

ORIGINAL ARTICLE

## The Ladybird Beetles (Coleoptera: Coccinellidae) of Tigirek Nature Reserve (North-Western Altai, Russia)

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The annotated list of 26 species and 16 genera of Coccinellidae from the Tigirek strict nature reserve is presented. Fifteen species are newly recorded for this region: *Scymnus frontalis* (Fabricius, 1787); *Hyperaspis reppensis* (Herbst, 1783); *Hyperaspis erythrocephala* (Fabricius, 1787); *Exochomus quadripustulatus* (Linnaeus, 1758); *Coccinula sinuatomarginata* (Faldermann, 1837); *Tytthaspis sedecimpunctata* (Linnaeus, 1761); *Tytthaspis gebleri* (Mulsant, 1850); *Myzia gebleri* (Crotch, 1874); *Propylea quatuordecimpunctata* (Linnaeus, 1758); *Calvia decemguttata* (Linnaeus, 1767); *Hippodamia (Hemisphaerica) tredecimpunctata* (Linnaeus, 1758); *Ceratomegilla undecimnotata* (D.H. Schneider, 1792); *Coccinella magnifica* L. Redtenbacher, 1843; *Coccinella nivicola* Mulsant, 1850, and *Anatisocellata* (Linnaeus, 1758). Two species, *Coccinula sinuatomarginata* (Faldermann, 1837) and *Tytthaspis sedecimpunctata* (Linnaeus, 1761), are new records for West Siberia.

**Key words:** Altai krai; check list; distribution; fauna; lady beetles; Palaearctic; West Siberia

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### Introduction

Coccinellidae Latreille, 1807 (Coleoptera, Coccinellidae) are well recognizable beetles, often having a bright warning coloration. The family Coccinellidae (lady beetles or ladybirds) is the largest family in the newly recognized superfamily Coccinelloidea (Robertson et al., 2008, 2015). Lady beetles in the world fauna include about 6000 species, belonging to 360 genera (Slipinski et al., 2011). In the Palaearctic, about 2000 species have been registered, in Russia – 167 species of 41 genus. The history of Siberian Coccinellidae study is more than 100 years old.

For the south of western Siberia, Filatova indicates 39 species of 22 genera (Filatova, 1970); Pekin gives already 64 species for the Urals and south of western Siberia (Pekin, 2007). However, the territory of the Altai mountainous country still remains very fragmentarily studied. Studies of biodiversity in specially protected areas are of particular relevance now, and Tigirek strict nature reserve is an example of that.

Tigirek strict nature reserve is located in south-western part of Altai krai, including sections of Zmeinogorsky, Tretyakovsky and Krasnoshchyokovsky districts bordering with Kazakhstan. It is situated on the left-bank part of the Upper Charysh river basin and occupies middle mountains and low mountains of the Tigirek ridge on the north-western border of the Altai mountainous country. Its area is 41505 hectares, the protected zone is 26257 hectares. The reserve occupies two levels, the high-mountainous and mid-mountainous, hardly reaching 2000 m - the lower boundary of the highlands. The highest points of the Tigirek ridge are mountains Chernaya (2013 m above sea level) and Razrabotnaya (1962 m above sea level). As we rise to the mountain peaks, the mountain forest-steppe first extends; shrub thickets form a separate sublayer; upper parts of slopes are occupied by the relic "Chernevaya" taiga – *Abies sibirica* dominates in the subnemoral tall-herbs forest. Above the forest border, there are subalpine tall-herbs and alpine meadows (Davydov et al., 2011). The reserve is currently one of the youngest in Russia (created in 1999), though the inventory works on the flora and fauna are actively going on there.

For today, the paper giving the first list of Coccinellidae of the reserve, including 11 species of 8 genera and 2 subfamilies, has been published (Volynkin et al., 2011). We have continued this research.

### Materials and Methods

The study was carried out on the territory of the reserve in 2012–2017. The entomological material was collected by mowing with a standard entomological net in the grass and wood-shrub vegetation. Additionally, we performed manual collection of lady beetles from plants. The beetles were killed with ethyl acetate, labeled and mounted on cotton mattresses. The beetles were examined with binocular MBS–10. The species were identified on different manuals (Reikhardt, 1948; Bielawski, 1984;

Kuznetsov, 1992). Part of the material is deposited in the reserve collection, another part – in the laboratory of fundamental and applied zoology of Altai State University.

The list presents the Coccinellidae registered in the reserve. The data on their localities inside the reserve are provided for each species.

According to the last classification of Coleoptera, Coccinellidae were classified in two subfamilies, Microweiseinae and Coccinellinae (Bouchard et al., 2011) but we use the classification of Kovar (2007) modified by Nedvěd and Kovář (2012) in this paper. The general distribution of the species is given after a series of works (Iablokoff-Khanzorian, 1983; Kuznetsov, 1992; Kovar, 2007; Nikitsky, Ukrainsky, 2016).

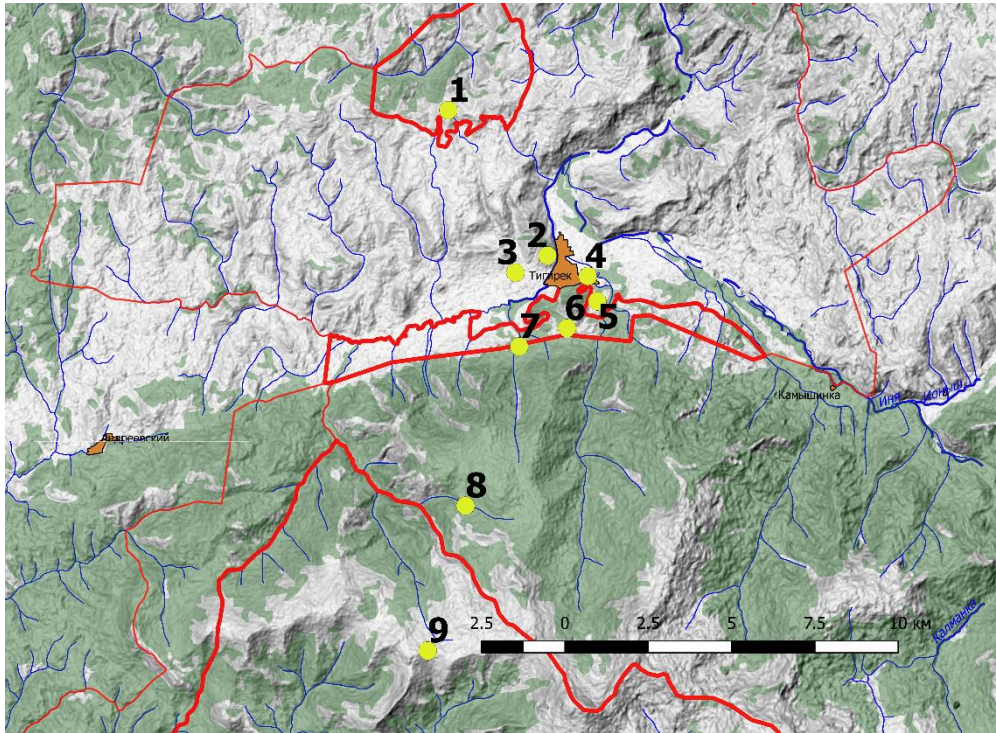


Fig. 1. Collecting localities of Coccinellidae in the Tigirek strict nature reserve.

List of collecting localities (fig. 1)

1. Altai krai, Krasnoshchyokovsky district, Hanharinsky sections of Tigirek strict nature reserve. Left bank area of Dragunsky Stream, 51°11'23.93" N 82°58'49.79" E, 700–850 m above sea level. Southern, eastern and western slopes. Steppe meadows, herb bunchgrass steppe (*Helictotrichon* sp., *Stipa rubens*, *S. pennata*, *Carex duriuscula*, *Peucedanum morisonii*) with shrubs (*Spiraea trilobata*, *Cotoneaster* sp.) and stones.
2. Altai krai, Krasnoshchyokovsky district, Buffer zone of Tigirek strict nature reserve. Surroundings of Tigirek village, Mount Kozyr (Mayak), 51°09'00.4" N 83°01'16.9" E, 500–700 m above sea level. Southern slope, watershed. Steppe meadows on the lower part of slope, herb bunchgrass steppe with shrubs (*Spiraea nana*, *Caragana pygmaea*, *Berberis sibirica*; *Stipa pennata*) and stones – in the upper part.
3. Altai krai, Krasnoshchyokovsky district, Buffer zone of Tigirek strict nature reserve. Surroundings of Tigirek village. Left bank area of Bolshoy Tigirek, 51°08'44.69" N 83°00'26.7" E, 550 m above sea level. Bottom of valley. Meadow with shrubs (*Pentaphylloides fruticosa*) on set aside land.
4. Altai krai, Krasnoshchyokovsky district, Buffer zone of Tigirek strict nature reserve. Tigirek village, 51°8'39.42" N 83° 2'18.22" E. Bottom of valley. Half-abandoned village.
5. Altai krai, Krasnoshchyokovsky district, Tigireksky sections of Tigirek strict nature reserve. Surroundings of Tigirek village. Left bank area of Maly Tigirek, Kirpichnaya hill, 51°08'14.8" N 83°02'31.9" E, 500–550 m above sea level. Watershed, northern slope. Ecotone: forest (*Larix sibirica*, *Betula pendula*, *Abies sibirica*) – steppe.
6. Altai krai, Krasnoshchyokovsky district, Tigireksky sections of Tigirek strict nature reserve. Surroundings of Tigirek village, Chainaya Mount, 51°7'49.52" N 83°1'43.98" E, 500–600 m above sea level. Eastern and southern slopes. Herb bunchgrass steppe with shrubs (*Spiraea nana*, *Caragana pygmaea*, *Berberis sibirica*; *Stipa pennata*, *Bupleurum aureum*) and stones on eastern and southern slopes; light forests on the ridge (*Larix sibirica*, *Betula pendula*, *Pinus sibirica*).
7. Altai krai, Charyshsky district, surroundings of Tigirek strict nature reserve. Left bank area of Maly Tigirek, Lviny kamen Mount, 51°7'32.9" N 83°0'29.3" E, 600 m above sea level, lower part of north-eastern slope. "Chernevaya" taiga – *Abies sibirica* dominated subnemoral tall-herbs forest.
8. Altai krai, Charyshsky district, surroundings of Tigirek strict nature reserve. Lviny kamen Mount, valley of Kholodny Klyuch river. 51°5'0" N 82°59'0" E, 1250 m above sea level. "Elfin woods" (*Betula tortuosa*), shrubs (*Pentaphylloides fruticosa*), tall forest herbaceous vegetation (*Veratrum lobelianum*, *Cirsium* sp.).

9. Altai krai, Zmeinogorsky district, Tigireksky sections of Tigirek strict nature reserve. Upper Rivers Baby Klyuch, Bolshoy Tigirek, Irkutka. 51°02'40.37" N 82°57'55.78" E, 1350–1500 m above sea level. The upper parts of northern and southern slopes, watersheds. Alpine herbaceous carpets, tall subalpine herbaceous vegetation (*Saussurea frolovi*, *Aconitum altaicum*, *Phlomooides alpina*), tundras (undershrub willow, moss), subalpine light forests (*Pinus sibirica*).

## Results

### Annotated list of the Coccinellidae (Coleoptera) fauna of Tigirek strict nature reserve

SCYMNINAE Mulsant, 1846

Scymnini Mulsant, 1846

*SCYMNUS* Kugelan N 1794

*Scymnus frontalis* (Fabricius, 1787)

MATERIAL EXAMINED.

[2]: 31.V.2012, 1 ex. (*T.M. Krugova*); 26.VII.2012, 3 ex. (*T.M. Krugova*); 16.VIII.2012, 2 ex. (*T.M. Krugova*); 17.VIII.2012, 11 ex. (*T.M. Krugova*); 09.IX.2012, 1 ex. (*T.M. Krugova*).

[6]: 03.VI.2012, 1 ex. (*T.M. Krugova*); 13.VII.2012, 3 ex. (*T.M. Krugova*); 26.VII.2012, 1 ex. (*T.M. Krugova*); 16.VIII.2012, 1 ex. (*T.M. Krugova*); 03.IX.2013, 1 ex. (*T.M. Krugova*); 21.VI.2014, 1 ex. (*T.M. Krugova*).

DISTRIBUTION. Russia: European part, W and E Siberia, Far East. – Europe, Kyrgyzstan, N Kazakhstan, Tajikistan, Turkey, Uzbekistan, China, Iran.

Hyperaspidini Mulsant, 1846

*HYPERASPIS* Chevrolat in Dejean N 1837

*Hyperaspis reppensis* (Herbst, 1783)

MATERIAL EXAMINED.

[2]: 26.VII.2012, 1 ex. (*T.M. Krugova*).

[3]: 02.VI.2017, 1 ex. (*E.A. Nepaeva*).

[6]: 26.VII.2012, 1 ex. (*T.M. Krugova*); 01.IX.2012, 1 ex. (*T.M. Krugova*).

DISTRIBUTION. Russia: European part, W Siberia. – North Africa, Europe, Kazakhstan.

*Hyperaspis erythrocephala* (Fabricius, 1787)

MATERIAL EXAMINED.

[6]: 26.VII.2012, 4 ex. (*T.M. Krugova*).

DISTRIBUTION. Russia: Central and South European part, W and E Siberia. – Europe, China, Kazakhstan, Mongolia, North Korea.

CHILOCORINAE Mulsant, 1846

Chilocorini Mulsant, 1846

*EXOCHOMUS* Redtenbacher, 1843

*Exochomus quadripustulatus* (Linnaeus, 1758)

MATERIAL EXAMINED.

[2]: 26.IX.2012, 1 ex. (*T.M. Krugova*).

[5]: 14.VIII.2017, 2 ex. (*E.A. Nepaeva*); 15.VIII.2017, 2 ex. (*E.A. Nepaeva*).

[6]: 03.IX.2013, 1 ex. (*T.M. Krugova*); 08.IX.2014, 1 ex. (*T.M. Krugova*); 18.VIII.2017, 1 ex. (*E.A. Nepaeva*).

[7]: 09.VIII.2017, 5 ex. (*E.A. Nepaeva*); 16.VIII.2017, 2 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: European part, W and E Siberia, Far East. – North Africa, Europe, Cyprus, Iran, Iraq, Israel, Kazakhstan, Lebanon, Mongolia, Turkey, Nearctic Region.

COCCINELLINAE Latreille, 1807

Coccinellini Latreille, 1807

*COCCINULA* Dobzhansky, 1925

*Coccinula quatuordecimpustulata* (Linnaeus, 1758)

Volynkin et al., 2011: 190.

MATERIAL EXAMINED.

[1]: 26.VI.2012, 1 ex. (*T.M. Krugova*);

[2]: 12.VII.2012, 1 ex. (*T.M. Krugova*); 26.VII.2012, 1 ex. (*T.M. Krugova*); 16.VIII.2012, 7 ex. (*T.M. Krugova*); 17.VIII.2012, 5 ex. (*T.M. Krugova*); 01.IX.2012, 1 ex. (*T.M. Krugova*); 09.IX.2012, 2 ex. (*T.M. Krugova*); 26.IX.2012, 10 ex. (*T.M. Krugova*); 03.VI.2017, 2 ex. (*E.A. Nepaeva*); 14.VIII.2017, 13 ex. (*E.A. Nepaeva*).

[3]: 02.VI.2017, 1 ex. (*E.A. Nepaeva*); 10.VIII.2017, 3 ex. (*E.A. Nepaeva*); 11.VIII.2017, 26 ex. (*E.A. Nepaeva*); 15.VIII.2017, 13 ex. (*E.A. Nepaeva*).

[6]: 03.VI.2012, 2 ex. (*T.M. Krugova*); 22.VI.2012, 2 ex. (*T.M. Krugova*); 13.VII.2012, 3 ex. (*T.M. Krugova*); 26.VII.2012, 16 ex. (*T.M. Krugova*); 16.VIII.2012, 6 ex. (*T.M. Krugova*); 01.IX.2012, 4 ex. (*T.M. Krugova*); 08.IX.2012, 4 ex. (*T.M. Krugova*); 01.VII.2013, 1 ex. (*T.M. Krugova*); 12.VII.2013, 2 ex. (*T.M. Krugova*); 01.VIII.2013, 7 ex. (*T.M. Krugova*); 03.IX.2013, 20 ex. (*T.M. Krugova*); 18.IX.2013,



6 ex. (*T.M. Krugova*); 21.VI.2014, 1 ex. (*T.M. Krugova*); 07.VII.2014, 5 ex. (*T.M. Krugova*); 26.VII.2014, 4 ex. (*T.M. Krugova*); 19.VIII.2014, 14 ex. (*T.M. Krugova*); 08.IX.2014, 2 ex. (*T.M. Krugova*); 28.V.2015, 1 ex. (*T.M. Krugova*); 19.VI.2015, 1 ex. (*T.M. Krugova*); 12.VII.2015, 3 ex. (*T.M. Krugova*); 28.VIII.2015, 1 ex. (*T.M. Krugova*); 31.VIII.2015, 6 ex. (*T.M. Krugova*); 17.VIII.2017, 25 ex. (*E.A. Nepaeva*); 18.VIII.2017, 4 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: European part, W and E Siberia. – Europe, China, Iran, Kyrgyzstan, Turkey, Syria, Uzbekistan, Afrotropical Region.

***Coccinula sinuatomarginata*** (Faldermann, 1837)

MATERIAL EXAMINED.

[2]: 03.VI.2017, 4 ex. (*E.A. Nepaeva*); 14.VIII.2017, 2 ex. (*E.A. Nepaeva*).

[3]: 01.VI.2017, 1 ex. (*E.A. Nepaeva*); 10.VIII.2017, 1 ex. (*E.A. Nepaeva*); 11.VIII.2017, 3 ex. (*E.A. Nepaeva*); 15.VIII.2017, 5 ex. (*E.A. Nepaeva*).

[9]: 05.VI.2017, 2 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: South European part, W Siberia (new record), E Siberia (Tuva). – North Africa, Europe, China, Afghanistan, Iran, Iraq, Kyrgyzstan, Kazakhstan, Lebanon, Syria, Tajikistan, Turkmenistan, Turkey, Uzbekistan.

***Tytthaspis*** Crotch, 1874

***Tytthaspis sedecimpunctata*** (Linnaeus, 1761)

MATERIAL EXAMINED.

[2]: 14.VIII.2017, 1 ex. (*E.A. Nepaeva*).

[6]: 17.VIII.2017, 1 ex. (*E.A. Nepaeva*).

[9]: 05.VI.2017, 1 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: European part, W Siberia (new record). – North Africa, Europe, China, Syria, Turkey.

***Tytthaspis gebleri*** (Mulsant, 1850)

MATERIAL EXAMINED.

[4]: 2012, 1 ex. (*T.M. Krugova*).

[6]: 17.VIII.2017, 1 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: South European part, W Siberia. – Kazakhstan, Uzbekistan.

***Myzia*** Mulsant, 1846

***Myzia gebleri*** (Crotch, 1874)

MATERIAL EXAMINED.

[5]: 14.VIII.2017, 1 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: W and E Siberia, Far East. – Japan, Mongolia, China.

***PROPYLEA*** Mulsant, 1846

***Propylea quatuordecimpunctata*** (Linnaeus, 1758)

MATERIAL EXAMINED.

[1]: 26.VI.2012, 1 ex. (*T.M. Krugova*).

[4]: 12.VI.2016, 1 ex. (*E.A. Nepaeva*); 30.V.2017, 1 ex. (*E.A. Nepaeva*).

[6]: 26.VII.2012, 1 ex. (*T.M. Krugova*); 01.VIII.2013, 4 ex. (*T.M. Krugova*); 07.VII.2014, 1 ex. (*T.M. Krugova*); 19.VIII.2014, 2 ex. (*T.M. Krugova*); 31.VIII.2015, 1 ex. (*T.M. Krugova*).

DISTRIBUTION. Russia: Central European part, North European part, South European part, East Siberia, Far East, W Siberia. – North Africa, Europe, China, Cyprus, Iran, Iraq, Israel, Japan, Kazakhstan, Lebanon, Mongolia, North Korea, Pakistan, South Korea, Syria, Turkey, Nearctic Region.

***CALVIA*** Mulsant, 1846

***Calvia decemguttata*** (Linnaeus, 1767)

MATERIAL EXAMINED.

[4]: 30.V.2017, 3 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: Central and South European part, W and E Siberia, Far East. – Europe, China, Japan, Mongolia, North Korea, South Korea, Turkey.

***Calvia quatuordecimguttata*** (Linnaeus, 1758)

Volyntkin et al., 2011: 191.

MATERIAL EXAMINED.

[2]: 26.IX.2012, 1 ex. (*T.M. Krugova*); 03.VI.2017, 1 ex. (*E.A. Nepaeva*).

[4]: 30.V.2017, 1 ex. (*E.A. Nepaeva*).

[7]: 16.VIII.2017, 1 ex. (*E.A. Nepaeva*).

[9]: 05.VI.2017, 7 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: Central European part, North European part, South European part, East Siberia, Far East, W Siberia. – Europe, Bhutan, China, India, Japan, Kazakhstan, Mongolia, North Korea, Nepal, South Korea, Turkey, Nearctic Region, Oriental Region.

***Calvia (Anisocalvia) quindecimguttata*** (Fabricius, 1777)

Volynkin et al., 2011: 191.

DISTRIBUTION. Russia: Central and North European part, W and E Siberia, Far East. – Europe, China, Japan, Mongolia, North Korea, South Korea.

***PSYLLOBORA*** Chevrolat, 1837

***Psyllobora vigintiduopunctata*** (Linnaeus, 1758)

Volynkin et al., 2011: 190.

MATERIAL EXAMINED.

[3]: 11.VIII.2017, 1 ex. (*E.A. Nepaeva*); 15.VIII.2017, 1 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: European part, W and E Siberia, Far East. – North Africa, Europe, Afghanistan, China, Iran, Iraq, Israel, Kyrgyzstan, Kazakhstan, Lebanon, Mongolia, North Korea, South Korea, Syria, Tajikistan, Turkey, Uzbekistan.

***CERATOMEGILLA*** Crotch, 1873

***Ceratomegilla undecimnotata*** (D.H. Schneider, 1792)

MATERIAL EXAMINED.

[1]: 26.06.2012, 1 ex. (*T.M. Krugova*).

[4]: 12.VII.2016, 1 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: European part, W Siberia. – Europe, Iran, Iraq, Kyrgyzstan, Kazakhstan, Tajikistan, Turkmenistan, Turkey, Uzbekistan.

***HIPPODAMIA*** Chevrolat, 1836

***Hippodamia (Hippodamia)*** Chevrolat, 1836:

***Hippodamia (Hippodamia) variegata*** (Goeze, 1777)

Volynkin et al., 2011: 190.

MATERIAL EXAMINED.

[2]: 31.V.2012, 19 ex. (*T.M. Krugova*); 21.VI.2012, 1 ex. (*T.M. Krugova*); 12.VII.2012, 4 ex. (*T.M. Krugova*); 26.VII.2012, 2 ex. (*T.M. Krugova*); 16.VIII.2012, 5 ex. (*T.M. Krugova*); 16.VIII.2012, 5 ex. (*T.M. Krugova*); 17.VIII.2012, 7 ex. (*T.M. Krugova*); 01.IX.2012, 5 ex. (*T.M. Krugova*); 09.IX.2012, 16 ex. (*T.M. Krugova*); 26.IX.2012, 12 ex. (*T.M. Krugova*); 27.IX.2012, 3 ex. (*T.M. Krugova*); 03.VI.2017, 7 ex. (*E.A. Nepaeva*); 14.VIII.2017, 22 ex. (*E.A. Nepaeva*).

[1]: 01.VI.2012, 6 ex. (*T.M. Krugova*).

[8]: 21.VII.2013, 7 ex. (*T.M. Krugova*).

[6]: 02.V.2012, 3 ex. (*T.M. Krugova*); 22.V.2012, 7 ex. (*T.M. Krugova*); 03.VI.2012, 1 ex. (*T.M. Krugova*); 22.VI.2012, 3 ex. (*T.M. Krugova*); 13.VII.2012, 4 ex. (*T.M. Krugova*); 26.VII.2012, 5 ex. (*T.M. Krugova*); 16.VIII.2012, 11 ex. (*T.M. Krugova*); 01.IX.2012, 11 ex. (*T.M. Krugova*); 08.IX.2012, 17 ex. (*T.M. Krugova*); 01.V.2013, 1 ex. (*T.M. Krugova*); 11.VI.2013, 2 ex. (*T.M. Krugova*); 30.VI.2013, 5 ex. (*T.M. Krugova*); 01.VII.2013, 6 ex. (*T.M. Krugova*); 12.VII.2013, 18 ex. (*T.M. Krugova*); 01.VIII.2013, 98 ex. (*T.M. Krugova*); 03.IX.2013, 36 ex. (*T.M. Krugova*); 18.IX.2013, 8 ex. (*T.M. Krugova*); 17.V.2014, 1 ex. (*T.M. Krugova*); 30.V.2014, 2 ex. (*T.M. Krugova*); 21.VI.2014, 4 ex. (*T.M. Krugova*); 07.VII.2014, 7 ex. (*T.M. Krugova*); 26.VII.2014, 1 ex. (*T.M. Krugova*); 19.VIII.2014, 2 ex. (*T.M. Krugova*); 08.IX.2014, 1 ex. (*T.M. Krugova*); 28.V.2015, 2 ex. (*T.M. Krugova*); 19.VI.2015, 2 ex. (*T.M. Krugova*); 28.VIII.2015, 1 ex. (*T.M. Krugova*); 17.VIII.2017, 31 ex. (*E.A. Nepaeva*); 18.VIII.2017, 6 ex. (*E.A. Nepaeva*).

[9]: 05.VI.2017, 26 ex. (*E.A. Nepaeva*).

[3]: 01.VI.2017, 2 ex. (*E.A. Nepaeva*); 09.VIII.2017, 3 ex. (*E.A. Nepaeva*); 10.VIII.2017, 14 ex. (*E.A. Nepaeva*); 11.VIII.2017, 53 ex. (*E.A. Nepaeva*); 15.VIII.2017, 14 ex. (*E.A. Nepaeva*).

[4]: 09.VII.2016, 4 ex. (*E.A. Nepaeva*); 12.VII.2016, 1 ex. (*E.A. Nepaeva*); 30.V.2017, 1 ex. (*E.A. Nepaeva*); 30.V.2017, 6 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: European part, W Siberia, Far East. – North Africa, Europe, Arab Emirates, Afghanistan, Bhutan, China, India, Iran, Iraq, Israel, Jordan, Kyrgyzstan, Kazakhstan, Lebanon, Mongolia, North Korea, Nepal, Pakistan, Saudi Arabia, South Korea, Egypt, Syria, Tajikistan, Turkmenistan, Turkey, Uzbekistan, Yemen, Afrotropical Region, Nearctic Region, Oriental Region.

***Hippodamia (Hemisphaerica)*** Hope, 1840

***Hippodamia (Hemisphaerica) arctica*** (D. H. Schneider, 1792)

Volynkin et al., 2011: 190.

MATERIAL EXAMINED.

[2]: 26.IX.2012, 1 ex. (*T.M. Krugova*).

DISTRIBUTION. Russia: North European part, W and E Siberia, Far East. – Europe, China, India, Kyrgyzstan, Kazakhstan, Mongolia, Nepal, Nearctic Region.

***Hippodamia (Hemisphaerica) tredecimpunctata*** (Linnaeus, 1758)

## MATERIAL EXAMINED.

[9]: 05.VI.2017, 4 ex. (*E.A. Nepaeva*).

[3]: 11.VIII.2017, 1 ex. (*E.A. Nepaeva*); 15.VIII.2017, 1 ex. (*E.A. Nepaeva*).

[2]: 14.VIII.2017, 1 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: European part, W and E Siberia, Far East.– North Africa, Europe, China, Afghanistan, Japan, Iran, Iraq, Kyrgyzstan, Kazakhstan, Mongolia, North Korea, South Korea, Tajikistan, Turkmenistan, Uzbekistan, Nearctic Region.

*COCCINELLA* Linnaeus, 1758*Coccinella septempunctata* Linnaeus, 1758

Volynkin et al., 2011: 190.

## MATERIAL EXAMINED.

[2]: 12.VII.2012, 1 ex. (*T.M. Krugova*); 01.IX.2012, 1 ex. (*T.M. Krugova*).

[6]: 22.VI.2012, 2 ex. (*T.M. Krugova*); 13.VII.2012, 1 ex. (*T.M. Krugova*); 16.VIII.2012, 1 ex. (*T.M. Krugova*); 08.IX.2012, 1 ex. (*T.M. Krugova*); 11.VI.2013, 1 ex. (*T.M. Krugova*); 12.VII.2013, 1 ex. (*T.M. Krugova*); 01.VIII.2013, 1 ex. (*T.M. Krugova*); 03.IX.2013, 1 ex. (*T.M. Krugova*); 07.VII.2014, 1 ex. (*T.M. Krugova*); 17.VIII.2017, 2 ex. (*E.A. Nepaeva*); 18.VIII.2017, 1 ex. (*E.A. Nepaeva*).

[8]: 21.VII.2013, 1 ex. (*T.M. Krugova*).

[9]: 05.VI.2017, 4 ex. (*E.A. Nepaeva*).

[4]: 03.VII.2016, 2 ex. (*E.A. Nepaeva*); 12.VII.2016, 1 ex. (*E.A. Nepaeva*).

[3]: 02.VI.2017, 1 ex. (*E.A. Nepaeva*); 09.VIII.2017, 3 ex. (*E.A. Nepaeva*); 10.VIII.2017, 2 ex. (*E.A. Nepaeva*); 11.VIII.2017, 4 ex. (*E.A. Nepaeva*); 15.VIII.2017, 3 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: European part, W Siberia, Far East.– North Africa, Europe, Afghanistan, Bhutan, China, Cyprus, Iran, Iraq, Israel, Japan, Jordan, India, Kyrgyzstan, Kuwait, Kazakhstan, Lebanon, Mongolia, North Korea, Nepal, Pakistan, Saudi Arabia, South Korea, Egypt, Syria, Tajikistan, Turkmenistan, Turkey, Uzbekistan, Afrotropical Region, Nearctic Region, Oriental Region.

*Coccinella quinquepunctata* Linnaeus, 1758

Volynkin et al., 2011: 190.

DISTRIBUTION. Russia: European part, W and E Siberia, Far East. – North Africa, Europe, China, Kazakhstan, Mongolia, Turkey.

*Coccinella magnifica* L. Redtenbacher, 1843

## MATERIAL EXAMINED.

[9]: 05.VI.2017, 1 ex. (*E.A. Nepaeva*).

[8]: 06.VI.2017, 1 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: European part, W and E Siberia, Far East. – Europe, China, Kyrgyzstan, Kazakhstan, Mongolia.

*Coccinella nivicola* Mulsant, 1850

## MATERIAL EXAMINED.

[9]: 05.VI.2017, 7 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: W and E Siberia, Far East. – China, Mongolia.

*ADALIA* Mulsant, 1846*Adalia bipunctata* (Linnaeus, 1758)

Volynkin et al., 2011: 190.

DISTRIBUTION. Russia: European part, W Siberia, Far East. – North Africa, Europe, Afghanistan, China, Iran, Iraq, Israel, Japan, Jordan, Kyrgyzstan, Lebanon, Mongolia, Syria, Tajikistan, Turkmenistan, Turkey, Uzbekistan, Afrotropical Region, Australian Region, Nearctic Region, Neotropical Region.

*HARMONIA* Mulsant, 1846*Harmonia axyridis* (Pallas, 1773)

Volynkin et al., 2011: 191.

## MATERIAL EXAMINED.

[2]: 26.VII.2012, 1 ex. (*T.M. Krugova*); 03.VI.2017, 1 ex. (*E.A. Nepaeva*).

[6]: 08.IX.2012, 1 ex. (*T.M. Krugova*); 01.VIII.2013, 1 ex. (*T.M. Krugova*); 02.VI.2017 1 ex. (*E.A. Nepaeva*).

[9]: 05.VI.2017, 6 ex. (*E.A. Nepaeva*).

[4]: 07.VI.2017, 1 ex. (*E.A. Nepaeva*).

[7]: 09.VIII.2017, 1 ex. (*E.A. Nepaeva*); 16.VIII.2017, 1 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: W and E Siberia, Far East. – Europe, China, Japan, Kazakhstan, Mongolia, North Korea, South Korea, India, Nearctic Region, Oriental Region.

*ANATIS* Mulsant, 1846*Anatis ocellata* (Linnaeus, 1758)

## MATERIAL EXAMINED.

[2]: 26.IX.2012, 1 ex. (*T.M. Krugova*).

[9]: 05.VI.2017, 12 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: European part, W and E Siberia, Far East. – Europe, China, Mongolia, North Korea, South Korea, Uzbekistan.

EPILACHNINAE Mulsant, 1846

*Epilachnin* Mulsant, 1846

SUBCOCCINELLA Agassiz, 1845

*Subcoccinella vigintiquatuor punctata* (Linnaeus, 1758)

Volynkin et al., 2011: 190.

MATERIAL EXAMINED.

[2]: 26.IX.2012, 1 ex. (*T.M. Krugova*).

[6]: 26.VII.2012, 1 ex. (*T.M. Krugova*); 03.IX.2013, 1 ex. (*T.M. Krugova*); 26.VII.2014, 2 ex. (*T.M. Krugova*); 12.VII.2015, 5 ex. (*T.M. Krugova*); 31.VIII.2015, 1 ex. (*T.M. Krugova*); 18.VIII.2017, 1 ex. (*E.A. Nepaeva*).

[3]: 31.V.2017, 1 ex. (*E.A. Nepaeva*); 01.VI.2017, 1 ex. (*E.A. Nepaeva*); 02.VI.2017, 1 ex. (*E.A. Nepaeva*).

[4]: 12.VII.2016, 1 ex. (*E.A. Nepaeva*); 30.V.2017, 1 ex. (*E.A. Nepaeva*).

DISTRIBUTION. Russia: European part, W and E Siberia, Far East. – North Africa, Europe, China, Iran, Kyrgyzstan, Kazakhstan, Mongolia, Turkey, Nearctic Region.

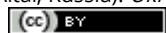
Thus, 26 Coccinellidae species of 16 genera and 4 subfamilies are currently registered in the reserve. Undoubtedly, these data are not exhaustive, and there is reason to believe that the data on trophic links and the Coccinellidae faunal list will be enlarged with further research.

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