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RESEARCH ARTICLE

Chrysomelidae, Megalopodidae and Orsodacnidae (Coleoptera: Chrysomeloidea) of the Republic of Mordovia (Russia): dataset description

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Abstract

The known fauna of the Republic of Mordovia comprises 294 species of Chrysomeloidea from three families: Orsodacnidae (1), Megalopodidae (2) and Chrysomelidae (291). The checklist includes 35 species newly recorded for the region. For each species, the number of plots and specimens is provided. Ten species have been excluded from the region's fauna. The species *Bruchus occidentalis*, *Chrysomela lapponica*, *Phratora tibialis*, *Euluperus pinicola*, *Aphthona franzi*, *Phyllotreta astrachanica*, *Podagrica fuscicornis*, *Cryptocephalus planifrons*, *Cryptocephalus quadripustulatus*, *Cryptocephalus apicalis*, and *Syneta betulae* occur in Mordovia near the boundaries of their distribution ranges. The leaf beetle *Donacia malinovskyi*, which is rare in European Russia, has been recorded. *Leptinotarsa decemlineata* is classified as an alien species, while *Psylliodes hyoscyami*, *Chrysolina eurina*, and *Lilioceris lilii* are regarded as cryptogenic species.

Keywords

Biodiversity, Russia, Republic of Mordovia, fauna, beetles, Chrysomeloidea

Introduction

The decline in invertebrate biodiversity as a result of anthropogenic pressure is one of the most pressing environmental issues of the 21st century. In recent years, this problem has attracted the attention of numerous researchers. Studies have covered many taxonomic groups of invertebrates (Karuppaiah and Sujayanad 2012; Rosa et al. 2024; Afonina and Tashlykova 2025; Boyle et al. 2025; Haris et al. 2025; Ruchin and Egorov 2025; Vdovina et al. 2025). Changes in biodiversity within specific regions are also driven by global warming, as well as associated secondary effects such as wildfires, floods, and shifts in temperature regimes (Rumohr et al. 2023; Hailay Gebremariam 2024; Prosvirov et al. 2024; Van Klink et al. 2024). Transformations in entomofauna are largely determined by changes in vegetation (Israa et al. 2025). Climate warming contributes to shifts in species ranges and promotes the northward migration of southern insect species (Shuman 2010; Haris et al. 2025). Species invasions resulting from unintentional introductions into new regions also play a significant role in altering biodiversity at the local scale (Dgebuadze 2014). In this context, the study of regional entomofaunas and the compilation of comprehensive databases are of particular importance (Dvořák et al. 2023; Esin et al. 2023; Sánchez Herrera et al. 2024; Haris et al. 2025; Sushko 2025; Bosc et al. 2026; Dedyukhin 2026).

Chrysomeloidea is one of the largest superfamilies within the order Coleoptera. It comprises seven families and includes more than 63,000 species worldwide (Bouchard et al. 2017). Within European Russia, representatives of four widely distributed families are known: Cerambycidae, Megalopodidae, Orsodacnidae, and Chrysomelidae (Danilevsky 2020; Bezděk and Sekerka 2024). The present study focuses on three of these families (excluding Cerambycidae). Although the fauna of these Chrysomeloidea taxa in the European part of Russia has been studied for a considerable period (Bieńkowski 2004, 2011), some regions remain insufficiently investigated, and precise data on species diversity are still lacking (Dedyukhin 2024). More comprehensive and up-to-date data have been published primarily for the central (Bieńkowski and Nikitsky 2019) and eastern parts of European Russia (Dedyukhin 2018, 2025), as well as for the Middle Volga region (Isaev 2007). The Chrysomeloidea fauna of the Republic of Mordovia remains insufficiently studied. The combination of steppe and forest communities within its territory suggests that this group is likely to be relatively diverse (Ruchin and Egorov 2018a, 2018b; Egorov et al. 2020, 2022; Ruchin et al. 2021, 2023; Dedyukhin et al. 2024). This paper describes a dataset based on long-term studies of Megalopodidae, Orsodacnidae, and Chrysomelidae in the Republic of Mordovia.

Geographic coverage

Coordinates of region:

Latitude ranged between 53.6437 and 55.1901.

Longitude ranged between 42.1640 and 46.7301.

The dataset under consideration contains records of Chrysomeloidea occurrences in the Republic of Mordovia. The region is located in the central part of the Russian Plain. The main rivers flowing through the territory are the Moksha (a tributary of the Oka River) and the Sura (a tributary of the Volga River). The eastern part of the republic lies within the Volga Upland, while the western part belongs to the Oka–Don Lowland. The climate is temperate, with clearly defined seasons. The average January temperature ranges from −11.5 to −12.3 °C, and the average July temperature from +18.9 to +19.8 °C. The mean annual air temperature ranges between 3.5 and 4.0 °C. According to botanical–geographical zoning, the republic is divided into eight botanical–geographical regions that differ in vegetation, forest types, and major ecosystems (Astradamov et al. 2002).

A total of 198 sample plots or points were surveyed.

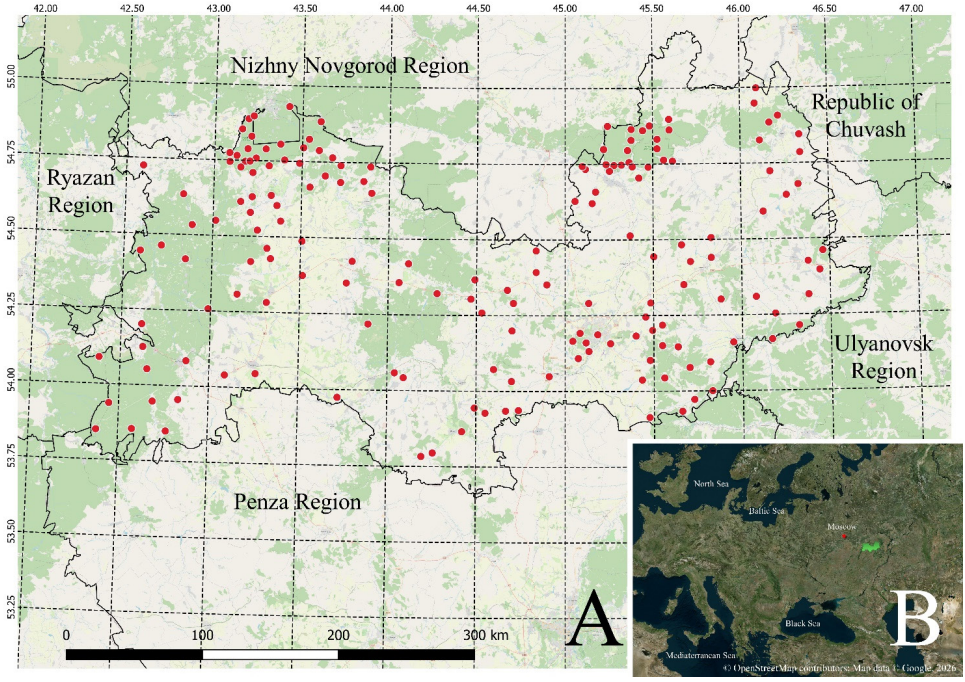

Figure 1. Cartographic map of the studied area. **A** – map of the Republic of Mordovia; **B** – geographical location of the Republic of Mordovia.

Materials and methods

The dataset is based on the authors' field studies conducted in 2005–2009 and 2011–2025, as well as on examined collection specimens and published sources on the subject (Bardin and Timraleev 2007; Bieńkowski and Orlova-Bienkowskaja 2009; Egorov et al. 2020). Standard and widely used entomological methods were employed, including sweep netting, mowing of herbaceous and shrub vegetation, Malaise traps, pan traps, beer traps, pitfall traps, and window traps (Golub et al. 2012). Only quantitative data (abundance) were used for analysis.

Identification of the authors' material and available collection specimens was primarily carried out by L.V. Egorov, with part of the material identified by S.V. Dedyukhin (Izhevsk). Species identification was performed using a range of taxonomic keys (Bey-Bienko 1965; Warchałowski 2003; Bieńkowski 2004; Isaev 2007; Warchałowski 2010; Bieńkowski 2011, 2015). Assistance in the identification of certain taxa was provided by recognized specialists in the group, A.O. Bienkowski (Moscow) and A.G. Moseyko (Zoological Institute of the Russian Academy of Sciences, St. Petersburg). Species nomenclature follows J. Bezděk and L. Sekerka (2024). In total, 9,387 specimens of Megalopodidae, Chrysomelidae, and Orsodacnidae were examined. The material is kept in the collection of the Mordovian State Nature Reserve and the personal collections of the authors.

Description of the Data in the Dataset

Data set name: Fauna of Chrysomeloidea in Republic of Mordovia (European Russia)

Resource link: https://www.gbif.org/dataset/fdc2fe0a-21fe-4d7a-abed-cc4ef63bf28a

Data format: Darwin Core Archive format

Usage licence: CC BY 4.0

Description: This occurrence dataset includes 4944 occurrences и 9387 specimens (Egorov et al. 2026). The table consists of 19 fields (Table 1).

Table 1. Description of the data in the dataset

Column label	Column description
occurrenceID	An identifier for the occurrence. https://dwc.tdwg.org/terms/#dwc:occurrenceID. Numerical, integer counter with values between 1 and 7095
basisOfRecord	The specific nature of the record. https://dwc.tdwg.org/terms/#dwc:basisOfRecord. Categorical according to vocabulary, constant: "HumanObservation
eventDate	Trap period (YYYY-MM-DD/YYYY-MM-DD). https://dwc.tdwg.org/terms/#dwc:eventDate, 1237 unique values

Column label	Column description
scientificName	Scientific name according to GBIF Backbone. https://dwc.tdwg.org/terms/#dwc:scientificNameCathegorical based on checklist, example:
kingdom	The full scientific name of the kingdom in which the taxon is classified. https://dwc.tdwg.org/terms/#dwc:kingdomCategorical according to GBIF Backbone checklist, constant: "Animalia"
decimalLatitude	The geographic latitude of location in decimal degrees. https://dwc.tdwg.org/terms/#dwc:decimalLatitude Numerical variable of decimal type with a precision of 6 and scale of 4 ranged between 49.6131 and 56.2339
decimalLongitude	The geographic longitude of location in decimal degrees. https://dwc.tdwg.org/terms/#dwc:decimalLongitude Numerical variable of decimal type with a precision of 6 and scale of 4 ranged between 33.7351 and 56.6668
country	The name of the country in which the location occurs. https://dwc.tdwg.org/terms/#dwc:countryCode. Categorical, constant: "Russian Federation"
countryCode	The standard code for the Russian Federation according to ISO 3166-1-alpha-2. https://dwc.tdwg.org/terms/#dwc:countryCode. Categorical, constant: "RU"
individualCount	The number of individuals represented present at the time of the occurrence. https://dwc.tdwg.org/terms/#dwc:individualCount
year	The four-digit year in which the dwc:Event occurred, according to the Common Era Calendar. http://rs.tdwg.org/dwc/terms/year
month	The integer month in which the dwc:Event occurred. http://rs.tdwg.org/dwc/terms/month
day	The integer day of the month on which the dwc:Event occurred. http://rs.tdwg.org/dwc/terms/day
recordedBy	A person, group, or organization responsible for recording the original occurrence. https://dwc.tdwg.org/terms/#dwciri:recordedBy
identifiedBy	A list of names of people who assigned the taxon to the subject. https://dwc.tdwg.org/terms/#dwciri:identifiedBy
georeferenceSources	A list of maps, gazetteers, or other resources used to georeference the Location. https://dwc.tdwg.org/terms/#dwc:georeferenceSources. Categorical, "Geolocate" or "Google Earth"
coordinateUncertaintyInMeters	The maximum uncertainty distance in metres. https://dwc.tdwg.org/terms/#dwc:coordinateUncertaintyInMeters Numerical, 50 or 1000
locality_original	The specific description of the place. This term may contain information modified from the original to correct perceived errors or standardize the description
associatedReferences	A list (concatenated and separated) of identifiers (publication, bibliographic reference, global unique identifier, URI) of literature associated with the dwc:Occurrence

Results

A list of species with the corresponding numbers of plots and specimens for each species is presented in Table 2. In total, the dataset records 294 species from the Republic of Mordovia, belonging to three families: Orsodacnidae (1 species), Megalopodidae (2 species), and Chrysomelidae (291 species). Within the family Chrysomelidae, representatives of the following subfamilies were recorded: Bruchinae (8), Donaciinae (18), Criocerinae (10), Cassidinae (25), Chrysomelinae (50), Galerucinae (118), Cryptocephalinae (57), Eumolpinae (4), and Synetinae (1). The subfamily composition of this family has been established almost completely. However, the occurrence of Lamprosomatinae remains possible. *Oomorphus concolor* (Sturm, 1807), a representative of this subfamily, has been recorded in the neighboring Chuvash Republic (Egorov 2020). The list (Table 2) includes 35 species newly recorded for the region (all belonging to the family Chrysomelidae). These species are marked with an asterisk (*).

Table 2. Species list of Chrysomeloidea in the dataset with quantitative features

	Species	MSNR	NPS	Other district	Numbers of specimens	Numbers of plots
	Orsodacnidae C. G. Thomson, 1859					
	Orsodacninae C. G. Thomson, 1859					
1	*Orsodacne cerasi* (Linnaeus, 1758)	104	6	42	152	17
	Megalopodidae Latreille, 1802					
	Zeugophorinae Böving & Craighead, 1931					
2	*Zeugophora scutellaris* Suffrian, 1840	2	-	-	2	2
3	*Zeugophora subspinosa* (Fabricius, 1781)	11	-	-	11	6
	Chrysomelidae Latreille, 1802					
	Bruchinae Latreille, 1802					
	Amblycerini Bridwell, 1932					
4	*Spermophagus sericeus* (Geoffroy, 1785)	20	3	5	28	9
	Bruchini Latreille, 1802					
5	*Acanthoscelides obtectus* (Say, 1831)	-	-	3	3	2
6	*Bruchidius unicolor* (Olivier, 1800)	-	-	1	1	1
7	*Bruchus affinis* Frölich, 1799	-	6	6	12	4
8	*Bruchus atomarius* (Linnaeus, 1761)	69	26	20	115	16
9	*Bruchus loti* Paykull, 1800	25	3	3	31	9
10	*Bruchus occidentalis* Lukjanovitch & Ter-Minassian, 1957*	-	2	1	3	2

	Species	MSNR	NPS	Other district	Numbers of specimens	Numbers of plots
11	*Bruchus pisorum* (Linnaeus, 1758)	-	-	1	1	1
	Donaciinae Kirby, 1837					
	Donaciini Kirby, 1837					
12	*Donacia aquatica* (Linnaeus, 1758)	73	3	17	93	15
13	*Donacia bicolora* Zschach, 1788	36	4	187	227	11
14	*Donacia brevitarsis* C.G. Thomson, 1884	17	-	1	18	6
15	*Donacia cinerea* Herbst, 1784	3	-	2	5	4
16	*Donacia clavipes* Fabricius, 1792	2	-	2	4	3
17	*Donacia crassipes* Fabricius, 1775	11	2	7	20	8
18	*Donacia dentata* Hoppe, 1795	1	-	3	4	2
19	*Donacia impressa* Paykull, 1799	3	-	2	5	2
20	*Donacia malinovskyi* Ahrens, 1810*	-	-	3	3	2
21	*Donacia marginata* Hoppe, 1795	16	-	8	24	5
22	*Donacia obscura* Gyllenhal, 1813	1	-	2	3	2
23	*Donacia semicuprea* Panzer, 1795	208	51	28	287	19
24	*Donacia simplex* Fabricius, 1775	-	-	1	1	1
25	*Donacia tomentosa* Ahrens, 1810	1	6	1	8	4
26	*Donacia vulgaris* Zschach, 1788	3	-	8	11	6
	Haemoniini S.-H. Chen, 1941					
27	*Macroplea appendiculata* (Panzer, 1794)	-	-	1	1	1
	Plateumarini Böving, 1922					
28	*Plateumaris bracata* (Scopoli, 1772)	-	1	1	2	2
29	*Plateumaris sericea* (Linnaeus, 1758)	28	3	6	37	12
	Criocerinae Latreille, 1804					
	Criocerini Latreille, 1804					
30	*Crioceris asparagi* (Linnaeus, 1758)	1	-	-	1	1
31	*Crioceris duodecimpunctata* (Linnaeus, 1758)	-	-	5	5	3
32	*Crioceris quatuordecimpunctata* (Scopoli, 1763)	-	2	4	6	4
33	*Lilioceris lilii* (Scopoli, 1763)*	-	-	2	2	1
34	*Lilioceris merdigera* (Linnaeus, 1758)	47	1	14	62	19
	Lemini Gyllenhal, 1813					
35	*Lema cyanella* (Linnaeus, 1758)	4	3	7	14	5
36	*Oulema erichsonii* (Suffrian, 1841)	49	4	12	65	21

	Species	MSNR	NPS	Other district	Numbers of specimens	Numbers of plots
37	*Oulema melanopus* (Linnaeus, 1758)	-	4	3	7	3
38	*Oulema obscura* (Stephens, 1831)	65	60	38	163	22
39	*Oulema tristis* (Herbst, 1786)	-	-	1	1	1
	Cassidinae Gyllenhal, 1813					
	Cassidini Gyllenhal, 1813					
40	*Cassida aurora* Weise, 1907*	-	-	1	1	1
41	*Cassida canaliculata* Laicharting, 1781	-	-	2	2	1
42	*Cassida denticollis* Suffrian, 1844	19	2	10	31	12
43	*Cassida flaveola* Thunberg, 1794	8	1	3	12	9
44	*Cassida hemisphaerica* Herbst, 1799	2	-	-	2	2
45	*Cassida lineola* Creutzer, 1799	8	-	2	10	4
46	*Cassida margaritacea* Schaller, 1783	3	2	3	8	6
47	*Cassida murraea* Linnaeus, 1767	-	-	9	9	3
48	*Cassida nebulosa* Linnaeus, 1758	24	4	15	43	17
49	*Cassida nobilis* Linnaeus, 1758	1	1	6	8	6
50	*Cassida pannonica* Weise, 1892	-	1	10	11	4
51	*Cassida panzeri* Weise, 1907	5	2	6	13	9
52	*Cassida prasina* Illiger, 1798	95	17	13	125	17
53	*Cassida rubiginosa* O.F. Müller, 1776	21	6	27	54	13
54	*Cassida sanguinolenta* O.F. Müller, 1776	11	15	8	34	13
55	*Cassida sanguinosa* Suffrian, 1844	11	-	7	18	9
56	*Cassida seladonia* Gyllenhal, 1827	-	-	1	1	1
57	*Cassida stigmatica* Suffrian, 1844	12	16	12	40	16
58	*Cassida subreticulata* Suffrian, 1844	7	-	-	7	5
59	*Cassida vibex* Linnaeus, 1767	18	14	30	62	15
60	*Cassida viridis* Linnaeus, 1758	26	16	17	59	20
61	*Cassida vittata* Villers, 1789	2	-	-	2	2
62	*Hypocassida subferruginea* (Schrank, 1776)	52	30	48	130	20
63	*Pilemostoma fastuosum* (Schaller, 1783)	-	-	2	2	2
	Hispini Gyllenhal, 1813					
64	*Hispa atra* Linnaeus, 1767	1	-	6	7	3
	Chrysomelinae Latreille, 1802					
	Chrysomelini Latreille, 1802					

	Species	MSNR	NPS	Other district	Numbers of specimens	Numbers of plots
65	*Chrysomela collaris* Linnaeus, 1758	19	-	7	26	14
66	*Chrysomela lapponica* Linnaeus, 1758*	-	-	2	2	1
67	*Chrysomela populi* Linnaeus, 1758	53	3	28	84	23
68	*Chrysomela saliceti* (Weise, 1884)	-	-	4	4	2
69	*Chrysomela tremula* Fabricius, 1787	12	2	6	20	9
70	*Chrysomela vigintipunctata* (Scopoli, 1763)	26	1	7	34	12
71	*Gastrophysa polygoni* (Linnaeus, 1758)	28	3	25	56	16
72	*Gastrophysa viridula* (DeGeer, 1775)	82	17	24	123	16
73	*Phaedon armoraciae* (Linnaeus, 1758)	2	3	3	8	7
74	*Phaedon cochleariae* (Fabricius, 1792)	5	11	123	139	9
75	*Phaedon laevigatus* (Duftschmid, 1825)	2	-	2	4	4
76	*Phratora vulgatissima* (Linnaeus, 1758)	5	-	6	11	8
77	*Phratora atrovirens* (Cornelius, 1857)	3	3	1	7	7
78	*Phratora laticollis* (Suffrian 1851)	11	-	5	16	6
79	*Phratora tibialis* (Suffrian, 1851)	1	-	-	1	1
80	*Phratora vitellinae* (Linnaeus, 1758)	3	1	5	9	6
81	*Plagiodera versicolora* (Laicharting, 1781)	58	16	45	119	19
82	*Plagiosterna aenea* (Linnaeus, 1758)	44	14	28	86	26
83	*Prasocuris glabra* (Herbst, 1783)	1	5	3	9	4
84	*Prasocuris hannoveriana* (Fabricius, 1775)	34	-	-	34	3
85	*Prasocuris marginella* (Linnaeus, 1758)	51	2	7	60	17
86	*Prasocuris junci* (Brahm, 1790)	1	-	-	1	1
87	*Prasocuris phellandrii* (Linnaeus, 1758)	9	3	19	31	10
88	*Chrysolina eurina* (Frivaldszky, 1883)	1	1	5	7	4
89	*Chrysolina analis* (Linnaeus, 1767)	1	-	-	1	1
90	*Chrysolina besseri* (Krynicki, 1832)	1	-	-	1	1
91	*Chrysolina carnifex* (Fabricius, 1792)*	-	-	1	1	1
92	*Chrysolina marginata* (Linnaeus, 1758)	2	-	7	9	6

	Species	MSNR	NPS	Other district	Numbers of specimens	Numbers of plots
93	*Chrysolina staphylaea* (Linnaeus, 1758)	5	13	19	37	13
94	*Chrysolina cerealis rufolineata* (Motschulsky, 1860)	-	-	5	5	3
95	*Chrysolina sturmi* (Westhoff, 1882)	27	5	25	57	16
96	*Chrysolina polita* (Linnaeus, 1758)	53	11	51	115	27
97	*Chrysolina graminis* (Linnaeus, 1758)	12	5	11	28	9
98	*Chrysolina geminata* (Paykull, 1799)	3	3	10	16	7
99	*Chrysolina hyperici* (Forster, 1771)	4	1	7	12	8
100	*Chrysolina varians* (Schaller, 1783)	61	5	29	95	27
101	*Chrysolina gypsophilae* (Küster, 1845)	2	-	-	2	2
102	*Chrysolina sanguinolenta* (Linnaeus, 1758)	10	-	7	17	8
103	*Chrysolina herbacea* (Duftschmid, 1825)	1	1	5	7	6
104	*Chrysolina limbata* (Fabricius, 1775)	3	6	10	19	9
105	*Fasta fastuosa* (Scopoli, 1763)	118	21	64	203	30
106	*Leptinotarsa decemlineata* (Say, 1824)	9	2	50	61	7
107	*Entomoscelis adonidis* (Pallas, 1771)	-	-	8	8	2
108	*Entomoscelis sacra* (Linnaeus, 1758)	1	-	1	2	2
109	*Gonioctena decemnotata* (Marsham, 1802)	34	9	7	50	12
110	*Gonioctena linnaeana* (Schrank, 1781)	2	-	6	8	5
111	*Gonioctena viminalis* (Linnaeus, 1758)	60	34	47	141	20
112	*Gonioctena pallida* (Linnaeus, 1758)	3	2	2	7	6
113	*Gonioctena quinquepunctata* (Fabricius, 1787)	53	42	49	144	14
114	*Colaphellus sophiae* (Schaller, 1783)*	-	1	-	1	1
	Galerucinae Latreille, 1802					
	Galerucini Latreille, 1802					
115	*Galeruca jucunda* (Faldermann, 1837)	2	-	-	2	2
116	*Galeruca laticollis* (C.R. Sahlberg, 1838)*	-	3	3	6	4
117	*Galeruca pomonae* (Scopoli, 1763)*	4	4	14	22	9
118	*Galeruca tanaceti* (Linnaeus, 1758)	134	105	113	352	26
119	*Galerucella grisescens* (Joannis, 1865)	14	-	9	23	8

	Species	MSNR	NPS	Other district	Numbers of specimens	Numbers of plots
120	*Galerucella nymphaeae* (Linnaeus, 1758)	22	1	2	25	9
121	*Galerucella calmariensis* (Linnaeus, 1767)	27	-	3	30	6
122	*Galerucella lineola* (Fabricius, 1781)	73	11	27	111	23
123	*Galerucella pusilla* (Duftschmid, 1825)	9	1	5	15	5
124	*Galerucella tenella* (Linnaeus, 1761)	73	1	9	83	18
125	*Lochmaea caprea* (Linnaeus, 1758)	87	14	31	132	18
126	*Lochmaea suturalis* (C.G. Thomson, 1866)	48	-	1	49	2
127	*Pyrrhalta viburni* (Paykull, 1799)	9	-	1	10	5
	Hylaspini Chapuis, 1875					
128	*Agelastica alni* (Linnaeus, 1758)	45	4	28	77	21
	Luperini Gistel, 1848					
129	*Euluperus pinicola* (Duftschmid, 1825)	10	-	-	10	2
130	*Luperus flavipes* (Linnaeus, 1767)	-	2	6	8	3
131	*Luperus longicornis* (Fabricius, 1781)	7	-	-	7	1
132	*Luperus luperus* (Sulzer, 1776)	7	2	-	9	3
133	*Luperus xanthopoda* (Schrank, 1781)*	-	-	1	1	1
134	*Phyllobrotica quadrimaculata* (Linnaeus, 1758)	6	12	13	31	16
135	*Altica aenescens* (Weise, 1888)*	-	3	-	3	1
136	*Altica brevicollis* Foudras, 1860*	-	-	2	2	2
137	*Altica engstromi* (J.R. Sahlberg, 1893)	-	1	3	4	3
138	*Altica impressicollis* (Reiche, 1862)	-	-	2	2	2
139	*Altica lythri* Aubé, 1843	9	11	14	34	8
140	*Altica oleracea* (Linnaeus, 1758)	106	17	21	144	22
141	*Altica palustris* (Weise, 1888)	1	-	-	1	1
142	*Altica quercetorum* Foudras, 1860	20	20	12	52	14
143	*Altica tamaricis* Schrank, 1785	4	84	8	96	11
144	*Aphthona abdominalis* (Duftschmid, 1825)*	-	8	3	11	5
145	*Aphthona beckeri* Jacobson, 1896*	-	1	1	2	1
146	*Aphthona czwalinai* Weise, 1888	1	-	9	10	2
147	*Aphthona euphorbiae* (Schrank, 1781)*	3	178	51	232	13

	Species	MSNR	NPS	Other district	Numbers of specimens	Numbers of plots
148	*Aphthona franzi* Heikertinger, 1944*	-	4	-	4	2
149	*Aphthona gracilis* Faldermann, 1837	1	-	-	1	1
150	*Aphthona lacertosa* Rosenhauer, 1847	2	-	-	2	1
151	*Aphthona lutescens* (Gyllenhal, 1813)	10	1	9	20	11
152	*Aphthona nigriscutis* Foudras, 1860*	-	-	1	1	1
153	*Aphthona nonstriata* (Goeze, 1777)	60	-	1	61	7
154	*Aphthona pallida* (Bach, 1855)	1	4	2	7	4
155	*Aphthona pygmaea* (Kutschera, 1861)*	-	1	-	1	1
156	*Argopus nigritarsis* (Gebler, 1823)	1	-	1	2	2
157	*Batophila fallax* Weise, 1888	6	-	-	6	1
158	*Batophila rubi* (Paykull, 1799)	40	-	9	49	10
159	*Chaetocnema aerosa* (Letzner, 1847)	4	-	2	6	5
160	*Chaetocnema arida* Foudras, 1860	1	-	-	1	1
161	*Chaetocnema aridula* (Gyllenhal, 1827)	15	1	15	31	12
162	*Chaetocnema compressa* (Letzner, 1847)	39	1	9	49	9
163	*Chaetocnema concinna* (Marsham, 1802)	20	24	37	81	16
164	*Chaetocnema hortensis* (Geoffroy, 1785)	24	7	12	43	11
165	*Chaetocnema mannerheimii* (Gyllenhal, 1827)	21	15	15	51	11
166	*Chaetocnema obesa* (Boieldieu, 1859)	-	-	2	2	2
167	*Chaetocnema picipes* Stephens, 1831*	-	1	1	2	2
168	*Chaetocnema sahlbergii* (Gyllenhal, 1827)*	-	1	1	2	2
169	*Chaetocnema semicoerulea* (Koch, 1803)	9	5	1	15	4
170	*Crepidodera aurata* (Marsham, 1802)	104	51	60	215	21
171	*Crepidodera fulvicornis* (Fabricius, 1792)	67	50	59	176	22
172	*Crepidodera nitidula* (Linnaeus, 1758)	3	12	4	19	5
173	*Crepidodera plutus* (Latreille, 1804)	4	1	1	6	4
174	*Derocrepis rufipes* (Linnaeus, 1758)	26	7	41	74	9
175	*Dibolia cynoglossi* (Koch, 1803)	-	-	1	1	1
176	*Epitrix pubescens* (Koch, 1803)	22	39	15	76	16

	Species	MSNR	NPS	Other district	Numbers of specimens	Numbers of plots
177	*Hippuriphila modeeri* (Linnaeus, 1761)	1	-	-	1	1
178	*Longitarsus apicalis* (Beck, 1817)	-	9	1	10	5
179	*Longitarsus atricillus* (Linnaeus, 1761)	-	-	1	1	1
180	*Longitarsus brunneus* (Duftschmid, 1825)	6	1	2	9	2
181	*Longitarsus echii* (Koch, 1803)	1	-	2	3	2
182	*Longitarsus exsoletus* (Linnaeus, 1758)	-	7	1	8	2
183	*Longitarsus ganglbaueri* Heikertinger, 1912	1	-	1	2	1
184	*Longitarsus holsaticus* (Linnaeus, 1758)	2	-	13	15	4
185	*Longitarsus jacobaeae* (C.R. Waterhouse, 1861)	2	1	4	7	3
186	*Longitarsus lewisii* (Baly, 1874)	1	7	1	9	4
187	*Longitarsus longipennis* Kutschera, 1863	-	-	1	1	1
188	*Longitarsus longiseta* Weise, 1889	13	-	1	14	5
189	*Longitarsus luridus* (Scopoli, 1763)	10	4	7	21	8
190	*Longitarsus lycopi* (Foudras, 1860)*	-	-	6	6	3
191	*Longitarsus melanocephalus* (DeGeer, 1775)	-	2	2	4	4
192	*Longitarsus nigrofasciatus* (Goeze, 1777)	3	1	-	4	1
193	*Longitarsus noricus* Leonardi, 1976	-	-	35	35	2
194	*Longitarsus parvulus* (Paykull, 1799)	-	2	-	2	1
195	*Longitarsus pellucidus* (Foudras, 1860)	-	2	1	3	2
196	*Longitarsus quadriguttatus* (Pontoppidan, 1763)	3	-	-	3	1
197	*Longitarsus rubiginosus* (Foudras, 1860)*	-	8	-	8	1
198	*Longitarsus succineus* (Foudras, 1860)	1	14	3	18	5
199	*Longitarsus suturellus* (Duftschmid, 1825)	1	-	1	2	2
200	*Longitarsus tabidus* (Fabricius, 1775)	6	9	2	17	7
201	*Longitarsus anchusae* (Paykull, 1799)	2	-	3	5	3
202	*Lythraria salicariae* (Paykull, 1800)	52	3	11	66	12

	Species	MSNR	NPS	Other district	Numbers of specimens	Numbers of plots
203	*Mantura chrysanthemi* (Koch, 1803)	28	1	1	30	9
204	*Neocrepidodera crassicornis* (Faldermann, 1837)	2	2	9	13	5
205	*Neocrepidodera ferruginea* (Scopoli, 1763)	42	46	29	117	16
206	*Neocrepidodera motschulskii* (Konstantinov, 1991)	2	12	9	23	8
207	*Neocrepidodera transversa* (Marsham, 1802)	4	6	20	30	11
208	*Phyllotreta armoraciae* (Koch, 1803)	-	1	4	5	2
209	*Phyllotreta astrachanica* Lopatin, 1977*	-	1	-	1	1
210	*Phyllotreta atra* (Fabricius, 1775)	19	104	36	159	16
211	*Phyllotreta cruciferae* (Goeze, 1777)*	-	15	15	30	5
212	*Phyllotreta diademata* Foudras, 1860	-	-	1	1	1
213	*Phyllotreta dilatata* C.G. Thomson, 1866	-	2	6	8	3
214	*Phyllotreta erysimi* Weise, 1900*	-	1	-	1	1
215	*Phyllotreta flexuosa* (Illiger, 1794)	10	-	1	11	3
216	*Phyllotreta nemorum* (Linnaeus, 1758)	8	7	3	18	9
217	*Phyllotreta nigripes* (Fabricius, 1775)	1	4	3	8	5
218	*Phyllotreta ochripes* (Curtis, 1837)	6	23	8	37	10
219	*Phyllotreta striolata* (Fabricius, 1803)	12	7	6	25	8
220	*Phyllotreta tetrastigma* (Comolli, 1837)	1	47	3	51	4
221	*Phyllotreta undulata* (Kutschera, 1860)	6	22	9	37	14
222	*Phyllotreta vittula* (L. Redtenbacher, 1848)	52	189	224	465	21
223	*Podagrica fuscicornis* (Linnaeus, 1767)*	-	3	6	9	4
224	*Psylliodes affinis* (Paykull, 1799)	8	1	2	11	5
225	*Psylliodes attenuata* (Koch, 1803)*	2	1	-	3	2
226	*Psylliodes chalcomera* (Illiger, 1807)	3	1	2	6	5
227	*Psylliodes cucullata* (Illiger, 1807)	-	-	3	3	3
228	*Psylliodes dulcamarae* (Koch, 1803)	8	4	5	17	6
229	*Psylliodes hyoscyami* (Linnaeus, 1758)*	-	2	-	2	2
230	*Psylliodes napi* (Fabricius, 1792)	4	5	1	10	5

	Species	MSNR	NPS	Other district	Numbers of specimens	Numbers of plots
231	*Psylliodes picina* (Marsham, 1802)	6	-	-	6	3
232	*Sphaeroderma testaceum* (Fabricius, 1775)	3	5	1	9	6
	Cryptocephalinae Gyllenhal, 1813					
	Clytrini Kirby, 1837					
233	*Clytra laeviuscula* (Ratzeburg, 1837)	-	-	1	1	1
234	*Clytra quadripunctata* (Linnaeus, 1758)	6	2	12	20	9
235	*Coptocephala unifasciata* (Scopoli, 1763)	20	1	32	53	13
236	*Labidostomis cyanicornis* (Germar, 1822)*	-	-	1	1	1
237	*Labidostomis humeralis* (D.N. Schneider, 1792)	-	1	1	2	2
238	*Labidostomis lepida* Lefèvre, 1872	3	5	5	13	7
239	*Labidostomis longimana* (Linnaeus, 1761)	11	11	57	79	13
240	*Labidostomis pallidipennis* (Gebler, 1830)	-	-	6	6	3
241	*Labidostomis tridentata* (Linnaeus, 1758)	4	-	1	5	4
242	*Smaragdina affinis* (Illiger, 1794)	3	11	5	19	8
243	*Smaragdina aurita* (Linnaeus, 1767)	-	-	2	2	1
244	*Smaragdina flavicollis* (Charpentier, 1825)	2	-	-	2	2
245	*Smaragdina salicina* (Scopoli, 1763)*	-	-	7	7	3
	Cryptocephalini Gyllenhal, 1813					
246	*Cryptocephalus bilineatus* (Linnaeus, 1767)	1	2	3	6	5
247	*Cryptocephalus chrysopus* Gmelin, 1790	1	1	1	3	3
248	*Cryptocephalus connexus* Olivier, 1808	-	-	4	4	2
249	*Cryptocephalus exiguus* D.N. Schneider, 1792	1	1	3	5	4
250	*Cryptocephalus fulvus* (Goeze, 1777)	4	9	14	27	7
251	*Cryptocephalus labiatus* (Linnaeus, 1761)	13	7	5	25	10
252	*Cryptocephalus ocellatus* Drapiez, 1819	-	5	1	6	4
253	*Cryptocephalus planifrons* Weise, 1882*	-	1	1	2	2

	Species	MSNR	NPS	Other district	Numbers of specimens	Numbers of plots
254	*Cryptocephalus pusillus* Fabricius, 1777	2	5	2	9	4
255	*Cryptocephalus anticus* Suffrian, 1848	13	11	16	40	13
256	*Cryptocephalus aureolus* Suffrian, 1847	7	7	12	26	11
257	*Cryptocephalus biguttatus* (Scopoli, 1763)	5	3	6	14	8
258	*Cryptocephalus bipunctatus* (Linnaeus, 1758)	20	14	39	73	23
259	*Cryptocephalus caerulescens* C.R. Sahlberg, 1839	-	-	2	2	1
260	*Cryptocephalus cordiger* (Linnaeus, 1758)	1	2	6	9	5
261	*Cryptocephalus decemmaculatus* (Linnaeus, 1758)	1	2	2	5	4
262	*Cryptocephalus distinguendus* D.H. Schneider, 1792*	-	-	2	2	2
263	*Cryptocephalus flavipes* Fabricius, 1781	3	5	16	24	10
264	*Cryptocephalus janthinus* Germar, 1823	-	2	1	3	2
265	*Cryptocephalus laetus* Fabricius, 1792	9	2	30	41	13
266	*Cryptocephalus moraei* (Linnaeus, 1758)	29	109	45	183	24
267	*Cryptocephalus nitidulus* Fabricius, 1787	-	1	1	2	2
268	Cryptocephalus nitidus (Linnaeus, 1758)	2	-	3	5	3
269	*Cryptocephalus octomaculatus* P. Rossi, 1790	-	-	2	2	2
270	*Cryptocephalus octopunctatus* (Scopoli, 1763)	1	2	4	7	5
271	*Cryptocephalus parvulus* O.F. Müller, 1776	1	1	-	2	2
272	*Cryptocephalus quadriguttatus* C.F.W. Richter, 1820	-	4	4	8	4
273	*Cryptocephalus quadripustulatus* Gyllenhal, 1813*	-	1	9	10	2
274	*Cryptocephalus quinquepunctatus* (Scopoli, 1763)	-	1	1	2	2
275	*Cryptocephalus sericeus* (Linnaeus, 1758)	13	12	36	61	17

	Species	MSNR	NPS	Other district	Numbers of specimens	Numbers of plots
276	*Cryptocephalus sexpunctatus* (Linnaeus, 1758)	1	1	1	3	3
277	*Cryptocephalus solivagus* Leonardi & Sassi, 2001	40	39	77	156	18
278	*Cryptocephalus violaceus* Laicharting, 1781	-	-	3	3	2
279	*Cryptocephalus virens* Suffrian, 1847	-	-	4	4	1
280	*Cryptocephalus pini* (Linnaeus, 1758)	1	1	-	2	2
281	*Cryptocephalus coryli* (Linnaeus, 1758)	2	-	3	5	5
282	*Cryptocephalus laevicollis* Gebler, 1830	-	-	5	5	2
283	*Cryptocephalus apicalis* Gebler, 1830*	-	-	1	1	1
284	*Cryptocephalus flavicollis* Fabricius, 1781	-	-	2	2	1
285	*Cryptocephalus flexuosus* Krynicky, 1834	-	-	1	1	1
286	*Cryptocephalus gamma* Herrich-Schäffer, 1835	-	-	4	4	1
	Pachybrachini Chapuis, 1874					
287	*Pachybrachis fimbriolatus* (Suffrian, 1848)*	-	-	1	1	1
288	*Pachybrachis hieroglyphicus* (Laicharting, 1781)	26	12	36	74	15
289	*Pachybrachis scriptidorsum* Marseul, 1874	-	-	4	4	2
	Eumolpinae Hope, 1841					
	Adoxini Baly, 1863					
290	*Bromius obscurus* (Linnaeus, 1758)	136	13	54	203	38
291	*Pachnephorus pilosus* (P. Rossi, 1790)	-	-	2	2	2
292	*Pachnephorus tessellatus* (Duftschmid, 1825)	6	-	3	9	3
	Eumolpini Hope, 1841					
293	*Chrysochus asclepiadeus* (Pallas, 1773)	-	-	2	2	1
	Synetinae LeConte & Horn, 1883					
294	*Syneta betulae* (Fabricius, 1792)	1	-	-	1	1
	Total of specimens	**3964**	**2159**	**3264**	**9387**	-
	Total of species	**205**	**178**	**255**	-	-

Discussion

A total of 205 species have been recorded within the Mordovia State Nature Reserve, and 178 species within the National Park "Smolny". In other districts of the region, 255 species have been documented, which is likely due to the greater diversity of habitats inhabited by Chrysomeloidea. The Mordovia State Nature Reserve and the National Park “Smolny” are almost entirely forest-covered areas, whereas the rest of the republic includes a wide range of open habitats (steppe areas, meadows), which are preferred by many species of this group. Differences in species richness among these territories are also influenced by varying degrees of faunal study.

The most frequently recorded species based on the number of plots (20 or more in total) include 20 species: *Oulema erichsonii*, *Oulema obscura*, *Cassida viridis*, *Hypocassida subferruginea*, *Chrysomela populi*, *Plagiosterna aenea*, *Chrysolina polita*, *Chrysolina varians*, *Fasta fastuosa*, *Gonioctena viminalis*, *Galeruca tanaceti*, *Galerucella lineola*, *Agelastica alni*, *Altica oleracea*, *Crepidodera aurata*, *Crepidodera fulvicornis*, *Phyllotreta vittula*, *Cryptocephalus bipunctatus*, *Cryptocephalus moraei*, and *Bromius obscurus* (Fig. 2).

In terms of the number of specimens (more than 200 individuals in total), the leading species are *Donacia bicolora*, *Donacia semicuprea*, *Fasta fastuosa*, *Galeruca tanaceti*, *Aphthona euphorbiae*, *Crepidodera aurata*, *Phyllotreta vittula*, and *Bromius obscurus*.

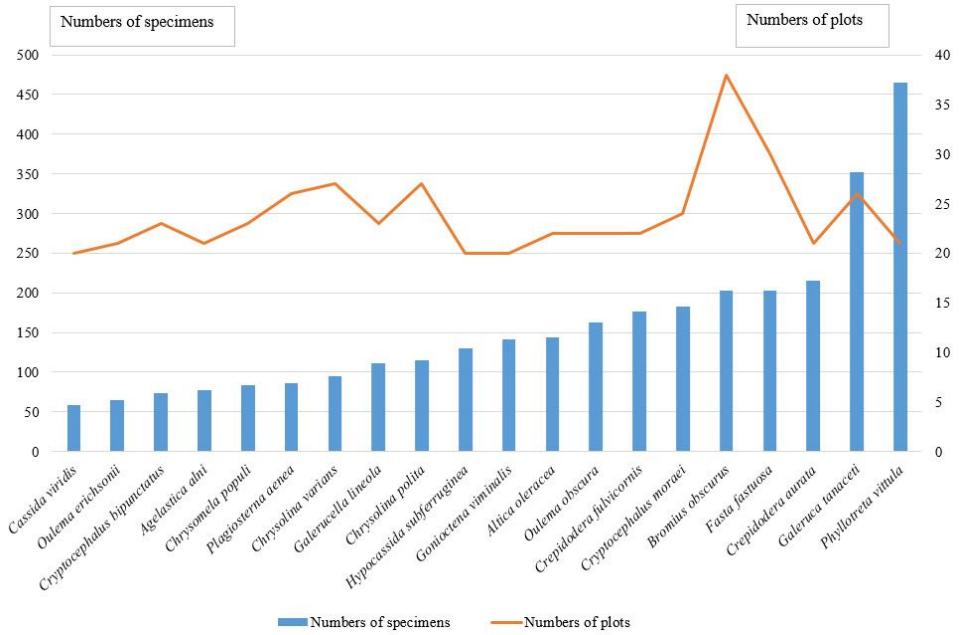

Figure 2. The most abundant and frequently encountered species of Chrysomeloidea in the Republic of Mordovia.

An analysis of current data on the distribution of Chrysomeloidea taxa (Bezděk and Sekerka 2024) and the material studied made it possible to exclude the following ten species from the regional fauna due to probable misidentifications: *Bruchidius olivaceus* (Germar, 1823), *Cassida berolinensis* Suffrian, 1844, *Cassida sareptana* Kraatz, 1874, *Chrysolina haemoptera* (Linnaeus, 1758), *Cryptocephalus modestus* Suffrian, 1848, *Cryptocephalus octomaculatus* P. Rossi, 1790, *Cryptocephalus vittatus* Fabricius, 1775, *Gonioctena nivosa arctica* Mannerheim, 1853, *Labidostomis lucida* (Germar, 1823), and *Phyllobrotica elegans* Kraatz, 1866.

A number of records are of particular zoogeographical interest. For instance, *Cryptocephalus planifrons* was recorded in Mordovia near the northern boundary of its range, which runs along the border between the forest and forest-steppe zones (Romantsov and Moseyko 2022). Similarly, several species of the steppe complex – *Cryptocephalus apicalis*, *Aphthona franzi*, and *Podagrica fuscicornis* – as well temperate species *Phyllotreta astrachanica* and *Bruchus occidentalis* (Dedyukhin 2018; 2025), were recorded close to the northern limits of their ranges.

Conversely, boreomontane species *Syneta betulae* and *Chrysomela lapponica*, temperate species *Phratora tibialis*, *Euluperus pinicola*, and boreal species *Cryptocephalus quadripustulatus* (Dedyukhin 2018) were recorded in the republic near the southern boundaries of their ranges.

As a result of this study, the rare reed beetle *Donacia malinovskyi* was recorded; in the European part of Russia, it is known only from a few regions (Kaliningrad, Voronezh, Moscow, Ryazan, Vladimir, Kaluga, Kirov, and Penza regions, as well as the Republic of Bashkortostan) (Bieńkowski 2015; Dedyukhin 2018), and in the Middle Volga region only from Samara Region.

One alien leaf beetle species, *Leptinotarsa decemlineata*, was recorded in the fauna. Three additional species are presumed to be non-native and are therefore currently best regarded as cryptogenic (Denux and Zagatti 2010). *Psylliodes hyoscyami* is a monophagous species on *Hyoscyamus niger* L., Mediterranean in origin, and now widely distributed across the Palaearctic; it likely penetrated Europe long ago, although the history of its spread remains unclear (Orlova-Bienkowskaja and Bieńkowski 2019). *Chrysolina eurina* is a monophagous species on *Tanacetum vulgare* L., of West Siberian origin with a disjunct distribution (Central Europe, European Russia, and Western Siberia) (Orlova-Bienkowskaja and Bieńkowski 2019; Bieńkowski and Nikitsky 2019). *Lilioceris lilii* is also most likely an adventive species in Mordovia. It is actively spreading in the republic via planting material (affecting *Lilium* spp. and *Fritillaria* spp.), as observed throughout the European part of Russia (Orlova-Bienkowskaja 2012). However, according to S.V. Dedyukhin (2018), in the eastern part of the Russian Plain it should be considered an ancient element of the South Siberian fauna; in this region, it has also been recorded in natural reserves on relict populations of *Lilium martagon* L.

The level of knowledge of the Chrysomeloidea fauna of the Republic of Mordovia is relatively high, as demonstrated by comparison with neighboring regions. For example, more than 300 species have been recorded in the well-studied Uly-

anovsk Region (Isaev 2005, 2007). In the adjacent Chuvash Republic, approximately 280 species are known based on published (Egorov 2020) and new data from the first author. In the well-studied Moscow Region, 325 species have been recorded (Bieńkowski and Nikitsky 2019).

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