

# Notodontidae (Lepidoptera) of Kemerovo Province (Southern Siberia, Russia)

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An overview of Notodontidae species composition of Kemerovo Province is given in the article. At present time, 28 species of 13 Notodontidae genera are registered. Two species (*Cerura przewalskii* (Alphéraky, 1882) and *Notodonta dembowskii* Oberthür, 1879) are recorded from Kemerovo Province for the first time.

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## Keywords

Fauna, biodiversity, Siberia, Macroheterocera, *Cerura przewalskii*, *Notodonta dembowskii*

## Introduction

The fauna of Lepidoptera in Kemerovo Province is studied quite fragmentarily. Rhopalocera (Diurna) are studied in sufficient detail (Sushchev 2008; Yakovlev and Kostyunin 2015; Kostyunin and Klyueva 2020; Chumakov et al. 2024). At the same time, most families of Lepidoptera, with a few exceptions, in the Kemerovo Province are still poorly and fragmentarily studied.

Notodontidae are a small family of Macroheterocera, including 119 species in the contemporary fauna of Russia (Matov and Dubatolov 2019). There are very few data on this family in Kemerovo Province. The first notification of Notodontidae in Kuznetsk region date back to the beginning of XX century (Tshugunov 1916). Later publications containing data on the region's Notodontidae, appeared only in the end of XX century (Barannik 1981; Izerskiy 1999).

In the catalogue of Lepidoptera of Russia, Kemerovo Province belongs to Pre-Altai region (№ 23),

which also includes Novosibirsk Province and Altai Krai (without the Kulunda steppe), and it is difficult to estimate, if the species reported for Pre-Altai region, belong also to Kemerovo Province.

Thus, the aim of our study is bringing together all available data and creating a list of Notodontidae species of the regional fauna, that is, Kemerovo Province.

## Materials and methods

The material for this article was mainly collected by A.V. Korshunov (in this case, the collector's name is not given in the label data). The literature data were also used. To collect Lepidoptera, we used standard methods: catching with a light screen at night and hand-collecting during the day. The material is kept in the collection of A.V. Korshunov.

The family taxa system and order is given mainly according to the Catalogue of the Lepidoptera of Russia (Matov and Dubatolov 2019) with minor changes (Schintlmeister 2008, 2013).

## Result

### List of species

### Cerurinae Butler, 1881

#### *Cerura erminea* (Esper, 1783)

**References.** Izerskiy, 1999

**Material.** Prokopyevsk, on a birch, 25.05.2021, D. Melintchuk - 1 ex.

**Distribution.** Temperate zone of Europe, Urals, Western and Eastern Siberia, Far East to Kamchatka Peninsula, Kazakhstan, Mongolia, China (Northeast, East, Central, and Southwest territories), Korea, Japan.

#### *Cerura vinula* (Linnaeus, 1758)

Fig. 1

**Material.** Kemerovsky Distr., Osinovka village, at light, 11.08.2001 - 1 ex.

**Distribution.** Europe except of Iberian Peninsula, Turkey, European part of Russia, Western Siberia (Altay and Sayan Mts.).

#### *Cerura przewalskii* (Alphéraky, 1882)

Figs 2–3

**Material.** Kemerovsky Distr., Osinovka, at light, 15.07.2001 - 2 exs.; Kemerovsky Distr., Balakhonka, 16.05.2021, E.Shcheglova - 1 ex.

**Distribution.** European part of Russia (Syzran), Western Siberia (Omsk Reg., Altay, Kemerovo Reg.), Kazakhstan, Kyrgyzstan, Afghanistan, Tajikistan, Uzbekistan, Mongolia, Western China.

**Remarks.** Quite a variable species, poorly different from *C. vinula*, with which it occurs sympatrically (Schintlmeister, 2008). Coloring variable. Seasonal dimorphism, with first-generation adults typically darker.

General background of front wing from white to dirty grey. Pattern represented by black spots and wavy bands (can be reduced). Hind wing white in males, white or basally grey in females. Outer border with well-defined black dots. The strokes in spaces between veins postdiscally poorly expressed, not reaching outer edge of wing. Abdomen with alternating black, grey and white bands and series of dorsal black w-shaped strokes.

Indicated for Kemerovo Province for the first time.

***Furcula aeruginosa* ssp. *sibirica* (Daniel, 1965)**

Fig. 4

**Material.** Kemerovsky Distr., Osinovka village, at light, 15.07.2001 – 1 ex.; Chebulinsky Distr., env. of Shestakovo village, 55°52'N, 87°59'E, slopes, at light, 15–30.06.2019 – 1 ex.; Kemerovo, Leninsky Distr., Kuzbass botanical garden, 55°21'N, 86°11'E, at light, 18–19.06.2021, 1–2.07.2021 – 7 exs.

**Distribution.** This species is distributed from Volga River to western Mongolia and Northwest China. Subspecies *sibirica* is distributed in mountains of southern Siberia (Russia, Kazakhstan, Northwest China).

***Furcula bicuspis* (Borkhausen, 1790)**

Fig. 5

**References.** Izerskiy, 1999

**Material.** Novokuznetsky Distr., env. of Shorokhovo village, 53°57'N, 87°15'E, protected area «Natural ecosystem «Tishinskiy», at light, 22–24.06.2020 – 1 ex.

**Distribution.** Europe, Urals, Siberia, northern Kazakhstan, Mongolia, south of the Far East, Kamchatka, Korea, Northeast China, Japan (Hokkaido, Honshu, Kyushu).

***Furcula bifida* (Brahm, 1787)**

Fig. 6

**References.** Barannik, 1981; Izerskiy, 1999.

**Material.** Chebulinsky Distr., Shestakovo village, at light, 24–26.07.2020 – 1 ex.; Kemerovo, Leninsky Distr., Kuzbass botanical garden, 55°21'N, 86°11'E, at light, 16.05.2021, 18–19.06.2021 – 2 exs.

**Distribution.** North Africa, Europe, Turkey, Urals, Western and Eastern Siberia to Transbaikalia, northern Kazakhstan, Mongolia, south of the Far East, Northwest China.

***Furcula furcula* (Clerck, 1759)**

Fig. 7

**Material.** Novokuznetsky Distr., env. of Shorokhovo village, protected area «Natural ecosystem «Tishinskiy», 53°57'N, 87°15'E, at light, 22–24.06.2020 – 1 ex.

**Distribution.** North America, Europe, Caucasus, Transcaucasia, Asia Minor, Siberia, Mongolia, the Far East, China (North, Northeast, and Central Territories), Japan (Hokkaido, Honshu, Kyushu).

## Dicranurinae Duponchel, 1845

[ *Dicranura ulmi* ([Denis Schiffermüller], 1775)]

**References.** Izerskiy, 1999: Alaevo vill., 16-18.05.1989.

**Distribution.** Central and Southern Europe, south of the European part of Russia, Western Asia, Caucasus, Transcaucasia, southern and central parts of Kazakhstan, Turkmenistan, Iran.

**Remarks.** The species is reported only from the published data, and its indication for Kemerovo region is quite doubtful.

[ *Stauropus fagi* (Linnaeus, 1758)]

**References.** Izerskiy, 1999: Alaevo vill., 16–18.06.1987.

**Distribution.** Amphipaleartic species. Europe east to Urals, Caucasus, northern Iran, Western Siberia (Omsk Region), Eastern Siberia (Transbaikalia), south of the Russian Far East, Korea, Japan (Honshu, Shikoku, Kyushu).

**Remarks.** The species is reported for Kemerovo region only from the published data. In Western Siberia *Stauropus fagi* is known from Omsk region (Knyazev 2020; Knyazev, Ivonin & Saykina 2022). One of the present article's authors collected a specimen of this species in Altai Krai, near its border with Kemerovo region (Zarinsky Distr., Baudyonok Riv., 53°47'59.3"N, 86°13'09.3"E, 5–6.07.2021, A. Korshunov leg.).

## Notodontinae Stephens, 1829

### Notodonta dembowskii Oberthür, 1879

Fig. 8

**Material.** Chebulinsky Distr., env of Shestakovo village, slopes, 55°52'N, 87°59'E, at light, 13-15.07.2015 – 1 ex.

**Distribution.** Mountains of South Siberia, northern Mongolia, Transbaikalia, southern part of Yakutia, south of the Russian Far East, Kamchatka, Sakhalin, Kuril Islands (Iturup, Kunashir), Korea, North and Northeast China, Japan (Hokkaido, Honshu).

**Remarks.** The species is very similar to *Notodonta dromedarius*. Differs in more contrasting and brighter color. Additionally, *N. dembowskii* has a longitudinal black stroke on fore wing basally.

Reported for Kemerovo region for the first time.

*Notodonta dromedarius* ssp. *sibirica* Schintlmeister Fang, 2001

Fig. 9

**References.** Izerskiy, 1999.

**Material.** Chebulinsky Distr., env. of Shestakovo village, slopes, 55°52'N, 87°59'E, at light, 13-15.07.2015 – 1 ex.; Novokuznetsky Distr., env. of Ust-Naryk village, 54°20'N, 87°26'E, at light, 7-8.08.2020 – 1 ex.; Kemerovo, Leninsky Distr., Kuzbass botanical garden, 55°21'N, 86°11'E, at light, 17-18.06.2021 – 1 ex.

**Distribution.** Europe, western Caucasus, Siberia, Kazakhstan, Northwest China. This subspecies is distributed in Western Siberia.

***Notodonta torva* (Hübner, 1803)**

Fig. 10

**Material.** Chebulinsky Distr., env. of Shestakovo village, slopes, 55°52'N, 87°59'E, at light, 13-15.07.2015 – 1 ex.; Kemerovo, at light, 30.06.2015 – 1 ex.; Kemerovsky Distr., Podyakovo village, at light, 9-10.07.2015 – 1 ex.; Yashkinsky Distr., museum-reserve «Tomskaya Pisanitsa», 55°40'06.7"N, 85°36'26.8"E, meadow, at light, 28- 30.06.2022 – 2 exs.

**Distribution.** Species with Holarctic range. Species is distributed from North America (Canada, USA) and Central Europe to the Far East of Russia, Northwest China, Korea and Japan (Hokkaido, Honshu).

***Notodonta tritophus* ([Denis Schiffermüller], 1775)**

**References.** Izerskiy, 1999.

**Distribution.** Europe, Turkey, Caucasus, northwest Russia, Kyrgyzstan, Kazakhstan, Siberia east to Baikal.

***Notodonta ziczac* (Linnaeus, 1758)**

Fig. 11

**Material.** Krapivinsky Distr., 8 km SSW of Saltymakovo village, vicinity of the biological station of KemSU «Azhendarovo», at light, 54°45'N, 87°01'E, 20-24.07.2015– 1 ex.; Chebulinsky Distr., env. of Shestakovo village, slopes, 55°52'N, 87°59'E, 13- 15.07.2015 – 1 ex.; Kemerovo, Leninsky Distr., Kuzbass botanical garden, 55°21'N, 86°11'E, at light, 1-2.06.2021 – 1 ex.

**Distribution.** North Africa, Europe, Caucasus, Western Siberia, Eastern Siberia, Cisamurian region, Kazakhstan, Kyrgyzstan, Mongolia, Northwest China.

***Pheosia gnoma* (Fabricius, 1776)**

Fig. 12

**Material.** Krapivinsky distr., 8 km SSW of Saltymakovo village, vicinity of the biological station of KemSU «Azhendarovo», 54°45'N, 87°01'E, at light, 20-24.07.2015– 1 ex.; Belovsky Distr., 4 km S of Bekovo village, 54°19'N, 86°12'E, steppe slope, at light, 10-12.07.2020 – 2 exs.

**Distribution.** Euro-Siberian range.

***Pheosia tremula* (Clerck, 1759)**

Fig. 13

**References.** Izerskiy, 1999.

**Material.** Chebulinsky distr., env. of Shestakovo village, slopes, 55°52'N, 87°59'E, 21-30.06.2018, 9-15.06.2019 – 2 exs.; Krapivinsky distr., 8 km SSW of Saltymakovo village, vicinity of the biological station of KemSU «Azhendarovo», 54°45'N, 87°01'E, 3-15.07.2017 – 2 exs.; Yashkinsky distr., museum-reserve «Tomskaya Pisanitsa», 55°40'06.7"N, 85°36'26.8"E, meadow, at light,

28-30.06.2022 – 2 exs.

**Distribution.** Europe, Caucasus and Transcaucasia, Western Asia, Western Siberia, Kazakhstan (Zailiysky Alatau), Mongolia (Morozov et al. 2016).

***Leucodonta bicoloria***

**([Denis Schiffermüller], 1775)**

**References.** Izerskiy, 1999.

**Distribution.** Europe, southern Urals, Siberia, northern Kazakhstan, south of the Far East, Northeast and Northwest China, Korea, Japan (Hokkaido, Honshu, Shikoku).

## **Ptilodontinae Packard, 1864**

***Pterostoma palpina* (Clerck, 1759)**

Fig. 14

**Material.** Kemerovsky Distr., Osinovka village, at light, 15.07.2001 – 1 ex.; Krapivinsky Distr., 8 km SSW of Saltyrnakovo village, vicinity of the biological station of KemSU «Azhendarovo», 54°45'N, 87°01'E, lake shore, at light, 20-24.07.2015 – 1 ex.; Kemerovo, Leninsky Distr., Kuzbass botanical garden, 55°21'N, 86°11'E, at light, 1-2.06.2021 – 2 exs.; Yashkinsky Distr., museum-reserve «Tomskaya Pisanitsa», 55°39'46.3"N, 85°37'29.1"E, at light, 20-21.05.2022 – 4 exs.

**Distribution.** Europe, Caucasus and Transcaucasia, Western Asia, Western and Eastern Siberia, Cisamuria, Northwest China, Sakhalin.

***Ptilodon capucina* ssp. *kuwayamae* (Matsumura, 1919)**

Fig. 15

**References.** Tshugunov, 1916 (*Lophopteryx camelina* L.); Izerskiy, 1999.

**Material.** Kemerovsky Distr., Podyakovo village, at light, 9–10.07.2015 – 1 ex.; Chebulinsky Distr., env. of Shestakovo village, slopes, 55°52'N, 87°59'E, at light, 13–15.07.2015 – 1 ex.; Gornaya Shoriya, Tashtagol'sky Distr., 4 km N of Sheregesh village, Zelenaya Mt., at light, 1–3.07.2015 – 3 ex.

**Distribution.** The species is distributed from Europe to Japan. Subspecies *kuwayamae* is distributed in Siberia and Far East.

***Odontosia carmelita* (Esper, 1799)**

Fig. 16

**Material.** Kemerovsky Distr., Osinovka village, 55°24'N, 86°17'E, at light, 2.06.2001– 1 ex.

**Distribution.** Central and northern Europe, Siberia east to Cisbaikalia.

***Odontosia sieversii* (Ménétriès, 1856)**

Fig. 17

**Material.** Kemerovsky Distr., Osinovka village, 55°24'N, 86°17'E, at light, 14.05.1997– 1 ex.; Kemerovo, at light, 3-4.05.2021 – 1 ex.; Yashkinsky Distr., museum-reserve «Tomskaya Pisanitsa», 55°39'N, 85°37'E, at light, 29-30.04.2022 – 9 exs.

**Distribution.** Europe, Urals, Western Siberia, mountains of South Siberia, south of the Russian Far East, Korea, Northeast China, Japan.

## **Phalerinae Butler, 1886**

### ***Phalera bucephala* (Linnaeus, 1758)**

Fig. 18

**References.** Barannik, 1981

**Material.** Chebulinsky Distr., env. of Shestakovo village, slopes, at light, 55°52'N, 87°59' E, 13-15.07.2015 – 1 ex.; Krapivinsky Distr., 8 km SSW of Saltymakovo village, vicinity of the biological station of KemSU «Azhendarovo», 54°45'N, 87°01'E, lake shore, at light, 20-24.07.2015 – 1 ex.; Belovsky Distr., 4 km S of Bekovo village, 54°19'N, 86°12'E, steppe slope, at light, 10-12.07.2020 – 1 ex.

**Distribution.** Northwest Africa, Europe, Western Asia, Caucasus, Transcaucasia, European part of Russia, Urals, Siberia, Kazakhstan, Mongolia, Far East to Sakhalin, Western and Northeast China.

## **Pygaerinae Duponchel, 1845**

### ***Gluphisia crenata* (Esper, 1785)**

Fig. 19

**References.** Izerskiy, 1999

**Material.** Kemerovo, at light, 30.06.2015 – 1 ex.; Kemerovsky Distr., Podyakovo village, at light, 9-10.07.2015 – 1 ex.; Yashkinsky Distr., museum-reserve «Tomskaya Pisanitsa», 55°39'46.3"N, 85°37'29.1"E, at light, 20-21.05.2022 – 1 ex.

**Distribution.** Europe, southern Ural, Siberia, south of the Russian Far East, Korea, Northeast China, Japan, North America.

### ***Pygaera timon* (Hübner, 1803)**

Figs 20-21

**References.** Tshugunov, 1916; Izerskiy, 1999.

**Material.** Kemerovsky Distr., Podyakovo village, at light, 9-10.07.2015 – 1 ex.; Chebulinsky Distr., env. of Shestakovo village, slopes, at light, 55°52'N, 87°59' E, 13- 15.07.2015 – 1 ex.; Kemerovo, Leninsky Distr., Kuzbass botanical garden, 55°21'N, 86°11'E, at light, 1-2.06.2021 – 2 exs.

**Distribution.** Northeast Europe, Poland, the Baltic states, European part of Russia, Urals, Siberia, south of the Russian Far East, northern Mongolia, Northeast China.

### ***Clostera albosigma* ssp. *curtuloides* Erschoff, 1870**



Fig. 22

**Material.** Chebulinsky Distr., env. of Shestakovo village, at light, 55°52'N, 87°59'E, 13-15.07.2015, 21-30.06.2018, 9-15.06.2019 – 8 exs.; Krapivinsky Distr., 8 km SSW of Saltymakovo village, vicinity of the biological station of KemSU «Azhendarovo», 54°45'N, 87°01'E, lake shore, at light, 20-24.07.2015 – 1 ex.; Kemerovo, Leninsky Distr., Kuzbass botanical garden, 55°21'N, 86°11'E, at light, 12-13.05.2021, 16.05.2021 – 6 exs.

**Distribution.** Urals, Siberia, Mongolia, south of the Russian Far East, Korea, Northeast and Central China, Japan, North America: Canada, USA (nominative subspecies).

***Clostera anachoreta* ([Denis Schiffermüller], 1775)**

**References.** Izerskiy, 1999; Barannik, 1981.

**Distribution.** Europe, Ural, Siberia, northern and eastern Kazakhstan, eastern Afghanistan, Himalayas, south of the Russian Far East to Sakhalin, Kuril Islands (Kunashir), Korea, China (Northeast, Central and Southeast territories), Japan.

***Clostera anastomosis* (Linnaeus, 1758)**

**References.** Tshugunov, 1916 (*Pygaera anastomosis*); Izerskiy, 1999.

**Distribution.** Transpalearctic species distributed from Western Europe to Japan.

***Clostera curtula* (Linnaeus, 1758)**

**References.** Izerskiy, 1999.

**Distribution.** Europe, West Asia, north-west of Russia, Caucasus, Transcaucasia, Urals, Siberia to Cisamuria, Kazakhstan, Northwest China.

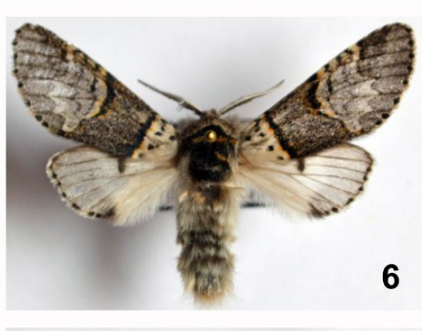
***Clostera pigra* (Hufnagel, 1766)**

**References.** Barannik, 1981; Izerskiy, 1999.

**Distribution.** North Africa (Morocco), Europe, Asia Minor, southern Urals, Siberia, south of the Russian Far East, Korea, Northeast China.

Thus, for the fauna of Kemerovo Province 28 species from 13 genera of six Notodontidae subfamilies are currently known. This study opens a series of faunal publications on Macrolepidoptera of Kemerovo Province.







**Figure 1. Figures 1–18.** Notodontidae, adult specimens: **1.** *Cerura vinula*, Kemerovo Distr., Osinovka village, at light, 11.08.2001; **2.** *C. przewalskii*, male, Kemerovsky Distr., Osinovka village, at light, 15.07.2001; **3.** *C. przewalskii*, female, same locality and data; **4.** *Furcula aeruginosa* ssp. *sibirica*, Chebulinsky Distr., env. of Shestakovo village, 55°52'N, 87°59'E, slopes, at light, 15–30.06.2019; **5.** *F. bicuspis*, Novokuznetsky Distr., env. of Shorokhovo village, 53°57'N, 87°15'E, protected area «Natural ecosystem «Tishinskiy», at light, 22–24.06.2020. Continued from the previous page. **6.** *F. bifida*, Chebulinsky Distr., Shestakovo village, at light, 24–26.07.2020; **7.** *F. furcula*, Novokuznetsky Distr., env. of Shorokhovo village, 53°57'N, 87°15'E, protected area «Natural ecosystem «Tishinskiy», at light, 22–24.06.2020; **8.** *Notodonta dembowskii*, Chebulinsky Distr., env. of Shestakovo village, slopes, 55°52'N, 87°59'E, at light, 13–15.07.2015; **9.** *N. dromedarius* ssp. *sibirica*, Kemerovo, Leninsky Distr., Kuzbass botanical garden, 55°21'N, 86°11'E, at light, 17–18.06.2021; **10.** *N. torva*, Yashkinsky Distr., museum-reserve «Tomskaya Pisanitsa», 55°40'06.7"N, 85°36'26.8"E, meadow, at light, 28–30.06.2022; **11.** *N. ziczac*, Chebulinsky Distr., env. of Shestakovo village, slopes, 55°52'N, 87°59'E, 13–15.07.2015; **12.** *Pheosia gnoma*, Belovsky Distr., 4 km S of Bekovo village, 54°19'N, 86°12'E, steppe slope, at light, 10–12.07.2020; **13.** *Ph. tremula*, Krapivinsky distr., 8 km SSW of Saltymakovo village, vicinity of the biological station of KemSU «Azhendarovo», 54°45'N, 87°01'E, 3–15.07.2017; **14.** *Pterostoma palpinum*, Yashkinsky Distr., museum-reserve «Tomskaya Pisanitsa», 55°39'46.3"N, 85°37'29.1"E, at light, 20–21.05.2022; **15.** *Ptilodon capucina* ssp. *kuwayamae*, Gornaya Shoriya, Tashtagol'sky Distr., 4 km N of Sheregesh village, Zelenaya Mt., at light, 1–3.07.2015; **16.** *Odontotia carmelita*, Kemerovsky Distr., Osinovka village, 55°24'N, 86°17'E, at light, 2.06.2001; **17.** *O. sieversii*, Yashkinsky Distr., museum-reserve «Tomskaya Pisanitsa», 55°39'N, 85°37'E, at light, 29–30.04.2022; **18.** *Phalera bucephala*, Chebulinsky Distr., env. of Shestakovo village, slopes, at light, 55°52'N, 87°59'E, 13–15.07.2015.



**Figure 2. Figures 19–22.** Notodontidae, adult specimens: **19.** *Gluphisia crenata*, Yashkinsky Distr., museum-reserve «Tomskaya Pisanitsa», 55°39'46.3"N, 85°37'29.1"E, at light, 20–21.05.2022; **20.** *Pygaera timon*, male, Kemerovo, Leninsky Distr., Kuzbass botanical garden, 55°21'N, 86°11'E, at light, 1–2.06.2021; **21.** *P. timon*, female, same locality and data; **22.** *Clostera albosigma* ssp. *curtuloides*, Kemerovo, Leninsky Distr., Kuzbass botanical garden, 55°21'N, 86°11'E, at light, 16.05.2021.

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