov distr., Tarkhany vill., 16–25.07.2019, 3 ex. (AR). NNR: Voznesenskoe distr., Svobodnyi sett., 2–19.06.2019, 3 ex. (AR), Shaprikha vill., 2–19.06.2019, 25.06–9.07.2019, 19–24.06.2019, 24.06.–2.07.2019, 12 ex. (AR).

Protaetia marmorata (Fabricius, 1792)

Material: RM: Temnikov distr., Tarkhany vill., 16–25.07.2019, 9 ex. (AR). NNR: Voznesenskoe distr., Svobodnyi sett., 2–19.06.2019, 11 ex. (AR), Shaprikha vill., 2–19.06.2019, 25.06–9.07.2019, 19–24.06.2019, 33 ex. (AR); Pervomaisk distr., 9 km E Bereschshino vill., 10–22.07.2019, 1 ex. (AR), Kavkazskoe les-nichestvo sett., 10–22.07.2019, 3 ex. (AR); Sarov, 24.05.2017, 1 ex. (PC).

Protaetia metallica (Herbst, 1782)

Material: RM: Temnikov distr., Tarkhany vill., 16–25.07.2019, 1 ex. (AR). NNR: Voznesenskoe distr., Svobodnyi sett., 2–19.06.2019, 1 ex. (AR), Shaprikha vill., 19–24.06.2019, 1 ex. (AR); Pervomaisk distr., 9 km E Bereschshino vill., 10–22.07.2019, 1 ex. (AR).

Note. In Catalogue of Palaearctic Coleoptera (Vol. 3) (Bezděk 2016), the species is listed as *Protaetia cuprea volhyniensis* (Gory & Percheron, 1833).

Protaetia speciosissima (Scopoli, 1786)

Material: NNR: Voznesenskoe distr., Shaprikha vill., 2–19.06.2019, 2 ex. (AR).

Trichius fasciatus (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 16.07.2017, 1 ex. (PC).

Valgus hemipterus (Linnaeus, 1758)

Material: NNR: Sarov, 22.05.2015, 2.06.2016, 2.05.2017, 3 ex. (PC).

Byrrhidae

Byrrhus fasciatus (Forster, 1771)

Material: RM: Elniki distr., Novye Shaly vill., 26.05.2013, pine forest, 1 ex. (AR).

Byrrhus pilula (Linnaeus, 1758)

Material: NNR: Sarov, 25.07.2013, 1 ex. (AR).

Heteroceridae

Heterocerus marginatus (Fabricius, 1787)

Material: NNR: Sarov, 3.06.2018, 1 ex. (PC).

Elateridae

Agriotes lineatus (Linnaeus, 1767)

Material: RM: Tengushevo distr., Kleme-schshei vill., 14.05–21.06.2019, mixed forest, 1 ex. (ME).

Agriotes obscurus (Linnaeus, 1758)

Material: RM: Tengushevo distr., Kleme-schshei vill., 14.05–21.06.2019, mixed forest, 4 ex. (ME).

Agrypnus murinus (Linnaeus, 1758)

Material: RM: Temnikov distr., Russkoe Karaevo vill., 8–16.07.2019, 1 ex. (AR). NNR: Voznesenskoe distr., Shaprikha vill., 19–24.06.2019, 1 ex. (AR); Sarov, 05–08.2013, 6 ex. (OA).

Ampedus cinnabarinus (Eschscholtz, 1829)

Material: NNR: Sarov, mixed forest, under the bark of a lying tree, 4.09.2015, 1 ex. (PC).

Athous subfuscus (O. F. Müller, 1764)

Material: NNR: Sarov, 05–08.2013, 1 ex. (OA); Sarov, 25.07.2013, 1 ex. (AR).

Cardiophorus ruficollis (Linnaeus, 1758)

Material: NNR: Sarov, 05–08.2013, 1 ex. (OA).

Dalopius marginatus (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Alamasovo vill., under the bark of a birch stump in a clearing, 24.04.2016, 1 ex. (PC).

Danosoma conspersum (Gyllenhal, 1808)

Material: NNR: Sarov, 14.05.2017, 1 ex. (PC).

Drapetes mordelloides (Host, 1789)

Material: NNR: Vyksa distr., 21.05.2019, 16.08.2017, 2 ex. (PC).

Melanotus castanipes (Paykull, 1800)

Material: NNR: Voznesenskoe distr., Shaprikha vill., 2–19.06.2019, 1 ex. (AR).

Prosternon tessellatum (Linnaeus, 1758)

Material: RM: Tengushevo distr., Kleme-schshei vill., 14.05–21.06.2019, mixed forest, 3 ex. (ME). NNR: Sarov, 05–08.2013, 2 ex. (OA); Sarov, 25.07.2013, 1 ex. (AR).

Selatosomus aeneus (Linnaeus, 1758)

Material: RM: Tengushevo distr., Kleme-schshei vill., 14.05–21.06.2019, mixed forest, 2 ex. (ME). NNR: Sarov, 05–08.2013, 1 ex. (OA).

Cantharidae

Cantharis livida Linnaeus, 1758

Material: NNR: Voznesenskoe distr., Svobodnyi sett., 2–19.06.2019, 2 ex. (AR).

Cantharis pellucida Fabricius, 1792

Material: NNR: Voznesenskoe distr., Shaprikha vill., 2–19.06.2019, 2 ex. (AR).

Ptinidae

Ptinus rufipes G.-A. Olivier, 1790

Material: RM: Elniki distr., Malye Mordovskie Poshty vill., 05–06.2014, broad-leaved forest, 1 ex. (AR).

Cleridae

Thanasimus formicarius (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 10.05.2015, 1 ex. (PC).

Trichodes apiarius (Linnaeus, 1758)

Material: NNR: Sarov, 12.07.2016, 1 ex.; Voznesenskoe distr., Alamasovo vill., 10.06.2018, 1 ex. (PC).

Melyridae

Apalochrus femoralis Erichson, 1840

Material: RM: Elniki distr., Novye Shaly vill., 19.07.2015, 2 ex. (AR).

Cordylepherus viridis (Fabricius, 1787)

Material: RM: Elniki distr., Malye Mordovskie Poshty vill., 19.07.2015, 1 ex. (AR).

Dolichosoma lineare (P. Rossi, 1794)

Material: RM: Elniki distr., Novye Shaly vill., 19.07.2015, 2 ex. (AR).

Nitidulidae

Cryptarcha strigata (Fabricius, 1787)

Material: RM: Temnikov distr., Tar-khany vill., 16–25.07.2019, 1 ex. (AR). NNR: Voznesenskoe distr., Svobodnyi sett., 2–19.06.2019, 3 ex. (AR).

Cychramus luteus (Fabricius, 1787)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 24.07.2016, 1 ex. (PC).

Epuraea biguttata (Thunberg, 1784)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 1.05.2015, 1 ex. (PC); Sarov, 14.04.2016, 1 ex. (PC). (det. A. Kirejtshuk).

Glischrochilus grandis (Tournier, 1872)

Material: RM: Temnikov distr., Tarkhany vill., 16–25.07.2019, 25.07–1.08.2019, 2 ex. (AR). Elniki distr., Starye Shaly vill., 05–06.2014, pine forest, 1 ex.; Svobodnyi sett., 04–06.2014, disturbed meadow, 1 ex. (AR). NNR: Voznesenskoe distr., Shaprikha vill., 2–19.06.2019, 1 ex. (AR), Alamasovo vill., 10.05.2015, 1 ex. (PC).

Glischrochilus hortensis (Geoffroy, 1785)

Material: RM: Elniki distr., Starye Shaly vill., 05–06.2014, pine forest, 1 ex. (AR).

Glischrochilus quadripunctatus (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 12.04.2015, 10.05.2015, 2 ex. (PC).

Glischrochilus quadrisignatus (Say, 1835)

Material: RM: Temnikov distr., Tarkhany vill., 16–25.07.2019, 25.07–1.08.2019, 3 ex. (AR).

Ipidia binotata Reitter, 1875

Material: NNR: Vyksa distr., Vyksa, 13.08.2019, 12.08.2017, 2 ex. (PC).

Ipidia sexguttata (R.F. Sahlberg, 1834)

Material: NNR: Vyksa distr., Vyksa, 21.05.2019, 22.05.2019, 2 ex. (PC).

Soronia grisea (Linnaeus, 1758)

Material: RM: Temnikov distr., Tarkhany vill., 16–25.07.2019, 25.07–1.08.2019, 3 ex. (AR).

Bothrideridae

Bothrideres bipunctatus (Gmelin, 1790)

Material: NNR: Sarov, 29.05.2015, 9.04.2015, 29.04.2016, 3 ex. (PC).

Endomychidae

Dapsa horvathi (Csiki, 1901)

Material: RM: Elniki distr., Novye Shaly vill., 19.07.2015, 1 ex. (AR).

Mycetina cruciata (Schaller, 1783)

Material: RM: Elniki distr., Novye Shaly vill., 05–06.2014, young pine forest, 1 ex. (AR).

Coccinellidae

Coccinella quinquepunctata Linnaeus, 1758

Material: NNR: Sarov, 25.07.2013, 1 ex. (AR).

Oenopia conglobata (Linnaeus, 1758)

Material: RM: Temnikov distr., Tarkhany vill., 16–25.07.2019, 1 ex. (AR).

Melandryidae

Dircaea quadriguttata (Paykull, 1798)

Material: NNR: Sarov, 2.06.2015, 19.06.2015, 2 ex. (PC); Voznesenskoe distr., Alamasovo vill., 16.07.2017, 2 ex. (PC).

Melandrya dubia (Schaller, 1783)

Material: NNR: Sarov, 26.05.2017, 1 ex. (PC).

Meloidae

Cerocoma schaefferi (Linnaeus, 1758)

Material: RM: Temnikov distr., Tarkhany vill., 7.07.2013, 1 ex. Elniki distr., Malye Mordovskie Poshaty vill., 31.05.2014, 1 ex.

Lytta vesicatoria (Linnaeus, 1758)

Material: RM: Elniki distr., Starye Pichingushi vill., 20.06.2012, 1 ex. (GS).

Meloe proscarabaeus Linnaeus, 1758

Material: NNR: Sarov, 6.05.2017, 22.05.2017, 2 ex. (PC).

Meloe violaceus Marsham, 1802

Material: NNR: Sarov, 10.05.2016, 7.06.2017, 2 ex. (PC).

Oedemeridae

Chrysanthia viridissima (Linnaeus, 1758)

Material: RM: Elniki distr., Novye Shaly vill., 19.07.2015, 2 ex.; Malye Mordovskie Poshaty vill., 22.07.2017, 1 ex. (AR). NNR: Sarov, 25.07.2013, 1 ex. (AR).

Oedemera femorata (Scopoli, 1763)

Material: RM: Elniki distr., Novye Shaly vill., 19.07.2015, 1 ex.; Malye Mordovskie Poshaty vill., 23.07.2016, 22.07.2017, 2 ex.; Novoyamskaya Sloboda vill., 22.07.2017, 3 ex. (AR).

Oedemera virescens (Linnaeus, 1767)

Material: RM: Elniki distr., Novye Shaly vill., 26.05.2013, pine forest, 1 ex. (AR).

Tenebrionidae

Crypticus quisquilius (Linnaeus, 1760)

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 14 ex. (AR). Tengushevo distr., Klemeschshei vill., 14.05–21.06.2019, mixed forest, 3 ex. (ME); Khlebino vill., 14.05–20.06.2019, meadow, 2 ex. (ME).

Lagria hirta (Linnaeus, 1758)

Material: RM: Elniki distr., Malye Mordovskie Poshty vill., 19.07.2015, 23.07.2016, 2 ex.; Novye Shaly vill., 22.07.2017, 1 ex. (AR).

Lagria laticollis Motschulsky, 1860

Material: Elniki distr., Malye Mordovskie Poshty vill., 23.07.2016, 1 ex.

Opatrum sabulosum (Linnaeus, 1760)

Material: RM: Elniki distr., Svobodnyi sett., 04–06.2014, disturbed meadow, 212 ex. (AR).

Upis ceramboides (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Shaprikha vill., 16.05–18.06.2019, mixed forest, 2 ex. (ME).

Cerambycidae

Arhopalus rusticus (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 10.07.2016, 1 ex. (PC).

Aromia moschata (Linnaeus, 1758)

Material: RM: Temnikov distr., Tarkhany vill., 16–25.07.2019, 1 ex. (AR). NNR: Voznesenskoe distr., Shaprikha vill., 19–24.06.2019, 1 ex. (AR); Pervomaisk distr., 9 km E Bereschshino vill., 10–22.07.2019, 2 ex. (AR); Pervomaisk distr., Kavkazskoe lesnichestvo sett., 10–22.07.2019, 1 ex. (AR).

Chlorophorus herbstii (Brahm, 1790)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 12.06.2019, 1 ex. (PC).

Cortodera femorata (Fabricius, 1787)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 21.05.2016, 1 ex. (PC); Sarov, 05–08.2013, 2 ex. (OA).

Dinoptera collaris (Linnaeus, 1758)

Material: NNR: Sarov, 23.06.2017, 1 ex. (PC).

Lamia textor (Linnaeus, 1758)

Material: NNR: Sarov, mixed forest, 11.06.2016, 1 ex. (PC); Sarov, 25.07.2013, 1 ex. (AR).

Leptura quadrifasciata Linnaeus, 1758

Material: NNR: Voznesenskoe distr., Shaprikha vill., 2–19.06.2019, 3 ex. (AR); Pervomaisk distr., 9 km E Bereschshino vill., 10–22.07.2019, 2 ex. (AR); Voznesenskoe distr., Alamasovo vill., 27.06.2015, 4.07.2015, 3 ex. (PC).

Leptura thoracica Creutzer, 1799

Material: NNR: Voznesenskoe distr., Svobodnyi sett., 2–19.06.2019, 4 ex. (AR). NNR: Voznesenskoe distr., Shaprikha vill., 2–19.06.2019, 3 ex. (AR); Sarov, 20.06.2016, 1 ex. (PC).

Lepturobosca virens (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 27.07.2017, 30.07.2017, 30.06.2018, 3 ex. (PC).

Mesosa myops (Dalman, 1817)

Material: NNR: Sarov, 22.05.2015, 17.06.2016, 2 ex. (PC).

Monochamus sutor (Linnaeus, 1758)

Material: RM: Temnikov distr., Russkoe Karaevo vill., 8–16.07.2019, 1 ex. (AR). NNR: Sarov, 29.06.2017, 1 ex. (PC).

Necydalis major Linnaeus, 1758

Material: NNR: Voznesenskoe distr., Shaprikha vill., 2–19.06.2019, 1 ex. (AR).

Oedecnema gebleri (Ganglbauer, 1889)

Material: NNR: Sarov, 28.05.2019, 1 ex. (PC).

Oxymirus cursor (Linnaeus, 1758)

Material: NNR: Sarov, 05–08.2013, 1 ex. (OA).

Pachyta quadrimaculata (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 20.06.2015, 1 ex. (PC).

Prionus coriarius (Linnaeus, 1758)

Material: NNR: Sarov, 17.07.2016, 1 ex. (PC).

Purpuricenus kaehleri (Linnaeus, 1758)

RM: Temnikov distr., Russkoe Karaevo vill., 8–16.07.2019, 1 ex. (AR), Tarkhany vill., 16–25.07.2019, 25.07.–1.08.2019, 2 ex. (AR). NNR: Voznesenskoe distr., Shaprikha vill., 2–19.06.2019, 25.06.–9.07.2019, 4 ex. (AR).

Rhagium inquisitor (Linnaeus, 1758)

Material: NNR: Sarov, 28.06.2015, 1 ex. (PC).

Rhagium mordax (De Geer, 1775)

Material: RM: Tengushevo distr., Klemschshei vill., 14.05–21.06.2019, mixed forest, 1 ex. (ME). NNR: Voznesenskoe distr., Shaprikha vill., 2–19.06.2019, 19–24.06.2019, 16 ex. (AR), Alamasovo vill., 7.05.2016, 1 ex. (PC); Pervomaisk distr., 9 km E Bereschshino vill., 10–22.07.2019, 3 ex. (AR); Sarov, 3.05.2015, 1 ex. (PC).

Rusticoclytus rusticus (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 14.06.2015, 1 ex. (PC); Sarov, 25.07.2013, 1 ex. (AR).

Rutpela maculata (Poda, 1761)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 19.07.2015, 2.07.2016, 2 ex. (PC).

Spondylis buprestoides (Linnaeus, 1758)

Material: NNR: Sarov, 19.06.2015, 19.06.2016, 11.07.2017, 4 ex. (PC).

Stenocorus meridianus (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Shaprikha vill., 2–19.06.2019, 11 ex. (AR).

Stenurella bifasciata (O.F. Müller, 1776)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 5.07.2014, 1 ex., Sarov, 1.07.2015, 1 ex. (PC); Sarov, 25.07.2013, 1 ex. (AR).

Stenurella melanura (Linnaeus, 1758)

Material: NNR: Sarov, 05–08.2013, 2 ex. (OA); NNR: Sarov, 25.07.2013, 1 ex. (AR).

Stictoleptura rubra (Linnaeus, 1758)

Material: NNR: Sarov, 28.06.2015, 1 ex.; Voznesenskoe distr., Alamasovo vill., 19.07.2015, 1 ex. (PC).

Chrysomelidae

Agelastica alni (Linnaeus, 1758)

Material: RM: Elniki distr., Bolshoi Urkat vill., 13.05.2009, 1 ex. Temnikov distr., Kitsaevka vill., 12.05.2013, mixed forest, 4 ex. (AR).

Cassida nebulosa Linnaeus, 1758

Material: RM: Elniki distr., Novye Shaly vill., 26.05.2013, pine forest, 1 ex. Temnikov distr., Andreevka vill., 11.05.2013, the edge of the forest, 1 ex. (AR).

Cassida sanguinosa Suffrian, 1844

Material: RM: Elniki distr., Novye Shaly vill., 22.07.2017, 1 ex. (AR).

Cassida stigmatica Suffrian, 1844

Material: RM: Elniki distr., Novye Shaly vill., 19.07.2015, 1 ex. (AR).

Chrysolina hyperici (Forster, 1771)

Material: RM: Elniki distr., Cherlyai vill., 23.07.2016, 1 ex. (AR).

Chrysolina varians (Schaller, 1783)

Material: RM: Elniki distr., Svobodnyi sett., 31.07.2008, meadow, 1 ex.; Novye Shaly vill., 19.07.2015, 1 ex. (AR).

Chrysomela collaris Linnaeus, 1758

Material: RM: Temnikov distr., Kitsaevka vill., 12.05.2013, mixed forest, 1 ex. (AR).

Chrysomela populi Linnaeus, 1758

Material: RM: Elniki distr., Novye Shaly vill., 26.05.2013, pine forest, 1 ex. (AR).

Cryptocephalus laetus Fabricius, 1792

Material: RM: Elniki distr., Malye Mordovskie Poshaty vill., 19.07.2015, 1 ex. (AR).

Coptocephala unifasciata unifasciata (Scopoli, 1763)

Material: RM: Elniki distr., Malye Mordovskie Poshaty vill., 22.07.2017, 2 ex.; Novye Shaly vill., 22.07.2017, 1 ex. (AR).

Cryptocephalus moraei (Linnaeus, 1758)

Material: NNR: Sarov, 25.07.2013, 1 ex. (AR).

Cryptocephalus solivagus Leonardi et Sassi, 2001

Material: RM: Elniki distr., Novye Shaly vill., 19.07.2015, 1 ex.; Malye Mordovskie Poshaty vill., 19.07.2015, 22.07.2017, 3 ex. (AR). NNR: Sarov, 25.07.2013, 1 ex. (AR).

Gonioctena quinquepunctata (Fabricius, 1787)

Material: RM: Temnikov distr., Kitsaevka vill., 12.05.2013, mixed forest, 2 ex. (AR).

Gonioctena viminalis (Linnaeus, 1758)

Material: RM: Elniki distr., Novye Shaly vill., 26.05.2013, pine forest, 2 ex. Temnikov distr., Veselyi sett., 25.05.2013, mixed forest, 2 ex. (AR).

Labidostomis longimana (Linnaeus, 1760)

Material: RM: Elniki distr., Novoyamskaya Sloboda vill., 22.07.2017, 1 ex. (AR).

Pachybrachis hieroglyphicus (Laicharting, 1781)

Material: RM: Elniki distr., Svobodnyi sett., 31.07.2008, meadow, 1 ex. (AR); Novye Shaly vill., 22.07.2017, 1 ex. (AR).

Phyllobrotica quadrimaculata (Linnaeus, 1758)

Material: RM: Elniki distr., Novye Shaly vill., 19.07.2015, 1 ex. (AR).

Plagioderma versicolora (Laicharting, 1781)

Material: RM: Temnikov distr., Kitsaevka vill., 12.05.2013, mixed forest, 1 ex. (AR).

Nemonychidae

Limberis attelaboides (Fabricius, 1787)

Material: RM: Elniki distr., Starye Shaly vill., 05–06.2014, pine forest, 1 ex.

Anthribidae

Dissoleucas niveirostris (Fabricius, 1798)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 3.05.2015, 1 ex. (PC).

Platyrhinus resinosus (Scopoli, 1763)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 3.05.2015, 1 ex. (PC); Sarov, 26.05.2016, 1 ex. (PC).

Platystomos albinus (Linnaeus, 1758)

Material: NNR: Voznesenskoe distr., Alamasovo vill., 1.05.2014, 1 ex. (PC); 20.05.2017, 1 ex. (PC). RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 1 ex.

Attelabidae

Byctiscus betulae (Linnaeus, 1758)

Material: RM: Elniki distr., Novye Shaly vill., 26.05.2013, pine forest, 1 ex.

Curculionidae

Chlorophanus viridis (Linnaeus, 1785)

Material: RM: Elniki distr., Starye Pichingushi vill., 25.06.2012, 2 ex. (GB).

Cryptorhynchus lapathi (Linnaeus, 1758)

Material: RM: Elniki distr., Starye Pichingushi vill., 16.08.2008, 1 ex. (DK).

Curculio venosus (Gravenhorst, 1807)

Material: RM: Temnikov distr., Tarkhany vill., 16–25.07.2019, 1 ex. (AR).

Eusomus ovulum Germar, 1823

Material: RM: Elniki distr., Malye Mordovskie Poshty vill., 22.07.2017, 2 ex. (AR).

Hylastes cunicularius Erichson, 1836

Material: RM: Elniki distr., Novye Shaly vill., 05–06.2014, young pine forest, 1 ex. (AR).

Hylobius abietis (Linnaeus, 1758)

Material: RM: Elniki distr., Novye Pichingushi vill., 04–06.2014, birch planting, 1 ex. (AR); Novye Shaly vill., 05–06.2014, 27 ex. (AR); Starye Shaly vill., 05–06.2014, 4 ex. (AR). NNR: Sarov, 05–08.2013, 15 ex. (OA).

Hylobius pinastri (Gyllenhal, 1813)

Material: NNR: Sarov, 25.07.2013, 1 ex. (AR).

Larinus obtusus Gyllenhal, 1835

Material: RM: Elniki distr., Malye Mordovskie

Table 1
Composition of Coleopterous insect fauna in the vicinity of the Mordovia Nature Reserve

Таблица 1
Состав фауны жесткокрылых насекомых в окрестностях Мордовского заповедника

Family	Number of species
Carabidae	115
Hydrophilidae	2
Histeridae	1
Silphidae	7
Staphylinidae	6
Lucanidae	1
Geotrupidae	1
Scarabaeidae	15
Byrrhidae	2
Heteroceridae	1
Elateridae	12
Cantharidae	2
Ptinidae	1
Cleridae	2
Melyridae	3
Nitidulidae	10
Bothrideridae	1
Endomychidae	2
Coccinellidae	2
Melandryidae	2
Meloidae	4
Oedemeridae	3
Tenebrionidae	5
Cerambycidae	26
Chrysomelidae	18
Nemonychidae	1
Anthribidae	3
Attelabidae	1
Curculionidae	11
Total	260

kie Poshty vill., 19.07.2015, 23.07.2016, 3 ex.; Cherlyai vill., 23.07.2016, 1 ex. (AR).

Phyllobius pyri (Linnaeus, 1758)

Material: RM: Elniki distr., Novye Shaly vill., 26.05.2013, pine forest, 1 ex. (AR).

Sitona inops Schoenherr, 1832

Material: RM: Elniki distr., Novye Shaly vill., 19.07.2015, 1 ex. (AR).

Tanymecus palliatus (Fabricius, 1887)

Material: RM: Elniki distr., Novye Shaly vill., 26.05.2013, pine forest, 1 ex. (AR).

Thus, as of today, 260 species from 29 families of Coleoptera are found in the vicinity of the Mordovia Nature Reserve (Table 1). The Carabidae

have been studied to the greatest extent, while the other families have not been sufficiently studied yet. Mostly common species have been recorded, but some rare taxa have also been found.

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