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RESEARCH ARTICLE

To the Lepidoptera fauna of Evenk District (Russia, East Siberia)

Svyatoslav A. Knyazev[1], Veronika G. Nikonova[2]

1 *Altai State University, 61 Lenina St., Barnaul, 656049, Russia*
2 *Design Institute for Oil and Gas Projects Construction and Rehabilitation JSC, 153/2 Krasny Put St., Omsk, 644033, Russia*

Corresponding author: Svyatoslav A. Knyazev (konungomsk@yandex.ru)

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Abstract

The article contains a list of 47 species of Lepidoptera from the Thyrididae, Crambidae, Tortricidae, Hesperiidae, Papilionidae, Pieridae, Lycaenidae, Nymphalidae (including Satyrinae), Geometridae, Erebidae families from the territory of Evenkia. 18 species are new to the North Yenisei Region in Catalog of Lepidoptera of Russia, among them *Thyris fenestrella* (Scopoli, 1763), *Chrysoteuchia culmella* (Linnaeus, 1758), *Crambus lathoniellus* (Zincken, 1817), *Epiblema simploniana* (Duponchel, 1835), *Grapholita compositella* (Fabricius, 1775), *Euphydryas intermedia* (Ménétriés, 1859), *Mellicta britomartis* Assmann, 1847, *Lomaspilis marginata* (Linnaeus, 1758), *Chiasmia clathrata* (Linnaeus, 1758), *Jodis putata* (Linnaeus, 1758), *Xanthorhoe deflorata* (Erschoff, 1877), *Xanthorhoe designata* (Hufnagel, 1767), *Mesoleuca albicillata* (Linnaeus, 1758), *Idaea pallidata* ([Denis & Schiffermüller], 1775), *Scopula immorata* (Linnaeus, 1758), *Polypogon tentacularia* (Linnaeus, 1758), *Phytometra viridata* (Clerck, 1759), *Callistege mi* (Clerck, 1759).

Keywords

Lepidoptera, Thyrididae, Crambidae, Tortricidae, Hesperiidae, Papilionidae, Pieridae, Lycaenidae, Nymphalidae, Satyrinae, Geometridae, Erebidae, East Siberia, Krasnoyarsk Territory, Evenkia, fauna, new records

Introduction

Evenkia (Evenk district) is a vast territory in the north-east of the Krasnoyarsk Territory with a total area of 763,197 km^2, which in the past had the status of the Evenk Autonomous Okrug. In the north, this territory borders with the Taimyr district of the Krasnoyarsk Territory, in the south – with the Kezhma, Boguchany, Motygino and North Yenisey districts of the Krasnoyarsk Territory, in the west – with the Turukhan district of the Krasnoyarsk Territory, in the east – with the Republic of Sakha (Yakutia) and the Irkutsk region.

The study of the Lepidoptera fauna of the north of the Krasnoyarsk Territory has practically always focused attention on the mountainous regions of the Putorana Plateau and the northern territories of Taimyr Peninsula (Ménétriès 1851; Chernov 1973; Antonova 1976; Korshunov et al. 1982; Korshunov et al. 1985; Dubatolov et al. 1991; Kononenko et al. 1996; Churkin et Grieshuber 2001; Kozlov et al. 2006; Yakovlev 2020; Tatarinov, Kulakova 2022). There are no data on the fauna of southern Evenkia in the literature. In the catalog of Lepidoptera of Russia (Sinev 2019), Evenkia is included in the North Yenisei region along with the Taimyr district of the Krasnoyarsk Territory in column 21, where information on species finds is provided in generalized form.

At the end of June 2021, the second author collected Lepidoptera in some locations on the South-West of the Evenkia during the survey of the Yurubchen-Takhomovsky oil field. The collected material was processed and identified by the first author of this article, who discovered several species that had not previously been observed on the territory of Evenkia. Considering the weak entomological knowledge of Evenkia and the almost complete absence of materials from this territory, we decided to publish a short faunal list of all the collected material.

Materials and methods

According to the zoogeographic zoning, the studied area belongs to the West Siberian group of the forest type of the Southern taiga complex of the population of the Central Siberian physico-geographical country in the middle taiga subzone. According to modern forest zoning, the territory in question belongs to the Angara-Tunguska forest province of the Central Siberian forest region, to the Podkamenno-Tunguska forest district of the middle taiga light coniferous forests. According to geobotanical zoning, the research area belongs to the taiga forests of the Central Siberian vegetation spectrum (Korotkov 1994). The predominant type of vegetation in the studied area is *Picea-Larix* (sometimes with a slight admixture of *Betula* and *Pinus sibirica*) shrubby grassy mossy forests and woodlands. The proximity of the territory under consideration to the border of the subzones of the middle and southern taiga is visually manifested by the admixture of *Pinus sibirica* and *Picea* in

the composition of larch forests, as well as in a noticeable increase in the diversity of shrubby and grass-shrubby vegetation tiers. In a part of the territory in the zones of direct and indirect human influence, the tree layer of forests has been completely destroyed. Such sites are occupied by derived communities – the early stages of forest vegetation successions.

Formations of mixed forests dominated by *Picea obovata*, *Larix sibirica*, shrubby, grass and moss-lichen coniferous forests, as well as river and stream valleys were examined.

All material processed within the framework of this article was collected on the territory of the Yurubchen-Takhomovsky oil field in Evenkia (Fig. 1). The research was conducted by the second author on June 23–28, 2021 using standard method of collecting by butterfly net. All collected specimens are deposited in the collections of Design Institute for Oil and Gas Projects Construction and Rehabilitation JSC and Svyatoslav Knyazev (Omsk, Russia). The photos were made using a Canon 100D with a Tamron 18–200mm F3.5–6.3 lens. The map was prepared using the online resource SimpleMappr (www.simplemappr.net). The species new to the North Yenisei Region in Catalog of Lepidoptera of Russia are marked with an asterisk (*).

Geographical coordinates of the collecting sites (all situated on the territory of the Yurubchen-Takhomovsky oil field (60.402N, 96.333E) within a 10 km radius):

E02 – 60°25'36.0"N, 96°10'53.4"E;
E03 – 60°23'20.9"N, 96°11'06.5"E (Fig. 2);
E04 – 60°22'47.3"N, 96°27'06.1"E;
E05 – 60°22'47.6"N, 96°27'08.7"E;
E06 – 60°26'00.6"N, 96°17'10.1"E;
E07 – 60°21'57.3"N, 96°27'41.3"E (Fig. 4);
E09 – 60°21'40.4"N, 96°21'35.0"E;
E10 – 60°21'43.1"N, 96°27'35.8"E;
E13 – 60°24'24.3"N, 96°32'04.2"E;
E15 – 60°23'38.5"N, 96°32'46.6"E;
E16 – 60°23'14.3"N, 96°31'28.2"E (Fig. 3).

Results

THYRIDIDAE

**Thyris fenestrella* (Scopoli, 1763)

Material examined. 1 spm., E16.

Remark. Widespread Transpalaearctic meadow-forest species (Sinev 2019). First record in North Yenisei Region.

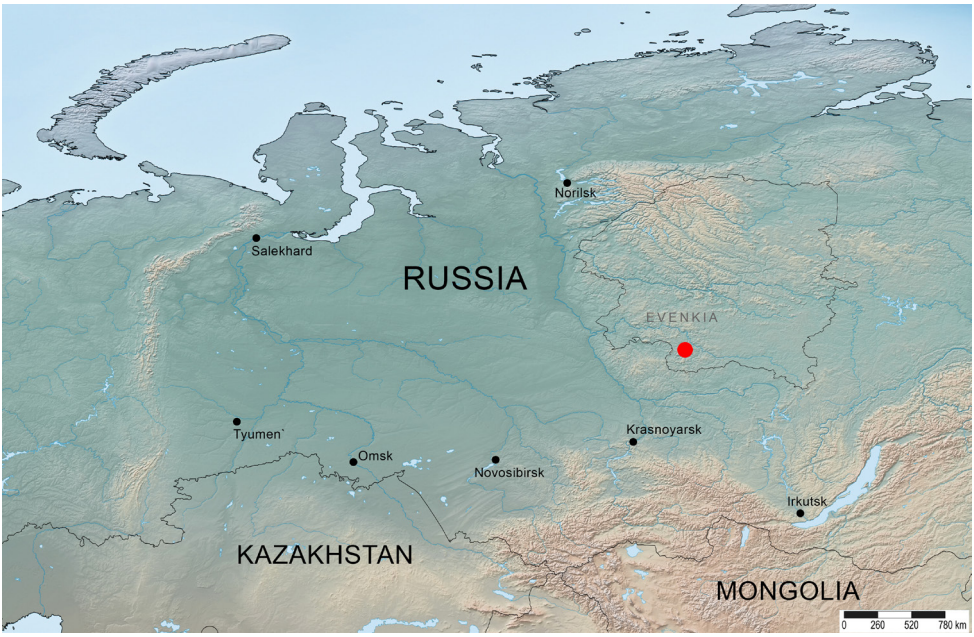
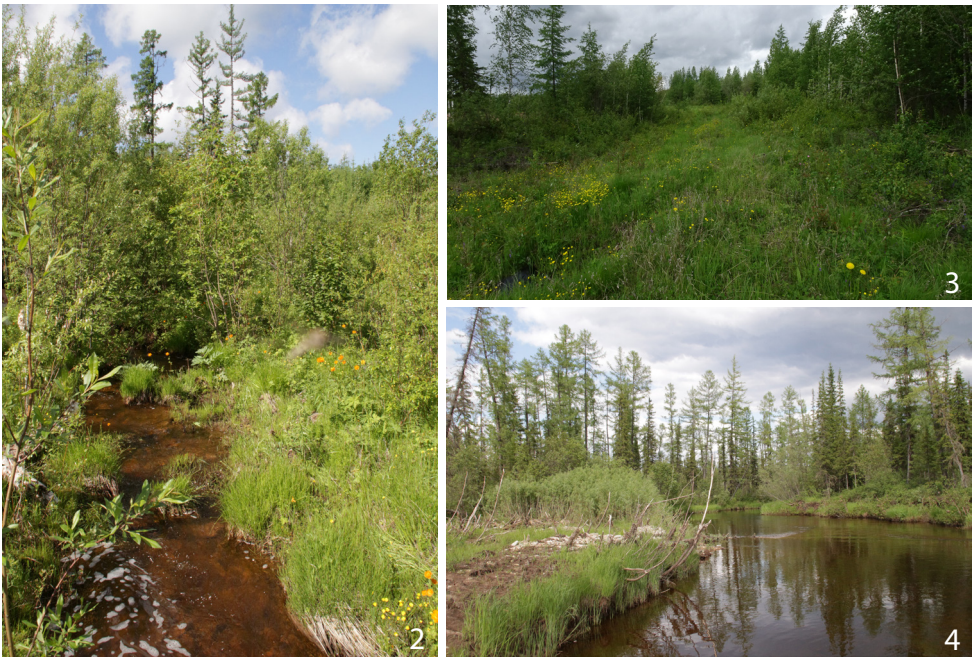


Figure 1. The location of the collecting site (red circle) on the map of Siberia.



Figures 2–4. Habitats in Evenkia (all photos by V.G. Nikonova): **2** – E03; **3** – E16; **4** – E07.

CRAMBIDAE

***Chrysoteuchia culmella* (Linnaeus, 1758)**

Material examined. 1 spm., E13–15; 12 spm., E04; 5 spm., E05; 6 spm., E03.

Remark. Widespread and common Transpalaearctic meadow species (Sinev 2019). First record in North Yenisei Region.

***Crambus lathoniellus* (Zincken, 1817)**

Material examined. 1♂, E16.

Remark. Widespread and common Transpalaearctic meadow species (Sinev 2019). First record in North Yenisei Region.

TORTRICIDAE

***Eana osseana* (Scopoli, 1763)**

Material examined. 1♂, E16.

Remark. Widespread Transpalaearctic species (Sinev 2019). It is often found in sphagnum swamps and in the tundra.

***Phiaris obsoletana* (Zetterstedt, 1839)**

Material examined. 1♂, E06–07.

Remark. Widespread Transpalaearctic species (Sinev 2019). The species is common in the taiga zone and in sphagnum swamps.

******Epiblema simploniana* (Duponchel, 1835)**

Material examined. 2♂, E04.

Remark. The species is widespread in Russia from the European part to Far East (Sinev 2019). First record in North Yenisei Region.

***Pelochrista guentheri* (Tengström, 1869)**

Material examined. 1♂, E10–11.

Remark. The species is distributed from the Scandinavian countries through the north of the European part of Russia in Siberia to Mongolia (Kuznetsov 2001; Sinev 2019).

****Grapholita compositella* (Fabricius, 1775)**

Material examined. 2♂, E13–15.

Remark. The species is widespread in Russia from the European part to Far East (Sinev 2019). First record in North Yenisei Region.

HESPERIIDAE

***Carterocephalus palaemon* (Pallas, 1771)**

Material examined. 1♂, E16.

Remark. Widespread Transpalaearctic meadow-forest species (Sinev 2019).

PAPILIONIDAE

***Parnassius tenedius* Eversmann, 1851**

Material examined. 10 spm., E05.

Remark. Rare and local Siberian species. This species is distributed in the Altai-Sayan mountain country, as well as northeast to Yakutia and the Magadan region (Sinev 2019). The present record is the westernmost for the species.

***Papilio machaon* Linnaeus, 1758**

Material examined. 1 spm., E05.

Remark. Widespread Holarctic species, common on all territory of Russia (Sinev 2019).

PIERIDAE

***Leptidea sinapis* (Linnaeus, 1758)**

Material examined. 2 spm., E04; 3 spm., E03.

Remark. A common Euro-Siberian species found in Russia everywhere from the European part to the Baikal region (Sinev 2019).

***Leptidea morsei* (Fenton, 1881)**

Material examined. 1 spm., E04; 1 spm., E06–07.

Remark. Widespread Transpalaearctic meadow-forest species (Sinev 2019).

***Antocharis cardamines* (Linnaeus, 1758)**

Material examined. 1♂, E03.

Remark. Common and widespread Transpalaearctic species distributed practically everywhere in Russia (Sinev 2019).

***Aporia crataegi* (Linnaeus, 1758)**
Fig. 8

Material examined. 1♂, E06–07.

Remark. The most common and widespread species in the Family found everywhere in Russia (Sinev 2019).

***Colias palaeno* (Linnaeus, 1761)**

Material examined. 1♂, E03.

Remark. It is a widespread species, often found in the taiga, tundra, and sphagnum swamps in most part of the Russian territory (Sinev 2019).

LYCAENIDAE

***Callophrys rubi* (Linnaeus, 1758)**

Material examined. 2 spm., E02; 1 spm., E16.

Remark. Widespread and common Transpalaearctic meadow species found practically everywhere in Russia (Sinev 2019).

***Ahlbergia frivaldzskyi* (Lederer, 1853)**

Material examined. 1♂, E03; 1♂, E16.

Remark. An East Palearctic species distributed in Russia from the Middle Urals to the Far East (Sinev 2019).

***Everes argiades* (Pallas, 1771)**

Material examined. 1♂, 1♀, E03.

Remark. Widespread and common Transpalaearctic species found practically everywhere in Russia (Sinev 2019).

***Glaucopsyche lycormas* (Butler, 1866)**

Material examined. 1♂, E13–15; 2 spm., E16; 1♀, E04.

Remark. An East Palearctic species distributed in Russia from West Siberia to the Far East (Sinev 2019).

***Cyaniris semiargus* (Rottemburg, 1775)**

Material examined. 1♂, E16.

Remark. Widespread Transpalaearctic species common on the most part of the Russian territory (Sinev 2019).

NYMPHALIDAE

****Euphydryas intermedia* (Ménétriés, 1859)**
Fig. 7

Material examined. 4 spm., E06–07; 3♂, E09; 1♀, E03.

Remark. It is an infrequent forest species found in Russia from the North of the European part to the Far East (Sinev 2019). First record in North Yenisei Region.

****Mellicta britomartis* Assmann, 1847**

Material examined. 1♂, E03.

Remark. Widespread Transpalaearctic species common on the most part of the Russian territory (Sinev 2019).

***Boloria eunomia* (Esper, 1799)**

Material examined. 2♂, E06–07.

Remark. Widespread Transpalaearctic species common on the most part of the Russian territory (Sinev 2019). It is found in mountainous areas, on sphagnum swamps and in the tundra.

SATYRINAE

***Lasiommata petropolitana* (Fabricius, 1787)**

Material examined. 1♀, E02; 1♂, E03; 2♂, E06–07.

Remark. A local Transpalaearctic forest species, widespread in Russia from the European part to the Far East (Sinev 2019).

***Erebia embla* (Thunberg, 1791)**

Material examined. 1♂, E16; 1♂, E02.

Remark. This species is distributed mainly in the northern and mountainous regions of Russia (Sinev 2019).

***Oeneis jutta* (Hübner, 1806)**

Material examined. 2 spm., E06–07; 1♂, E09.

Remark. Widespread Transpalaearctic species found in sphagnum swamps in many regions of Russia (Sinev 2019).

***Coenonympha hero* (Linnaeus, 1761)**

Material examined. 3♂, E03; 1♂, E16.

Remark. It is a widespread Transpalaearctic species found in the forest area of most regions of Russia (Sinev 2019).

GEOMETRIDAE

***Cabera exanthemata* (Scopoli, 1763)**

Material examined. 1♂, E05; 1♂, 1♀, E16.

Remark. Widespread Transpalaearctic meadow-forest species found in almost the entire territory of Russia (Sinev 2019).

***Ematurga atomaria* (Linnaeus, 1758)**
Fig. 6

Material examined. 3♂, 1♀, E10–11; 1♂, E13–15; 1♂, E04; 1♂, 1♀, E05; 1♂, 2♀, E02; 1♂, E09; 10♂, 3♀, E03.

Remark. It is a widespread Transpalaearctic species found in the most regions of Russia (Sinev 2019).

****Lomaspilis marginata* (Linnaeus, 1758)**

Material examined. 1 spm., E05.

Remark. It is a widespread and common species found in Russia from the European part to Transbaikalia (Sinev 2019). First record in North Yenisei Region.

****Chiasmia clathrata* (Linnaeus, 1758)**
Fig. 5

Material examined. 3 spm., E10–11; 3 spm., E13-15; 3 spm., E04; 2 spm., E03.

Remark. The most common and widespread Transpalaearctic species found throughout Russia (Sinev 2019). First record in North Yenisei Region.

****Jodis putata*** **(Linnaeus, 1758)**

Material examined. 2 spm., E10–11.

Remark. A Transpalaearctic species found mostly in forest and swampy areas of Russia (Sinev 2019). First record in North Yenisei Region.

Spargania luctuata **([Denis & Schiffermüller], 1775)**

Material examined. 1 spm., E05.

Remark. It is a widespread Transpalaearctic species, inhabiting a predominantly forested area in Russia (Sinev 2019).

Xanthorhoe abrasaria **(Herrich-Schäffer, 1855)**

Material examined. 3 spm., E05.

Remark. A Transpalaearctic species found in the northern and mountainous regions of Russia (Sinev 2019).

****Xanthorhoe deflorata*** **(Erschoff, 1877)**

Material examined. 1 spm., E05.

Remark. It is an East Palaearctic species found in Russia mainly in the forest zone from Western Siberia to the Far East (Sinev 2019). First record in North Yenisei Region.

****Xanthorhoe designata*** **(Hufnagel, 1767)**

Material examined. 1♂, E10–11.

Remark. The species is widespread in Russia from the European part to Yakutia (Sinev 2019). First record in North Yenisei Region.

Epirrhoe tristata **(Linnaeus, 1758)**

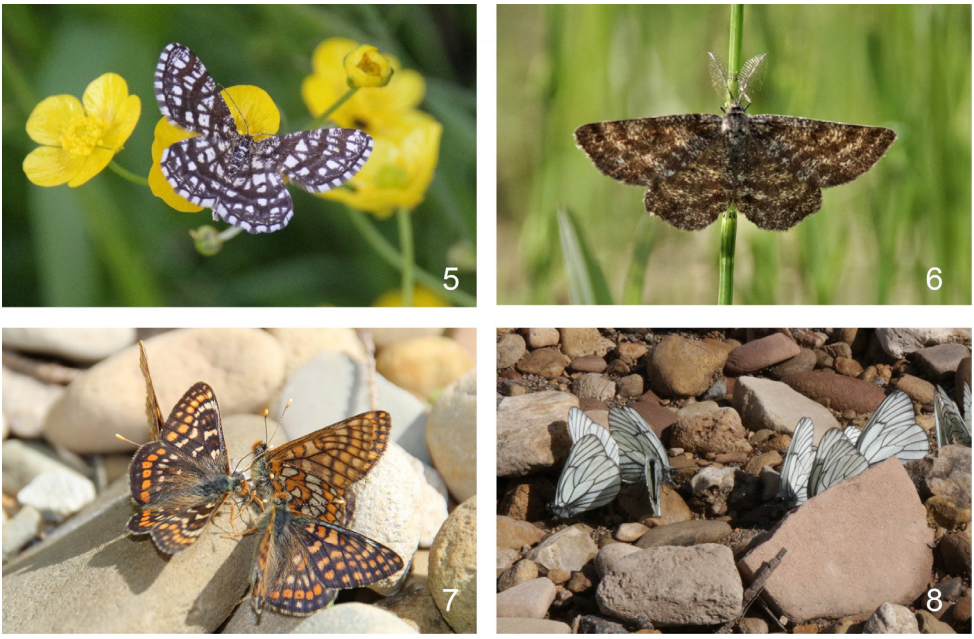
Material examined. 1♂, 1♀, E13–15; 6 spm., E16; 1♂, E02; 1 spm., E03.

Remark. Widespread in Russia Transpalaearctic species (Sinev 2019).

****Mesoleuca albicillata*** **(Linnaeus, 1758)**

Material examined. 1 spm., E04.

Remark. It is a widespread Transpalaearctic species, inhabiting in Russia a predominantly forested area (Sinev 2019). First record in North Yenisei Region.



Figures 5–8. Adults in nature (all photos by V.G. Nikonova) **5** – *Chiasmia clathrata*, 25.06.2021; **6** – *Ematurga atomaria*, 25.06.2021; **7** – *Euphydryas intermedia*, 27.06.2021; **8** – *Aporia crataegi*, 27.06.2021.

***Rheumaptera hastata* (Linnaeus, 1758)**

Material examined. 2 spm., E06–07.

Remark. It is a widespread Transpalaearctic meadow-forest species, found in Russia in predominantly forested area (Sinev 2019).

***Rheumaptera subhastata* (Nolcken, 1870)**

Material examined. 1♂, E06–07.

Remark. It is a widespread Transpalaearctic species found in Russia in forest regions (Sinev 2019).

****Idaea pallidata* ([Denis & Schiffermüller], 1775)**

Material examined. 2♂, E16; 1♂, 1♀, E04.

Remark. The species is widespread in the most part of the Regions on the Russian territory (Sinev 2019). First record in North Yenisei Region.

******Scopula immorata* **(Linnaeus, 1758)**

Material examined. 1♂, E13–15; 1 spm., E03.

Remark. This species is widespread and common in most of Russia (Sinev 2019). First record in North Yenisei Region.

EREBIDAE

******Polypogon tentacularia* **(Linnaeus, 1758)**

Material examined. 2♂, E02; 1♂, E16.

Remark. The species is widespread in Russia from the European part to Far East (Sinev 2019). First record in North Yenisei Region.

******Phytometra viridaria* **(Clerck, 1759)**

Material examined. 1 spm., E04.

Remark. A Transpalaearctic species, found everywhere from the European part to Lake Baikal, but not common in Eastern Siberia and the Far East (Sinev 2019).

***Euclidia glyphica* (Linnaeus, 1758)**

Material examined. 1 spm., E10–11; 2 spm., E13-15; 2 spm., E16; 2 spm., E03.

Remark. It is one of the most common species of the family, widespread almost throughout Russia (Sinev 2019).

******Callistege mi* **(Clerck, 1759)**

Material examined. 1♂, E02.

Remark. Like the previous species, it is also a common and widespread species in Russia (Sinev 2019).

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