

Noctuid moths (Lepidoptera: Erebidae, Nolidae, Noctuidae) of North-East Kazakhstan (Pavlodar Region)

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The paper contains data on the fauna of the Lepidoptera families Erebidae, Nolidae and Noctuidae of Pavlodar Region (North-East Kazakhstan). The check list includes 480 species (100 species of Erebidae, 8 species of Nolidae and 372 species of Noctuidae), 393 species are reported for the region for the first time. The map of collecting localities and pictures of the main landscapes of the region are presented.

Key words: Lepidoptera, Nolidae, Erebidae, Noctuidae, Kazakhstan, new records, fauna.

Introduction

Pavlodar Region is located in North-East Kazakhstan (Fig. 1) and borders on Russia (Omsk and Novosibirsk Regions to the north, and Altai territory to the east) and the following Kazakh regions: Akmola (to the west), East Kazakhstan (to the south-east), North Kazakhstan (to the north-west), and Karaganda (to the south). The territory of Pavlodar Region is located in the steppe natural zone, and has an area of 127 500 square kilometers. There are two geomorphological parts of Pavlodar Region: the larger, plain one includes southwestern part of the West Siberian Plain (altitudes approximately 100–200 m), and the smaller, south-western upland-mountain one (altitudes approximately 150–1000 m) includes north-eastern border of the Kazakhstan Uplands. The relief of the latter is dismembered and consists of numerous hills with rocky outcrops and three small mountain massifs: Bayanaul, Kyzyltau (its north-eastern part) and Akshiman. The highest point of Pavlodar Region, Mt. Aulie (Kyzyltau massif), is 1055 m in elevation. The main landscapes of the region are illustrated in figs. 20–30.

The fauna of noctuid moths (the families Erebidae, Nolidae and Noctuidae) of Kazakhstan is still poorly studied. Only the fauna of West Kazakhstan has been studied satisfactorily (Gorbunov, 2011; Shovkoon & Trofimova, 2016). On the faunas of other parts of the country, only fragmentary data are published (Bubnova, 1980, 1982; Aibasov & Zhdanko, 1982; Hacker & Peks, 1990; Lehmann et al., 1998; Benedek & Bálint, 2009, 2013; Korb, 2013; Knyazev, 2015; Knyazev & Zuban', 2016; Volynkin & Titov, 2016a, 2016b, 2016c; Volynkin et al., 2016). In contrast to the West Kazakhstan, the fauna of noctuid moths of North-East Kazakhstan was almost not studied. Only some reports were contained in the different old (Suvortsev, 1894; Kozhantschikov, 1929; Pospelov, 1960; Shek, 1975; Aibasov & Zhdanko, 1982) and some recent publications (Titov & Volynkin, 2013, 2016; Ivonin et al., 2013; Volynkin & Titov, 2014; Titov et al., 2016; Titov et al., 2017). Only the fauna of footman-moths (Lithosiini) was recently revised by Dubatolov & Titov (2015). Until now, totally 87 species were known from the region including 19 species mentioned in our previous publications.

Since 2003, we conducted an intensive faunistic study of the Noctuoidea fauna of the North-East Kazakhstan. At the moment, we found in North-East Kazakhstan 480 species of noctuid moths (100 species of Erebidae, 8 – Nolidae and 372 – Noctuidae), 393 of which were not known from Pavlodar Region previously. The check-list of noctuid moths of Pavlodar Region is presented below.

Material and methods

The field work was conducted from April to September every year. The night collecting was made by using mercury and UV light and bait consisting of red wine and sugar. Some specimens were also collected on colonies of aphids. Material collected is deposited in the collections of Sergey Titov (CST, Pavlodar, Kazakhstan), Anton Volynkin (CAV, Barnaul, Russia), Matjaž Černila (MCK, Kamnik,

Slovenia) and Siberian Zoological Museum of the Institute of Systematics and Ecology of Animals, Siberian Branch of RAS (SZMN, Novosibirsk, Russia). Some additional specimens were found in the collections of Zoological Institute of the Russian Academy of Sciences (ZISP, St. Petersburg, Russia) and Kazakh scientific research institute of plant protection and quarantine (KSRIPPQ, Almaty, Kazakhstan).

Results

In the check-list presented below, we generally accept the classification of Noctuoidea proposed by Lafontaine & Schmidt (2010), with some changes published later (Lafontaine & Schmidt, 2011, 2013; Rota et al., 2015; Kononenko, 2016).

The classification of the subfamily Lymantriinae is still not well-established, and here we accept the tribal classification by Holloway (1999) and Lafontaine & Schmidt (2010, 2013). Taxa treated as subgenera of *Orgyia* Ochsenheimer, 1810 by Speidel & Witt (2011) we treat here as distinct genera due significant differences in their male genitalia structures. The subgeneric structure of *Lymantria* Hübner, [1819] and *Gynaephora* Hübner, [1819] are accepted here after Speidel & Witt (2011).

Witt et al. (2011) synonymized the arctiine genera *Eucharia* Hübner, [1819] and *Epicallia* Hübner, [1819] with *Arctia* Schrank, 1802 and downgraded them to the subgeneric level, but here we follow Dubatolov (2010) and Lafontaine & Schmidt (2013) and treat *Eucharia* and *Epicallia* as distinct genera. The generic classification of the subtribe Lithosiina (Erebidae: Arctiinae) is accepted here according to Dubatolov & Zolotuhin (2011).

Goater et al. (2003) and Yela et al. (2011) treated *Callistege* Hübner, [1823] and *Gonospileia* Hübner, [1823] as subgenera of *Euclidia* Ochsenheimer, 1816, but after Kononenko (2010) we treat them as distinct genera.

The tribal classification of the subfamily Chloephorinae (Nolidae) is accepted after Zahiri et al. (2012).

In the check list, for each species we present data on its flight period in NE Kazakhstan (abbreviated as 'FP', the months are given in Roman numerals), the list of abbreviated known localities, and references, if the species was previously reported for Pavlodar Region in literature. All species without references are reported here for the region for the first time.

The collecting localities (Fig. 1):

Zhelezinka district – Z

- Z0 vic. of Antonovka vill., 53°52'21.41"N 75°48'48.86"E, birch groves;
- Z1 vic. of Mikhailovka vill., 53°50.029'N 76°30.136'E, birch groves, meadows, steppe;
- Z2 vic. of Krasnovka vill., 53°43'44.54"N 76°56'34.36"E, birch groves, steppe (Fig. 20);
- Z3 vic. of Zhelezinka vill., 53°31'39.40"N 75°18'29.58"E, Irtysh river valley, wet meadows, poplar-willow forest near steppe;
- Z4 vic. of Moiseevka vill., 53°26.902' N 75°28.131'E, Irtysh river valley, wet meadows, poplar-willow forest near steppe;
- Z5 vic. of Slavyanovka vill., 53°53.747'N 76°22.59'E, birch and pine groves near steppe;
- Z6 vic. of Novokuzminka vill., 54°11'11.38"N 76°24'0.11"E, birch groves near a lake;
- Z7 Kyzyl-tuz lake, 53°45'38.24"N 76°47'29.04"E, saline steppe;
- Z8 vic. of Pyateryzhsk vill., 53°23'29.86"N 75°30'13.04"E, Irtysh river valley, wet meadows, poplar-willow forest near steppe;

Irtysh district – I

- I6 vic. of Koskol vill., 53°09'21"N 73°58'44"E, steppe;
- I7 vic. of Kaban vill., 53°30'23.63"N 74°32'8.24"E, steppe;
- I8 vic. of Golubovka vill., 53°7'56.74"N 74°12'11.91"E, steppe;
- I9 Seletyteniz lake, 53°17'27.03"N 73°28'55.75"E, dry steppe;

Aktogay district – AK

- AK1 vic. of Aktogay vill., 53°0'21.69"N 75°58'46.68"E, steppe;
- AK2 vic. of Razumovka vill., 52°45'44.80"N 75°27'38.06"E, steppe;

Kachiry district – K

- K6 vic. of Zhaksairat vill., 53°10'10.73"N 75°48'5.67"E, steppe;
- K7 vic. of Berezovka vill., 53°26'20.69"N 76°50'45.35"E, birch groves and steppe;
- K8 vic. of Trofimovka vill., 53°30'29.38"N 76°56'13.17"E, steppe;
- K9 vic. of Zhanabet vill., 53°16'32.66"N 75°37'9.68"E, steppe;
- K10 vic. of Terenkol vill., 53°3'59.30"N 76°6'7.85"E, Irtysh river valley, poplar-willow forest;
- K11 vic. of Baykonys vill., 52°57'1.88"N 76°25'34.54"E; Irtysh River floodplain meadows;
- K12 vic. of Kyzyltan vill., 52°54'50.10"N 76°30'43.60"E, steppe;

Pavlodar district – P

- P11 Pavlodar city, steppe and Irtysh river valley (Fig. 30);
- P12 vic. of Pavlodarskoe vill., 52°22.084'N 76°52.161'E, Irtysh river valley, wet meadows and poplar-willow forest near steppe;
- P13 vic. of Rozovka vill., 52°35'59.80"N 77°24'59.90"E, steppe;
- P14 vic. of Kenzhenkol vill., 52°7'59.97"N 76°58'59.97"E, Irtysh river valley, wet meadows, poplar-willow forest;
- P15 vic. of Efremovka vill., 52°32'8.89"N 77°21'43.09"E, steppe;
- P16 vic. of Sychevka vill., 52°36'30.2"N 76°44'23.2"E, Irtysh river valley, steppe, shrubs;
- P17 vic. of NE shore of Koryakovka lake, 52°26.369'N 77°09.183'E, pine grove, steppe;
- P19 vic. of Zhertumysk vill., 52°1'58.67"N 77°11'29.98"E, steppe and sand dunes;
- P20 vic. of Leninsky vill., 52°16'7.82"N 76°47'50.94"E, steppe;
- P21 vic. of Krasnoarmeyka vill., 52°21'39.51"N 77°15'50.38"E, steppe;
- P22 vic. of Baydala vill., 52°8'0.57"N 77°3'48.97"E, border of wet meadows and steppes in the valley of Irtysh river;
- P23 vic. of Zhetekshi vill., 52°18'31.94"N 77° 7'23.21"E, steppe;

Sharbakty district – S

- S16 52°32'30.05"N 78° 6'20.38"E, place of the former village Sergeevka, cereal fields;

- S17 vic. of Sofiyevka vill., 52°50'51.75"N 78°03'1.48"E, steppe;
S18 Maraldy lake, 52°20.485'N 77°48.653'E, saline steppe, marsh;
S20 vic. of Shaldai vill., 51°55'24.56"N 78°50'9.13"E, pine forest, steppes;
S21 vic. of Galkino vill., 52°12'0.07"N 78°24'60.00"E, pine forest, steppes;
S22 SW vic. of May Karagay vill., the Borskaya Dacha natural landmark, 51°35'59.36"N 78°46'59.52"E, dry steppe;
S23 vic. of Sharbakty vill., 52°28'11.39"N 78°9'56.72"E, dry steppe near a pine grove (Fig. 22);
S24 vic. of Georgievka vill., 52°43'55.93"N 78°12'5.94"E, steppe, forest plantations;

Lebyazhye district – L

- L24 Tuz lake, 51°17'58.24"N 78°37'57.06"E, saline lake shore near a pine grove and dunes;
L25 highway M-38 near the border of Pavlodar and East Kazakhstan Regions, 51°15'58.61"N 78°32'43.73"E, steppe near deciduous grove;
L26 vic. of Sharbakty vill., 51°24'8.19"N 78°21'11.01"E, dry meadows near a pine forest;
L27 Borly lake, 51°49'28.32"N 77°56'42.45"E, marshes and steppe;
L28 vic. of Akku vill. 51°28'13.88"N 77°46'41.77"E, Irtysh river valley, wet meadows, poplar-willow forest near steppe;

Bayanaul district – B

- B29 Bayanaul Mts., Birzhankol lake, 50°49'9.97"N 75°20'52.44"E, dry steppe near mixed forest with rocky outcrops;
B30 Bayanaul Mts., Kurkeli natural landmark, 50°44'34.00"N 75°38'16.80"E, mixed forest, shrubs, rocky outcrops;
B31 Bayanaul Mts., vic. of Shonai vill., 50°48'53.88"N 75°44'22.45"E, mixed forest, shrubs, rocky outcrops, meadows;
B32 Bayanaul Mts., vic. of Kempirtas Mt., 50°51'24.65"N 75°34'37.21"E, steppe, rocky outcrops near mixed forest (Fig. 25);
B33 Bayanaul Mts., vic. of Toraihyr lake, 50°51'54.01"N 75°40'21.29"E, dry steppe near rocks and mixed forest (Fig. 26);
B34 Bayanaul Mts., Kirgichi natural landmark, 50°50'26.05"N 75°44'15.03"E, meadows, mixed forest, rocky outcrops (Fig. 23);
B35 Kyzyltau Mts., vic. of Zhana Zhosaly vill., 50°23.357'N 76°10.903'E, steppe, rocks, shrubs, meadows (Fig. 24);
B36 Kyzyltau Mts., vic. of Dulga Tas Mt., 50°28.251'N 76°15.056'E, dry steppe, rocky outcrops;
B37 Bayanaul Mts., Zhasybai lake, 50°48'55.50"N 75°36'39.71"E, mountains, mixed forest;
B38 Bayanaul Mts., Zhumbak natural landmark, 050°47'53"N 075°33'45"E, border of mountain mixed forest and steppe shrubby slopes;
B39 Bayanaul Mts., Moldybulak natural landmark, 50°51.218'N 75°48.125'E, dry steppe, rocky outcrops near mixed forest;

Maysky district – M

- M37 vic. of Karasor lake, 51°6'59.82"N 77°34'0.23"E, steppe (Fig. 28);
M38 vic. of Zhamantuz lake, 50°32'56.70"N 77°52'43.68"E, steppe hills and saline lake shore;
M39 vic. of Koktobe vill., 51°35'7.42"N 77°25'56.65"E, Irtysh river valley, wet meadows, poplar-willow forest near steppe;
M40 Kalmykyrgan Mts., vic. of Old Akshiman vill., 50°43.632'N 76°41.981'E, steppe, rocky slopes, shrubs, meadows near deciduous groves;
M41 the former Semipalatinsk nuclear test site, 50°16'N 77°57'E, steppe hills with rocky outcrops, salines;

Aksu district – A

- A42 Zholpak river duct, 52°20'0.05"N 76°50'44.29"E, Irtysh river valley, wet meadows, poplar-willow forest, shores of floodplain lakes (Fig. 21);
A43 vic. of Rebrovka vill., 52°27'27.22"N 76°47'52.09"E, Irtysh river valley, wet meadows, poplar-willow forest, shores of floodplain lakes;
A44 Kishi Kalkaman lake, 52°4'13.83"N 76°31'30.63"E, steppe, clayey shore of a saline lake;
A45 vic. of the old road bridge over Irtysh river, 52°18'54.95"N 76°52'53.63"E, Irtysh river valley, poplar-willow forest, meadows;
A46 Kurkol village, 51°50'18.37"N 77°10'10.12"E, grass and sagebrush steppe;
A47 Kalkaman vill., 51°57'59.85"N 76°1'42.21"E;
A48 Western shore of the lake Kudaykol, 51°52'36.85"N 75°56'12.70"E, saline steppe (Fig. 29);

Ekibastuz district – E

- E46 Zhartas natural landmark, 51°38'7.49"N 74°39'54.86"E, steppe hills with rocky outcrops;
E47 vic. of Karazhar vill., 52°12'18.64"N 74°42'48.51"E, steppe and salines;
E48 vic. of Shiderty vill., 7th hydrounit of Kanysh Satpaev channel, 51°47'59.99"N 74°36'59.78"E, steppe hills, rocky outcrops and shrubs in the Shiderty river valley;
E49 vic. of Shiderty vill., 11th hydrounit of Kanysh Satpaev channel, 51°15'25.76"N 74°10'33.26"E, steppe and salines in the Shiderty river valley;
E50 Olenty river valley, 52°3'2.22"N 74°19'44.97"E, steppe, sandstones, meadows in the river valley;
E51 Ulken Ak-Zhar cretaceous slope, 51°54'25"N 074°47'24"E, steppe and dry river bed near the cretaceous slope (Fig. 27);
E52 Bozshakol lake, 51°49'55.47"N 74°18'4.22"E, steppe;
E53 west shore of Shiderty reservoir, 51°48'2.09"N 74°35'26.55"E, steppe;
E54 Ulken-Koyandy Mt., 51°40'59.09"N 73°58'3.38"E, steppe hills;

Uspenka district – U

- U49 vic. of Il'ichevka vill., 53°5'59.21"N 77°26'1.13"E, steppe;
U50 vic. of Belousovka vill., 52°55'45.50"N 77°18'49.15"E, steppe;
U51 vic. of Novopokrovka vill., 52°54'16.38"N 78° 3'45.04"E, steppe;
U52 vic. of Lozovoye vill., 53°17'42.31"N 77°45'29.92"E, steppe;
U53 Borly lake, 53°17'17.67"N 77°41'54.46"E, steppe;
U54 Big Azhbulat lake, 53°20'6.63"N 77°24'14.18"E, steppe;
U55 Klaksor lake, 53°20'1.18"N 77°37'24.60"E, forbs steppe;
U56 1.5 km. east of the Steklyannoe lake, 53°17'0.20"N 77°37'35.83"E, birch forests;
U57 ruins of uninhabited village Vesely Klin, 53°16'39.92"N 77°53'20.91"E, birch forests.

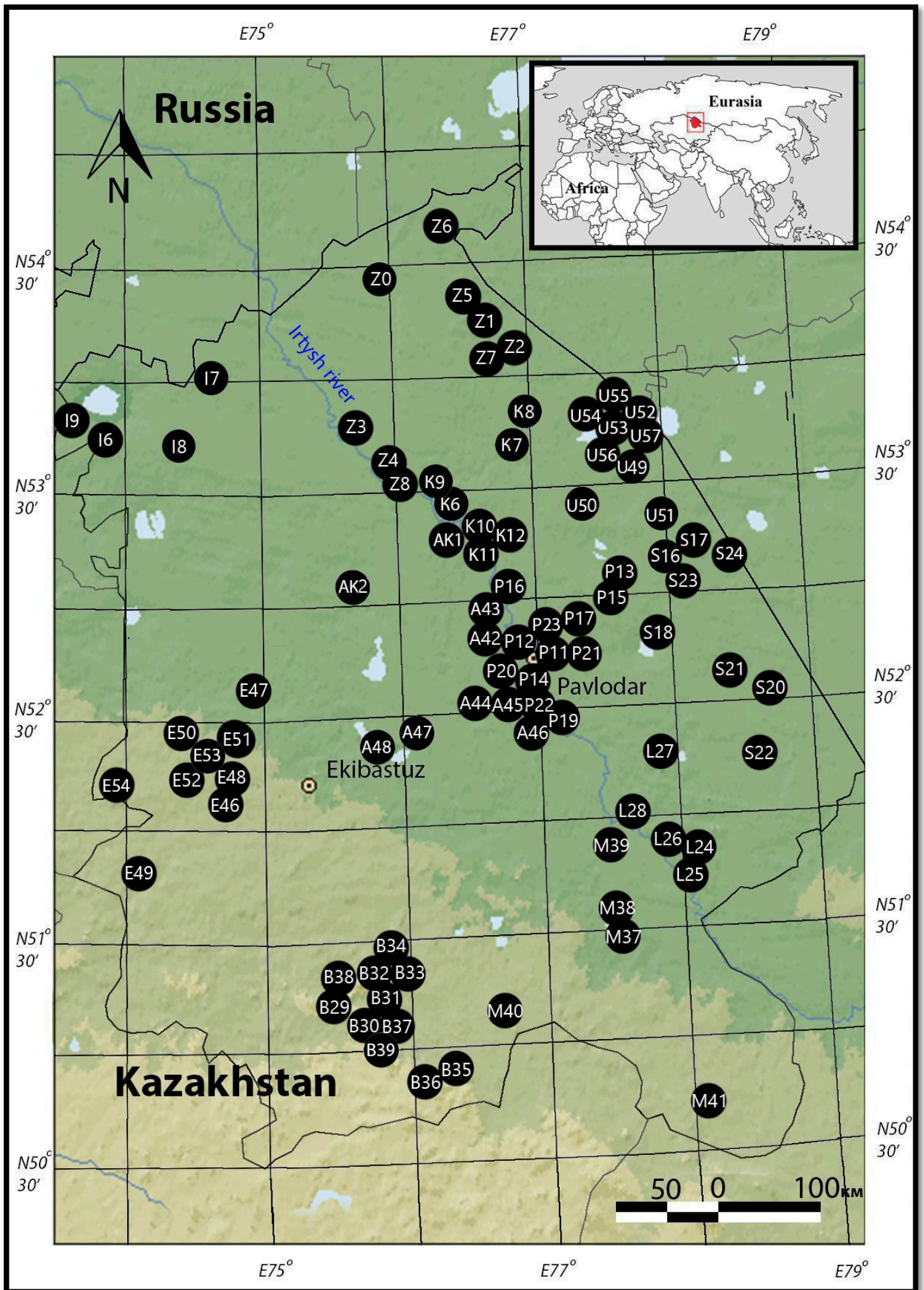


Figure 1. Map of Pavlodar Region with collecting localities (explanations are in the text).

Check list of Erebidae, Nolidae and Noctuidae of Pavlodar Region

Family Erebidae Leach, [1815]

Subfamily Lymantriinae Hampson, [1893]

Tribe Lymantriini Hampson, [1893]

Lymantria (Porthetria) dispar (Linnaeus, 1758) – FP: VII–IX; localities: Z1, Z2, Z3, Z4, Z6, Z8, K10, K11, P11, P12, P13, P14, P16, S18, S20, S22, S23, L24, L26, L27, L28, B29, B30, B31, B32, B33, B34, B35, B36, B37, B38, M40, A42, A43, E46, E47, E48, E50. Reference: Kozhantschikov (1950).

Tribe Orgyiini Wallengren, 1861

Gynaephora (Dicallomera) fascelina (Linnaeus, 1758) – FP: V–VII; localities Z1, Z2, Z3, Z4, Z6, Z8, K10, K11, P11, P12, P13, P14, P16, P17, S18, S20, S22, S23, L24, L26, L27, L28, B29, B30, B31, B32, B33, B34, B35, B36, B37, M40, A42, A43, A44, E46, E47, E48, E50.

Gynaephora (Dicallomera) pumila (Staudinger, 1881) (Fig. 5) – FP: VIII; locality: B31.

Clethrogyna dubia (Tauscher, 1806) – FP: V, VIII–IX; localities: Z8, I9, P11, P12, S18, B29, A44, A47, E46, E47, E50, E51. Reference: Ivonin et al. (2013).

Thylacigyna antiquoides (Hübner, [1822]) – FP: VIII; localities: S20, B31, U55.

Tribe Leucomini Grote, 1895

Leucoma salicis (Linnaeus, 1758) – FP: VI–VII; localities: Z1, Z2, Z5, Z6, I9, K10, P11, P12, P13, P14, S18, S20, S23, L24, L26, L27, B29, B31, B32, B34, B35, M37, M38, M39, A44, E46, E47, E48, E49, E50, E51.

Tribe Nygmiini Holloway, 1999

Euproctis kargalika (Moore, 1878) – FP: VI–VII; localities: Z1, Z2, Z3, Z4, Z6, Z8, K10, K11, P11, P12, P13, P14, P16, P17, P23, S18, P20, S20, S22, S23, L24, L26, L27, L28, B29, B30, B31, B32, B33, B34, B35, B36, B37, M40, A42, A43, A44, E46, E47, E48, E50.

Sphrageidus similis (Fuessly, 1775) – FP: V–VI; localities: P12, P20, B30, B33, B36.

Subfamily Arctiinae Leach, [1815]

Tribe Lithosiini Billberg, 1820

Subtribe Lithosiina Billberg, 1820

Cybosia mesomella (Linnaeus, 1758) – FP: VI; localities: P23, B29, B32, B37. Reference: Dubatolov & Titov (2015).

Manulea palliatella (Scopoli, 1763) – FP: VIII; localities: L24, S26, B31. Reference: Dubatolov & Titov (2015).

Manulea complana (Linnaeus, 1758) – FP: VI–IX; localities: P12, S20, B30, B32, B34, B31, B35. Reference: Dubatolov & Titov (2015).

Manulea pygmaeola (Doubleday, 1847) – FP: VII–VIII; localities: P11, P12, L24, M40. Reference: Dubatolov & Titov (2015).

Manulea lutarella (Linnaeus, 1758) – FP: VI–VIII; localities: P12, S23, B31, E46, E48. Reference: Dubatolov & Titov (2015).

Manulea lurideola ([Zincken], 1817) – FP: VI; localities: B29, B31. Reference: Dubatolov & Titov (2015).

Wittia sororcula (Hufnagel, 1766) – FP: V–VI; localities: Z2, B30. Reference: Dubatolov & Titov (2015).

Collita griseola (Hübner, [1803]) – FP: VIII; locality: S23. Reference: Dubatolov & Titov (2015).

Atolmis rubricollis (Linnaeus, 1758) – FP: VI; localities: E48, A46. Reference: Dubatolov & Titov (2015).

Pelosia muscerda (Hufnagel, 1766) – FP: VI–VII; locality: L27. Reference: Dubatolov & Titov (2015).

Pelosia obtusa (Herrich-Schäffer, 1847) – FP: VI; localities: Z4, Z6, L27. Reference: Dubatolov & Titov (2015).

Subtribe Endrosina Börner, 1932

Stigmatophora flava (Bremer & Grey, 1852) – FP: VI–VII; localities: B29, B31, B32, B33, B34, B37. Reference: Dubatolov & Titov (2015).

Stigmatophora micans (Bremer & Grey, 1852) – FP: VI; localities: B29, B32, B33, B37. Reference: Dubatolov & Titov (2015).

Setina irrorella (Linnaeus, 1758) – FP: VI; localities: B31, B32, B34. Reference: Dubatolov & Titov (2015).

Setina roscida ([Denis & Schiffermüller], 1775) – FP: VI–VII; localities: Z1, Z6. Reference: Dubatolov & Titov (2015).

Subtribe Nudariina Walker, [1865] 1864

Thumatha senex (Hübner, [1808]) – FP: VI; localities: B30, B33, B35, A46. Reference: Titov et al. (2017).

Miltochrista miniata (J.R. Forster, 1771) – FP: VII–VIII; locality: A48. Reference: Dubatolov & Titov (2015).

Tribe Arctiini Leach, [1815]

Subtribe Callimorphina Walker, 1865

Tyria jacobaeae (Linnaeus, 1758) – FP: V–VI; localities: Z2, Z4, P11, E47, E48, E50, U53, U54, U55, U56, U57.

Lacydes spectabilis (Tauscher, 1806) – FP: VIII–IX; localities: Z3, P11, P12, P13, S23, B31, A44, E48. Reference: Aybasov & Zhdanko (1982 as *Arctia*).

Spiris striata (Linnaeus, 1758) – FP: VIII; localities: S20, S24.

Coscinia cribraria (Linnaeus, 1758) – FP: VI; localities: P12, P13, P23, B32, L24, S23, B34.

Subtribe Arctiina Leach, [1815]

Hyphoraia aulica (Linnaeus, 1758) (Fig. 6) – FP: V; locality: B38.

Arctia caja (Linnaeus, 1758) – FP: VI–VIII; localities: Z1, Z2, Z3, Z4, Z5, Z6, Z7, Z8, K10, K11, P11, P12, P13, P14, P15, P16, P17, S18, S20, S21, S22, S23, L24, L25, L26, L27, L28, B29, B30, B31, B32, B33, B34, B35, B36, B37, M39, M40, A42, A43, A45, E46, E47, E48, E50. Reference: Dubatolov & Zolotarev (1990).

Arctia flavia (Fuessly, 1779) – FP: VI–VIII; localities: Z1, Z4, K10, P11, P12, P13, P23, B29, B31, A42, E46. Reference: Dubatolov & Zolotarev (1990).

Epicalia villica (Linnaeus, 1758) – FP: VI–VII; localities: Z1, P11, P12, P13, P23, B29, A46.

Eucharia festiva (Hufnagel, 1766) – FP: IV–VI; localities: Z1, Z2, Z3, Z4, Z5, Z7, Z8, P11, P12, P14, P17, P21, S18, S20, L24, L28, B30, B31, B32, B33, B35, B36, M37, M38, M39, M40, A44, E46, E48, E49, E52. Reference: Dubatolov & Zolotarev (1990).

Subtribe Micrarctiina Seitz, 1910

Chelis maculosa (Gerning, 1780) – FP: VI–VII; localities: E47, E48, E50, U53.

Chelis caecilia (Kindermann in Lederer, 1853) (Fig. 7) – FP: VI; locality: B31.

Chelis dahurica (Boisduval, 1832) (Fig. 8) – FP: VI; localities: Z1, Z6.

Diacrisia sannio (Linnaeus, 1758) – FP: V–VI; localities: Z1, Z2, Z6, Z8, P11, P12, P13, P16, P17, S18, S20, L26, B29, B30, B34, A42, A45, E46, E48, E50.

Rhyparia purpurata (Linnaeus, 1758) – FP: VI–VIII; localities: Z1, Z2, K10, K11, P11, P13, P12, P23, P16, S18, S20, S22, B29, B30, B31, B32, B33, B34, B35, M39, M40, A42, E46, E47, E48.

Subtribe Spilosomina Seitz, 1910

Watsonarctia deserta (Bartel, 1902) – FP: V–VI; localities: Z5, B30, B31, B32, B33, B35, B36, B37, M39.

Spilosoma lubricipeda (Linnaeus, 1758) – FP: VI–VII; localities: K10, P12, S20, B29.

Spilosoma urticae (Esper, 1789) – FP: VI; localities: P12, K10, B29, A42.

Spilarctia lutea (Hufnagel, 1766) – FP: VI; locality: Z6.

Phragmatobia fuliginosa (Linnaeus, 1758) – FP: IV, VII–IX; localities: Z1, Z2, Z3, Z5, Z6, Z7, Z8, K10, K11, P11, P12, P14, P17, S18, S20, S23, L24, L25, L27, L28, B29, B30, B31, B32, B33, B34, B35, B37, B38, M38, M39, A42, A43, A45, E46, E47, E48, E50, E51.

Eudiaphora turensis (Erschoff, 1874) – FP: V; locality: B29.

Tribe Syntomini Herrich-Schäffer, [1846]

Amata transcaspica Obraztsov, 1941 – FP: VI–VII; localities: Z1, Z4, P12, P19, P22, S18, S23, L27, B29, B33, A44, A48, E46, E48, U57.

Amata caspia (Staudinger, 1877) – FP: VI–VII; localities: Z4, Z7, P11, P12, P17, P22, P23, S18, S20, S22, L27, B29, B30, B31, B32, B34, B35, B37, M39, M40, A44, A46, A48, E46, E48, U55, U56.

Subfamily Herminiinae Leach, [1815]

Simplicia rectalis (Eversmann, 1842) – FP: VI–VIII; localities: Z1, P12, P13, B30, B31.

Paracolax tristalis (Fabricius, 1794) – FP: VI–VII; localities: Z2, K10, B34.

Herminia tenuialis (Rebel, 1896) – FP: VI; localities: Z1, B29.

Herminia tristriga W. Kozhantschikov, 1929 – FP: VII; locality: A46.

Polypogon tentacularia (Linnaeus, 1758) – FP: VII; localities: Z2, P12, B30.

Pechipogo strigilata (Linnaeus, 1758) – FP: VI; localities: P23, A46.

Zanclognatha lunalis (Scopoli, 1763) – FP: VII; localities: Z1, P12, B30.

Subfamily Hypeninae Herrich-Schäffer, [1851]

Zekelita ravularis (Staudinger, 1879) – FP: IV–VI, VII–IX; localities: Z1, Z2, Z7, P11, P12, P13, P19, P22, P23, S23, S18, S20, S23, L27, L24, L26, L27, L28, B31, B33, B35, M39, E46, E47, E48, E50, E51.

Hypena rostralis (Linnaeus, 1758) – FP: IV–VI; localities: B30, B32, M39, E48.

Hypena obesalis (Treitschke, 1829) – FP: VI; localities: Z1, P12, S20.

Hypena tristalis Lederer, 1853 – FP: VIII; localities: L24, B31.

Subfamily Rivulinae Grote, 1895

Rivula sericealis (Scopoli, 1763) – FP: VI–VII; localities: Z1, Z2, A46, B30.

Subfamily Scoliopteryginae Herrich-Schäffer, [1852]

Scoliopteryx libatrix (Linnaeus, 1758) – FP: IV–VII, IX–XI; localities: Z1, P11, P12, K11, S20, S23, L27, B30, B31, B32, B33, B35, B37, B38, A42, A45, E46, E47.

Subfamily Calpinae Boisduval, 1840

Tribe Calpini Boisduval, 1840

Calyptra thalictri (Borkhausen, 1790) – FP: VI–VIII; localities: P12, K10, L24, B31, B35, M39, A45, A46, E47, E50.

Subfamily Boletobiinae Guenée, [1858]

Tribe Boletobiini Guenée, [1858]

Parascotia fuliginaria (Linnaeus, 1761) – FP: VI–VIII; localities: Z2, P12, P23, L24, L27, A46.

Tribe Aventiini Tutt, 1896

Paragona cognata (Staudinger, 1892) – FP: VII; locality: B30.

Tribe Eublemmini Forbes, 1954

Odice arcuinna (Hübner, 1790) – FP: VIII; localities: L26, B31, B35, A46.

Eublemma minutata (Fabricius, 1794) – FP: VI–VIII; localities: Z4, P12, L26, E48.

Eublemma ostrina (Hübner, [1808]) – FP: VIII; localities: L24, L26.

Eublemma porphyria (Freyer, 1845) – FP: VI; localities: L24, B32, B33.

Eublemma panonica (Freyer, 1840) (Fig. 9) – FP: VII; locality: L24.

Eublemma amasina (Eversmann, 1842) – FP: VI; locality: Z5.

Eublemma purpurina ([Denis & Schiffermüller], 1775) – FP: VI–VIII; localities: P12, P19, S20, B30, B31, B33, B34, B35, A46, A47, M39, E46, U57.

Eublemma pallidula (Herrich-Schäffer, 1856) – FP: VI; localities: P22, L27.

Eublemma pusilla (Eversmann, 1834) – FP: VI–VII; localities: Z2, Z4, P12, S18, P22, S18, S20, L27, B31, B39, A46, A48, E48.

Eublemma polygramma (Duponchel, 1842) – FP: VI; locality: L24.

Tribe Phytometrini Hampson, 1913

Phytometra viridaria (Clerck, 1759) – FP: V–VI; VIII; localities: Z1, K10, P12, P13, P19, P22, P23, L26, B29, B31, B33, B35, M39, A47, A48, E46, U53.

Subfamily Toxocampinae Guenée, 1852

Lygephila lubrica (Freyer, 1842) – FP: VII–VIII; localities: Z1, Z7, P12, S23, L24, B33, B35, M40, E46, E50.

Lygephila ludicra (Hübner, 1790) – FP: VI–VIII; localities: P13, S23, 42, E46, E47, B32, B33, B35, M40, E50. References: Pospelov (1960, as *Eccrita*), Shek (1975, as *Eccrita*).

Lygephila pastinum (Treitschke, 1826) – FP: VII; localities: P11, P12, B30, A46. Reference: Pospelov (1962).

Lygephila viciae (Hübner, [1822]) – FP: VII; localities: P12, P23, B32, A46.

Lygephila cracca ([Denis & Schiffermüller], 1775) – FP: VIII; localities: L24, B31.

Lygephila asiatica Pekarsky, 2016 – FP: VII; locality: E50.

Autophila (Cheirophanes) chamaephanes Boursin, 1940 – FP: IV, IX; locality: B32. Reference: Titov et al. (2017).

Subfamily Erebininae Leach, [1815]

Tribe Acantholipini Fibiger & Lafontaine, 2005

Acantholipes regularis (Hübner, 1813) – FP: VI; locality: P22.

Tribe Catocalini Boisduval, [1828]

Catocala fulminea (Scopoli, 1763) – FP: VII; localities: P12, B30.

Catocala neonympha (Esper, 1805) – FP: VII–VIII; localities: Z1, P11, P12, P14, S20, S23, L24, B29, B30, B31, B32, B33, B34, B35, B36, B37, B38, B39, A42, A45, A46, E46, E47, E50, E54.

Catocala fraxini (Linnaeus, 1758) – FP: VIII–XI; localities: Z1, Z2, Z4, Z8, K10, P11, P12, L24, L28, S23, B31, B33, E46, E47, U52. References: Pospelov (1962), Shek (1975).

Catocala nupta (Linnaeus, 1767) – FP: VII–IX; localities: Z1, P11, P12, P16, S23, L24, B33.

Catocala adultera Ménétériès, 1856 – FP: VIII; localities: Z2, L24.

Catocala deducta Eversmann 1843 – FP: VIII–IX; localities: P12, L24.

Catocala puerpera (Giorna, 1791) – FP: VI–X; localities: Z1, Z4, P11, P12, P23, S23, L24, L27, B29, B31, B39, A46, E46, E47, E50. References: Shek (1975), Klyuchko & Matov (2006, as *Catocala orientalis*).

Catocala lupina Herrich-Schäffer, 1851 – FP: VIII; localities: L24, E46, E54.

Catocala pacta (Linnaeus, 1758) – FP: VII–VIII; localities: Z2, P11, P12, P14, P16, B31, B33, B35, M39, A42, E46, E48.

Tribe Melipotini Grote, 1895

Drasteria cailino (Lefebvre, 1827) – FP: V–VI, VIII; localities: P12, L24, B29, B30, B32, B33, B34, E46.

Drasteria rada (Boisduval, 1848) – FP: V–VI, VIII; localities: L24, B29, B30, B32, B33, B34, M37, E46.

Drasteria christophi (Alphéraky, 1895) (Fig. 11) – FP: V; locality: M41.

Drasteria obscurata (Staudinger, 1882) – FP: IV–VI; localities: B31, B32, B33, B34.

Tribe Euclidiini Guenée, 1852

Euclidia glyphica (Linnaeus, 1758) – FP: V–VII; localities: Z2, P11, P12, P16, B29, B30, B33, A46.

Callistege mi (Clerck, 1759) – FP: V–VI, locality: Z2.

Callistege fortalitium (Tauscher, 1809) – FP: V–VIII; localities: P11, Z2, Z4, B29, B36, A46, E46.

Gonospileia triquetra ([Denis & Schiffermüller], 1775) – FP: V–VI, VIII; localities: Z2, P11, P12, P19, S23, B29, B33, A46, A47, A48, E46.

Gonospileia munita (Hübner, [1818]) – FP: VI; localities: P23, S18, L27, B32, A46, E47.

Family Nolidae Bruand, 1846

Subfamily Nolinae Bruand, 1846

Nola aerugula (Hübner, 1793) – FP: VI–VII; localities: B31; P12, P23.

Nola crambiformis Rebel, 1902 – FP: VI–VII; localities: B30, B33, A46.

Nola confusalis (Herrich-Schäffer, 1847) – FP: V; locality: B33.

Subfamily Chloephorinae Stainton, 1859

Tribe Eariadini Hampson, 1912

Earias clorana (Linnaeus, 1761) – FP: V–VII; localities: Z2, Z4, P11, P12, S18, B37. References: Pospelov (1962, as *chlorana*); Shek (1975).

Tribe Chloephorini Stainton, 1859

Pseudoips prasinana (Linnaeus, 1758) – FP: VI–VII; locality: B31.

Tribe Sarrothripini Hampson, 1894

Nycteola eremostola Dufay, 1961 (Fig. 10) – FP: VI; locality: E48.

Nycteola degenerana (Hübner, 1799) – FP: IV–V, VIII–IX; localities: P12, P16, E46, B31.

Nycteola asiatica (Krulikovsky, 1904) – FP: IV; localities: P16, E46.

Family Noctuidae Latreille, 1809

Subfamily Plusiinae Boisduval, [1828]

Tribe Abrostolini Eichlin & Cunningham, 1978

Abrostola triplasia (Linnaeus, 1758) – FP: VIII; locality: B31.

Abrostola tripartita (Hufnagel, 1766) – FP: VII; localities: Z4, A46.

Tribe Argyrogrammatini Eichlin & Cunningham, 1978

Trichoplusia ni (Hübner, [1803]) – FP: VIII; locality: B30.

Tribe Plusiini Boisduval, [1828]

Subtribe Autoplusiina Kitching, 1987

Macdunnoughia confusa (Stephens, 1850) – FP: VI–X; localities: Z6, K10, P11, P12, S23, L24, L27, L28, B32, B35, A42, A45, E46, E48. Reference: Pospelov (1962, as *Autographa*).

Diachrysia chryson (Esper, 1789) – FP: VIII; locality: S23.

Diachrysia chrysitis (Linnaeus, 1758) – FP: VII; localities: P11, P12, B30, E46.

Diachrysia stenochrysis (Warren, 1913) – FP: VII; localities: Z2, Z3, Z8, K11, P12, P23, S20, S23, L24, B31, B35, A42, A46, E50.

Diachrysia zosimi (Hübner, [1822]) – FP: VI–VII; localities: P11, P12, A42.

Subtribe Euchalciina Chou & Lu, 1979

Euchalcia consona (Fabricius, 1787) – FP: VIII; localities: P16, P23, S23.

Polychrysia esmeralda (Oberthür, 1880) – FP: VII; localities: P12, P16, P23, B35.

Panchrysia deaurata (Esper, 1787) – FP: VI–VII; localities: B33, B35.

Lamprotes c-aureum (Knoch, 1781) – FP: VIII; locality: P12.

Plusidia cheiranthi (Tauscher, 1809) – FP: VI–VII; localities: Z2, Z4, P12, A42, B30, B31.

Subtribe Plusiina Boisduval, [1828]

Autographa gamma (Linnaeus, 1758) – FP: VI, IX–X; localities: Z1, P11, P12, P13, I9, K11, S17, S20, S23, L27, B30, B31, B32, B33, B35, B37, B38, A42, A45, E46, E47, E48, E51.

- Autographa buraetica* (Staudinger, 1892) – FP: VI; localities: S20, B29.
Autographa mandarina (Freyer, 1845) – FP: VIII; localities: S20, S23.
Autographa bractea ([Denis & Schiffermüller], 1775) – FP: VIII; locality: Z2.
Autographa excelsa (Kretschmar, 1862) – FP: VIII; locality: Z2.
Cornutiplusia circumflexa (Linnaeus, 1767) – FP: VIII; locality: B31.
Syngrapha interrogationis (Linnaeus, 1758) – FP: VII–VIII; localities: Z1, B31.
Plusia festucae (Linnaeus, 1758) – FP: VI–IX; localities: Z1, S23, E46, E47, E48.
Plusia putnami (Grote, 1873) – FP: VII; localities: Z1, E47.

Subfamily Eustrotiinae Grote, 1882

- Phyllophyla obliterated* (Rambur, 1833) – FP: VII; localities: Z4, P11, P12, P23.
Deltote (Protodeltote) pygarga (Hufnagel, 1766) – FP: VI; localities: K10, P12.
Deltote (Deltote) deceptoria (Scopoli, 1763) – FP: V–VI; localities: Z2, K10, P12, P19.
Deltote (Deltote) uncula (Clerck, 1759) – FP: VI–V; localities: P11, P12, B30. Reference: Pospelov (1962, as *Unca*).
Deltote (Deltote) bankiana (Fabricius, 1775) – FP: VI–VII; localities: Z4, P11, P12, L27, E47, E48. References: Pospelov (1962, as *Unca olivana*), Shek (1975, as *Eustrotia olivana*).

Subfamily Acontiinae Guenée, 1841

Tribe Acontiini Guenée, 1841

- Acontia (Acontia) lucida* (Hufnagel, 1766) – FP: VI–VIII; localities: P11, P13, S23, E46. Reference: Pospelov (1962, as *Tarache*).
Acontia (Emmelia) trabealis (Scopoli, 1763) – FP: V–IX; localities: Z2, K10, P11, P12, P13, P19, S17, S23, L27, L28, A42, E47. Reference: Pospelov (1960, as *Emmelia*).

Tribe Aediini Beck, 1960

- Aedia funesta* (Esper, 1786) – FP: VI–VIII; localities: Z1, K10, P12, P13, S23, E46.

Subfamily Pantheinae Smith, 1898

- Colocasia coryli* (Linnaeus, 1758) – FP: V–VI, VIII; localities: L24, P19, L27, B30.

Subfamily Acronictinae Heinemann, 1859

- Leiometopon simyrides* Staudinger, 1888 – FP: VI; locality: E47. Reference: Titov et al. (2017).
Acronicta (Johaera) alni (Linnaeus, 1767) – FP: V–VIII; localities: K10, S23, B30, B31, B33.
Acronicta (Triaena) cuspis (Hübner, [1813]) – FP: VI; locality: P11.
Acronicta (Triaena) tridens ([Denis & Schiffermüller], 1775) – FP: VII; locality: Z1.
Acronicta (Triaena) psi (Linnaeus, 1758) – FP: VIII; localities: Z1, P11, P12, K11, S20, S23, L27, B30, B31, B32, B33, B331, B35, B37, B38, A42, A45. Reference: Pospelov (1962, as *Apatele*).
Acronicta (Viminia) auricoma ([Denis & Schiffermüller], 1775) – FP: IV–V, VII–VIII; localities: B30, B31, B33.
Acronicta (Viminia) rumicis (Linnaeus, 1758) – FP: V–VI–VIII; localities: Z3, AK3, P12, P19, B30, B33. Reference: Shek (1975).
Acronicta (Viminia) cinerea (Hufnagel, 1766) – FP: IV–VIII; localities: P12, B30, B31, B35, B36.
Acronicta (Simyra) nervosa ([Denis & Schiffermüller], 1775) – FP: IV–V, VII–VIII; localities: S18, B31, B35, E46, E47, E48, E50.
Acronicta (Simyra) albovenosa (Goeze, 1781) – FP: V, VII–VIII; localities: S23, M39, E49, E50.
Acronicta (Simyra) dentinosa Freyer, 1838 – FP: IV–V; localities: P13, P14, A44, E49.
Acronicta (Subacronicta) megacephala ([Denis & Schiffermüller], 1775) – FP: V–VIII; localities: Z1, Z2, Z3, Z4, Z5, P11, P12, P13, S23, B30, B32, A45, A46. References: Pospelov (1962), Shek (1975); Titov et al. (2017).

Subfamily Metoponiinae Herrich-Schäffer, [1851]

- Mycteroplus puniceago* (Boisduval, 1840) – FP: VII; localities: Z4, Z6, P14, L28, A45.
Tyta luctuosa ([Denis & Schiffermüller], 1775) – FP: V–VI, VIII; localities: Z1, Z2, Z6, K10, P11, P12, P19, S17, S23, L24, L28, A42, A45, E46. Reference: Pospelov (1962, as *Acontia*).

Subfamily Cuculliinae Herrich-Schäffer, [1850]

- Cucullia tiefi* Tshetverikov, 1956 – FP: IV; locality: E53. Reference: Titov & Volynkin (2013).
Cucullia praecana Eversmann, 1843 – FP: VI–VII; localities: B30, E47.
Cucullia propinqua Eversmann, 1842 – FP: V–VII; localities: B35, M39.
Cucullia scopariae Dorfmeister, 1853 – FP: VII; localities: P12, S20, E46.
Cucullia fraudatrix Eversmann, 1837 – FP: VII; locality: P12.
Cucullia absinthii (Linnaeus, 1761) – FP: VIII; localities: P13, L28.
Cucullia argentea (Hufnagel, 1766) – FP: VIII; localities: Z1, Z2, Z4, P12, P19, S23, B29, B35, B39, A46, A48, E46, E51, E54.
Cucullia infuscata Tshetverikov, 1925 – FP: VII; localities: P12, B33, E50.

- Cucullia artemisiae* (Hufnagel, 1766) – FP: VI–VII; localities: Z4, K10, P11, P13, E46, E47.
Cucullia humilis Boursin, 1941 – FP: VI–VIII; localities: B31, B33.
Cucullia splendida (Stoll, 1782) – FP: VII–IX; localities: Z1, P11, P12, P13, P14, S23, L24, E46, E54. Reference: Shek (1975).
Cucullia gnaphalii (Hübner, 1813) – FP: VI–VIII; localities: Z2, B31, B35.
Cucullia magnifica (Freyer, 1839) – FP: VIII; locality: L24.
Cucullia argentina (Fabricius, 1787) – FP: V–VI; localities: Z2, Z4, U54.
Cucullia biradiata W. Kozhantshikov, 1925 – FP: VI; locality: Z2. Reference: Pospelov (1962).
Cucullia pustulata Eversmann, 1842 – FP: VIII–IX; localities: P15, S23.
Cucullia lucifuga ([Denis & Schiffermüller], 1775) – FP: VI; localities: Z2, B32.
Cucullia umbratica (Linnaeus, 1758) – FP: V–VIII; localities: Z2, Z4, P17, P19, B33, E46.
Cucullia biornata Fischer von Waldheim, 1840 – FP: V–VIII; localities: Z1, Z2, Z4, P11, S23, B29, B35, B39, E47, E50. Reference: Pospelov (1962).
Cucullia balsamitae (Boisduval, 1840) – FP: VIII; localities: S20, E46.
Cucullia inderiensis Herrich-Schäffer, 1856 – FP: IV–V; localities: Z1, Z2, P11, P12, P16, B30, E48, E51.
Cucullia duplicata Staudinger, 1882 – FP: IV–VII; localities: Z2, Z4, Z5, P12, P17, P19, S18, B30, B32, B33, M39, E46, E50.
Cucullia santonici (Hübner, [1813]) – FP: VI–VII; localities: B35, E46.
Cucullia lactea (Fabricius, 1787) (Fig. 12) – FP: V–VII; localities: M40, E46.
Cucullia mixta Freyer, 1841 – FP: IV–VI; localities: Z1, Z2, B31, E46, E47.
Cucullia xeranthemi (Boisduval, 1840) – FP: V–VIII; localities: Z2, P11, P12, B33, E46. References: Pospelov (1962), Shek (1975).
Cucullia virgaureae Boisduval, 1840 – FP: VI–VIII; localities: P12, E46, E47.
Cucullia amota Alphéraky, 1887 – FP: VI–VIII; localities: P12, E47, B31, B33.
Cucullia asteris ([Denis & Schiffermüller], 1775) – FP: VI–VIII; localities: Z1, K10, B35.
Cucullia tanacetii ([Denis & Schiffermüller], 1775) – FP: V–VIII; localities: P19, S20.

Subfamily Amphipyriinae Guenée, 1837

Tribe Amphipyriini Guenée, 1837

- Amphipyra pyramidea* (Linnaeus, 1758) (Fig. 13) – FP: VIII; locality: P12.
Amphipyra perflua (Fabricius, 1787) – FP: VIII; localities: Z1, P12, B30.
Amphipyra livida ([Denis & Schiffermüller], 1775) – FP: VII–VIII; localities: Z1, Z2, P12, E48.
Amphipyra tragopoginis (Clerck, 1759) – FP: VIII; localities: Z1, Z2, P11, P12, B31.
Amphipyra tetra (Fabricius, 1787) – FP: VIII; localities: Z6, P11, P12, L26.
Amphipyra sergei Staudinger, 1888 – FP: VII–VIII; localities: P11, P12, S20, L24.

Tribe Psaphidini Grote, 1895

Subtribe Psaphidina Grote, 1895

- Brachionycha nubeculosa* (Esper, 1785) – FP: IV; localities: Z1, Z2, Z4.

Subfamily Oncocnemidinae Forbes & Franclemont, 1954

- Calophasia lunula* (Hufnagel, 1766) – FP: V–VI, VIII; localities: Z2, Z4, P11, P12, P19, E46, P17, B30, B32, M40. Reference: Shek (1975).
Calophasia opalina (Esper, [1794]) – FP: V; locality: L25.
Sympistis strioligera (Lederer, 1853) – FP: VIII; localities: B29, B30, B31, B32, B35, B37, B39, L24.
Sympistis campicola (Lederer, 1853) – FP: VIII; localities: B29, B30, B31, B32, B35, B37, B39, E46.
Sympistis exacta (Christoph, 1887) (Fig. 15) – FP: VI–VIII; localities: B29, B31, M40.
Sympistis nigricula (Eversmann, 1856) – FP: VIII–IX; localities: S23, B31, E46, E54.
Sympistis senica (Eversmann, 1856) (Fig. 2) – FP: IX; locality: B31.
Lophoterges (Variterges) centralasiae (Staudinger, 1901) – FP: VI; localities: B29, B31, B33. Reference: Titov et al. (2017).
Epimecia ustula (Freyer, 1835) (Fig. 14) – FP: V; locality: B30.
Phidrimana amurensis (Staudinger, 1892) – FP: VII–IX; localities: Z2, Z4, K10, P11, P12, P13, P23, A48. Reference: Titov et al. (2017).

Subfamily Condicinae Poole, 1995

Tribe Condicini Poole, 1995

- Acosmetia caliginosa* (Hübner, [1813]) – FP: VI; locality: E46.

Tribe Leuconyctini Poole, 1995

- Eucarta virgo* (Treitschke, 1835) – FP: VI–VIII; localities: Z4, P11, P12. References: Pospelov (1962, as *Callogonia*), Shek (1975, as *Caledonia*).

Eucarta amethystina (Hübner, [1803]) – FP: VI; locality: P12.

Subfamily Heliothinae Boisduval, [1828]

Pyrrhia umbra (Hufnagel, 1766) – FP: VII; localities: P11, B35, A42, E46.

Pyrrhia exprimens (Walker, 1857) – FP: VII–VIII; localities: P11, S20.

Schinia cognata (Freyer, 1833) – FP: VII; locality: M41. The species is known from Pavlodar Region only by pictures taken in nature (Fig. 3).

Protoschinia scutosa ([Denis & Schiffermüller], 1775) – FP: V–VI, VIII; localities: Z1, Z2, Z4, Z7, K10, P11, P12, P13, P19, P22, S18, S23, B30, B31, B32, B33, B35, M39, A46, B47, E50, E51, U57. Reference: Pospelov (1962, as *Heliothis*).

Heliothis peltigera ([Denis & Schiffermüller], 1775) – FP: V; locality: E46.

Heliothis viriplaca (Hufnagel, 1766) – FP: VI–VIII; localities: P11, P19, S23, L24, E48. Reference: Pospelov (1962).

Heliothis adauca Butler, 1878 – FP: VI–VIII; localities: P12, P19, S23, L24, E46, E47, E48.

Helicoverpa armigera (Hübner, [1808]) – FP: VII, IX; localities: S20, E47.

Subfamily Bryophilinae Guenée, 1852

Cryphia (*Cryphia*) *fraudatricula* (Hübner, [1803]) – FP: VI; localities: B31, B32, B33, B35, B39.

Bryophila (*Bryoleuca*) *orthogramma* (Boursin, 1954) – FP: VI–VIII; localities: B30, B34, E46, E48.

Athaumasta expressa (Lederer, 1855) – FP: V–VI; localities: B29, B30, B31, B32, B33, B35.

Subfamily Noctuidae Latreille, 1809

Tribe Pseudeustrotiini Beck, 1996

Pseudeustrotia candidula ([Denis & Schiffermüller], 1775) – FP: IV–VII; localities: P11, P12, B29, B30, A46. References: Pospelov (1962, as *Unca*), Shek (1975, as *Eustrotia*).

Tribe Prodeniini Forbes, 1954

Spodoptera exigua (Hübner, 1808) – FP: IX; locality: E47.

Tribe Elaphriini Beck, 1996

Elaphria venustula (Hübner, 1790) – FP: VI–VII; localities: Z1, Z2, P12, B30.

Tribe Caradrinini Boisduval, 1840

Subtribe Caradrinina Boisduval, 1840

Caradrina (*Caradrina*) *morpheus* (Hufnagel, 1766) – FP: VI–VIII; localities: Z6, Z12, L24, L27, A42.

Caradrina (*Platyperigea*) *terrea* Freyer, 1840 – FP: VIII–IX; localities: P12, P13, S23, L24, B31.

Caradrina (*Platyperigea*) *montana* Bremer, 1861 – FP: VIII; localities: L26, B31, E46.

Caradrina (*Platyperigea*) *albina* (Eversmann, 1848) – FP: V–X; localities: Z1, Z2, Z6, AK2, P11, P12, P13, P19, S17, L24, S23, L27, B32, B33, E46, E47, E48, E51, E54. Reference: Pospelov (1962, as *albina* f. *congesta*).

Caradrina (*Platyperigea*) *petraea* Tengström, 1869 – FP: VI; localities: P11, P12.

Caradrina (*Eremodrina*) *monssacralis* (Varga & L. Ronkay, 1991) – FP: VIII; locality: E46. Reference: Volynkin & Titov (2016a).

Caradrina (*Paradrina*) *wulschlegeli* Püngeler, 1903 – FP: VI; localities: P12, B32, B33, B34.

Caradrina (*Paradrina*) *clavipalpis* (Scopoli, 1763) – FP: IV–V, VII; localities: P11, B30, B31.

Hoplodrina octogenaria (Goeze, 1781) – FP: VII–VIII; localities: P11, S23.

Hoplodrina blanda ([Denis & Schiffermüller], 1775) – FP: VII–VIII; localities: S23, L28, B31, B35.

Chilodes maritima (Tauscher, 1806) – FP: VI–VII; localities: K10, P11, P12, E48.

Chilodes distracta (Eversmann, 1848) – FP: V; localities: Z2, P12.

Charanyca (*Rusina*) *ferruginea* (Esper, [1787]) – FP: VI; locality: B34.

Subtribe Athetiina Fibiger & Lafontaine, 2005

Athetis (*Athetis*) *furvula* (Hübner, [1808]) – FP: VII–VIII; localities: P12, S23, L24, L26, L28, B35, B36, A45.

Athetis (*Hydrillula*) *pallustris* (Hübner, [1808]) – FP: V–VI; localities: Z2, B32, B33.

Athetis (*Proxenus*) *lepigone* (Möschler, 1860) – FP: V; locality: Z2.

Athetis (*Proxenus*) *correpta* (Püngeler, 1906) – FP: V–VI; localities: Z2, P12, P22.

Tribe Dypterygiini Forbes, 1954

Dypterygia scabriuscula (Linnaeus, 1758) – FP: V–VII; localities: Z6, P11, P12, P22, P23, S20, L26, L28, B30, B31, B34, B35, M39, A43, A46, E46, U56.

Trachea atriplicis (Linnaeus, 1758) – FP: VI; locality: P11.

Tribe Actinotiini Beck, 1996

Actinotia polyodon (Clerck, 1759) – FP: V–VIII; localities: P12, B30, B31.

Tribe Apameini Guenée, 1852

Subtribe Oxytripiina Gozmany, 1970

Oxytrippia orbiculosa (Esper, 1799) – FP: IX–X; localities: B31, B32, E47, E51, E54.

Subtribe Apameina Guenée, 1852

Sidemia spilogramma (Rambur, 1871) – FP: IX–X; localities: P12, S23, B31, E46, E51.

Calamia tridens (Hufnagel, 1766) – FP: VII–IX; localities: Z1, Z2, Z4, Z8, K10, P12, P13, P17, P23, S18, S20, S22, S23, L24, L27, B29, B30, B31, B33, B34, B35, B36, B37, M40, M39, A42, A46, A48, E46, E50, E54, U55.

Staurophora celsia (Linnaeus, 1758) – FP: VIII–IX; localities: L28, B31, B32.

Helotropha leucostigma (Hübner, [1808]) – FP: VII–VIII; localities: P14, E46.

Celaena haworthii (Curtis, 1829) – FP: IX; localities: P12, E47.

Hydraecia micacea (Esper, 1789) – FP: VII–IX; locality: P12.

Hydraecia ultima Holst, 1965 – FP: VIII; locality: P11.

Hydraecia mongoliensis Urbahn, 1967 – FP: VIII; localities: P12, B31, E46, E47, E54.

Hydraecia osseola (Staudinger, 1882) – FP: IX; localities: P12, E47.

Amphipoea fucosa (Freyer, 1830) – FP: VII–VIII; localities: Z2, K10, P12, L24, E46, B30, B31, B35.

Amphipoea ochreola (Staudinger, 1882) – FP: IX–X; localities: P12, B31, E51.

Amphipoea asiatica (Burrows, 1911) – FP: VII–VIII; localities: Z1, S20, B31.

Fabula zollikoferi (Freyer, 1836) – FP: VI, VIII–X; localities: K10, P12, P22, S23, E46, E47, E51, E54.

Rhizedra lutosa (Hübner, [1803]) – FP: IX–X; localities: P12, E47, E51, E54.

Nonagria typhae (Thunberg, 1784) – FP: VIII–X; localities: P12, S23, E46, E47, E51, E54.

Longalatedes elymi (Treitschke, 1825) – FP: VI–VII; localities: P12, L27, A46, B30. Reference: Shek (1975, as *Arenostola*).

Archanara dissoluta (Treitschke, 1825) – FP: VIII; locality: E46.

Denticucullus pygmina (Haworth, 1809) – FP: IX; localities: B38, E54.

Hypocoena stigmatica (Eversmann, 1855) – FP: VI; locality: K10.

Photedes fluxa (Hübner, 1809) – FP: VII–VIII; localities: P12, A46, B30, B31.

Photedes extrema (Hübner, [1809]) – FP: VI; localities: B30, B34.

Ogilia leuconephra (Hampson, 1908) – FP: VIII; locality: S23.

Protarchanara brevilinea (Fenn, 1864) – FP: VII; locality: P12.

Globia sparganii (Esper, 1790) – FP: VIII; locality: E46.

Globia algae (Esper, 1789) – FP: VIII; localities: P12, E46.

Pabulatrix pabulatricula (Brahm, 1791) – FP: VII; localities: P12, B35.

Apamea (Apamea) monoglypha (Hufnagel, 1766) – FP: VI–VIII; localities: Z1, Z4, Z6, K10, P11, P13, S23, L28, B29, B35, A45, E48.

Apamea (Apamea) ferrago (Eversmann, 1837) – FP: VII–VIII; localities: Z1, Z6, B31, M40, A42, E46.

Apamea (Apamea) furva ([Denis & Schiffermüller], 1775) – FP: VII–VIII; localities: Z6, P11, L24, B34, B35.

Apamea (Apamea) lateritia (Hufnagel, 1766) – FP: VI–VIII; localities: Z1, Z4, Z6, K10, P11, P13, S17, S23, L28, B29, B35, A45, E48. Reference: Pospelov (1962).

Apamea (Apamea) oblonga (Haworth, 1809) – FP: VII–VIII; localities: AK1, AK2, P14, S17, S23, A45, U52. Reference: Pospelov (1962).

Apamea (Apamea) sordens (Hufnagel, 1766) – FP: V–VI; localities: Z2, P12, P13.

Apamea (Apamea) anceps ([Denis & Schiffermüller], 1775) – FP: VI–VII; localities: Z0, Z6, I7, I8, AK1, AK2, K6, K7, K8, K9, K10, P11, S16, S17, B31, E48, U49, U50, U51, U52. Reference: Pospelov (1960).

Apamea (Apamea) leucodon (Eversmann, 1837) – FP: V–VI; localities: Z4, P11, P17, P19, L27, B32, E48, B33. References: Pospelov (1962), Shek (1975).

Apamea (Apamea) remissa (Hübner, [1809]) – FP: VI–VIII; localities: Z6, P12, P22, S23, E46.

Apamea (Apamea) crenata (Hufnagel, 1766) – FP: VI–VIII; localities: P12, B31.

Apamea (Apamea) unanimitis (Hübner, [1813]) – FP: VI; localities: P12, B34.

Apamea (Apamea) illyria Freyer, 1846 – FP: VI, locality: P12.

Oligia latruncula ([Denis & Schiffermüller], 1775) – FP: VIII; localities: P11, S23.

Mesoligia furuncula ([Denis & Schiffermüller], 1775) – FP: VII–VIII; localities: Z4, P11, P13, S23, L28, E46.

Litoligia literosa (Haworth, 1809) – FP: VIII; localities: S23, L28, B31, B35.

Mesapamea secalis (Linnaeus, 1758) – FP: VIII; locality: L24.

Mesapamea moderata (Eversmann, 1843) – FP: VII; locality: B30.

Resapamea hedeni (Graeser, [1889]) – FP: VI–IX; localities: Z4, Z6, P12, S23, L24, E48.

Xylomoia graminea (Graeser, [1889]) – FP: VI–VII; localities: Z4, P12, E48.

Tribe Episemini Guenée, 1852

Episema tersa ([Denis & Schiffermüller], 1775) – FP: IX; locality: B31. Reference: Titov et al. (2017).

Leucochlaena (Furcochlaena) fallax (Staudinger, 1870) – FP: VIII; localities: P12, B31. Reference: Titov et al. (2017).

Tribe Xylenini Guenée, 1837
Subtribe Xylenina Guenée, 1837

Hyppa rectilinea (Esper, 1788) – FP: VI; localities: K10, A46.

Parastichtis suspecta (Hübner, [1817]) – FP: VII–VIII; localities: P11, P12, B31.

Apterogenum ypsillon ([Denis & Schiffermüller], 1775) – FP: VII; locality: P12.

Xanthia togata (Esper, 1788) – FP: IX; localities: P12, S23, B31, B32.

Cirrhia icteritia (Hufnagel, 1766) – FP: VIII–IX; localities: P11, S23, L24, B31.

Cirrhia ocellaris (Borkhausen, 1792) – FP: VII–X; localities: P11, P12, L28, B31, B32, E51.

Cirrhia tunicata (Graeser, 1890) (Fig. 16) – FP: IX–X; localities: P12, S23, E51.

Mesogona acetosellae ([Denis & Schiffermüller], 1775) – FP: VIII–IX; localities: P12, B31, E46, E54.

Mesogona oxalina (Hübner, [1803]) – FP: IX–X; localities: S23, E51.

Sunira circellaris (Hufnagel, 1766) – FP: VIII–X; localities: P12, E51.

Agrochola (Agrochola) vulpecula (Lederer, 1853) – FP: IX; locality: P12.

Agrochola (Anchoscelis) helvola (Linnaeus, 1758) – FP: IX; localities: B31, B32.

Agrochola (Leptologia) lota (Clerck, 1759) – FP: X; locality: E51.

Conistra (Conistra) vaccinii (Linnaeus, 1761) – FP: IV–V, IX–X; localities: Z2, P12, P13, P16, B30, B31, B38, E48, E51.

Conistra (Dasycampa) rubiginea ([Denis & Schiffermüller], 1775) – FP: IV–V, IX; localities: B30, B31, B38.

Lithophane (Lithophane) socia (Hufnagel, 1766) – FP: IV–V, IX; localities: Z2, P16, B30, B31, B38.

Lithophane (Lithophane) furcifera (Hufnagel, 1766) – FP: IV–V, IX–X; localities: B30, B31, B38. Reference: Titov et al. (2016).

Xylena (Xylena) exsoleta (Linnaeus, 1758) – FP: IV, X; localities: Z2, B38, E46, E47, E51.

Xylena (Xylena) vetusta (Hübner, [1813]) – FP: IV–V, IX–X; localities: Z1, Z2, Z3, Z4, Z8, K10, P11, P12, P16, B38, E46, E48, S23, L28, B30.

Xylena (Lithomoia) solidaginis (Hübner, 1803) – FP: VIII; locality: Z2.

Orbona fragariae (Vieweg, 1790) – FP: IV, IX–X; localities: B31, B38.

Eupsilia transversa (Hufnagel, 1766) – FP: IV–V, X; localities: Z2, P11, P12, P16, B30, B31, B38.

Subtribe Cosmiina Guenée, 1852

Energia paleacea (Esper, 1788) – FP: VII–VIII; localities: P11, P12, S17, S20, L24, B31. Reference: Pospelov (1962).

Energia abluta (Hübner, 1808) – FP: VII–VIII; localities: P11, P12, L24.

Ipimorpha retusa ([Denis & Schiffermüller], 1775) – FP: VII–VIII; localities: Z4, P12.

Ipimorpha subtusa ([Denis & Schiffermüller], 1775) – VII–VIII; localities: Z4, P12.

Cosmia affinis (Linnaeus, 1767) – FP: VIII; locality: Z1.

Brachyxanthia zelotypa (Lederer, 1853) – FP: VIII; locality: Z1.

Subtribe Pseudohadenina L. Ronkay & Fibiger, 2007

Pseudohadena argyllostigma (Varga & L. Ronkay, 1991) – FP: IX; locality: E47. Reference: Titov et al. (2016).

Eremohadena immunda (Eversmann, 1842) – FP: VI–IX; localities: L28, B33.

Subtribe Antitypina Forbes & Franclemont, 1954

Antitype chi (Linnaeus, 1758) – FP: IX; locality: B32.

Ammoconia caecimacula ([Denis & Schiffermüller], 1775) – FP: IX; localities: B31, B32.

Dasypolia (Dasypolia) templi (Thunberg, 1792) – FP: IV, X; localities: E46, E51.

Dasypolia (Dasypolia) timoi Fibiger & Nupponen, 2006 – FP: IV, X; locality: E46. Reference: Titov et al. (2017).

Mniotype adusta (Esper, 1790) – FP: V; locality: B35.

Tribe Orthosiini Guenée, 1837

Panolis flammea ([Denis & Schiffermüller], 1775) – FP: V; localities: L24, B30, B38.

Orthosia (Orthosia) incerta (Hufnagel, 1766) – FP: IV–V; localities: Z1, Z2, Z4, K10, P11, P12, P13, P14, P16, L24, B30, B31, M37, B38, A44.

Orthosia (Orthosia) ronkayorum Volynkin & Titov, 2014 – FP: IV–V; localities: B31, E48.

Orthosia (Poporthosia) populeti (Fabricius, 1775) – FP: IV; localities: Z1, Z2, P12, B33, B38, E46.

Orthosia (Cororthosia) gracilis ([Denis & Schiffermüller], 1775) – FP: IV–V; localities: Z2, P13, P14.

Orthosia (Cororthosia) opima (Hübner, [1809]) – FP: IV; localities: B31, B38, E46.

Orthosia (Semiophora) gothica (Linnaeus, 1758) – FP: IV–V; localities: Z1, Z2, P12, P13, B30, B31, B38

Anorthoa munda ([Denis & Schiffermüller], 1775) – FP: IV; localities: Z1, Z2, P11, B31.

Perigrapha (Perigrapha) circumducta (Lederer, 1855) – FP: IV–V; localities: Z2, Z4, B30, B31, B38, M39, E46, E48.

Egira anatolica (Hering, 1933) – FP: V; locality: L24.

Tribe Tholerini Beck, 1996

Tholera cespitis ([Denis & Schiffermüller], 1775) – FP: VIII–IX; localities: P12, E54.

Tholera decimalis (Poda, 1761) – FP: VI–IX; localities: P12, B32, E54.

Tholera hilaris (Staudinger, 1901) – FP: VIII–IX; localities: P12, S23, E54.

Cerapteryx graminis (Linnaeus, 1758) – FP: VI; localities: A42, B29.

Tribe Hadenini Guenée, 1837

Anarta (Cardiostria) vaciva (Püngeler, 1906) – FP: VI; locality: E47. Reference: Titov et al. (2017).

Anarta (Calocestria) dianthii (Tauscher, 1809) – FP: V–VI, VIII; localities: S23, L24, B32, A44, E46, E47, E48.

Anarta (Calocestria) trifolii (Hufnagel, 1766) – FP: V–IX; localities: Z1, Z2, Z6, K10, P11, P13, P17, S17, S23, L24, L27, B32, B35, M40, A45, E46, E47, E48. Reference: Pospelov (1962, as *Discestra*).

Anarta (Calocestria) stigmata (Christoph, 1887) – FP: V–VI, VIII; localities: Z1, Z2, Z4, Z5, Z6, Z7, Z8, P17, P19, P22, L24, L28, E46, E47.

Polia bombycina (Hufnagel, 1766) – FP: VI–VIII; localities: Z1, Z6, P12, B29, B31, B35, A42, E50.

Polia hepatica (Clerck, 1759) – FP: VI; locality: P11. Reference: Shek (1975).

Polia nebulosa (Hufnagel, 1766) – FP: VI; localities: Z1, Z2, Z6, K10, P12, P13, P15, P17, P21, S20, B29, B33, A42, A46, U54.

Polia serratilinea (Treitschke, 1825) – FP: VII–VIII; localities: Z1, P11, B31, B35. Reference: Pospelov (1962).

Polia altaica (Lederer, 1853) – FP: VII–VIII; localities: S23, B31, B33, B35, M40, M41.

Pachetra sagittigera (Hufnagel, 1766) – FP: V–VI; localities: Z2, P12, P17.

Lacanobia (Lacanobia) w-latinum (Hufnagel, 1766) – FP: IV–VI; localities: Z1, L27, B33.

Lacanobia (Dianobia) thalassina (Hufnagel, 1766) – FP: VI–VII; localities: Z6, P11, B32, B33, L24. Reference: Pospelov (1962).

Lacanobia (Dianobia) suasa ([Denis & Schiffermüller], 1775) – FP: IV–IX; localities: Z2, Z6, P11, P17, S23, S17, L24, L26, L28, B31, B32, B35, A45, E46. Reference: Pospelov (1962).

Lacanobia (Dianobia) contigua ([Denis & Schiffermüller], 1775) – FP: VI–VII; localities: Z6, P12, B29.

Lacanobia (Diataraxia) oleracea (Linnaeus, 1758) – FP: VI–IX; localities: Z6, P12, P17, S23, L24, L28, A45, E48.

Lacanobia (Diataraxia) splendens (Hübner, [1803–1808]) – FP: VI; locality: Z2.

Lacanobia (Diataraxia) aliena (Hübner, [1808]) – FP: VI–VIII; localities: Z1, Z6, P11, P12, L24, L27, B32.

Lacanobia (Diataraxia) blenna (Hübner, [1824]) – FP: VI–VIII; localities: P11, P12, S23, E47. References: Pospelov (1962, as *Mamestra peregrina*), Shek (1975, as *Mamestra peregrina*).

Melanchra persicariae (Linnaeus, 1761) – FP: VII; localities: P12, B30.

Ceramica pisi (Linnaeus, 1758) – FP: VI–VII; localities: P12, B30, A42.

Hada plebeja (Linnaeus, 1761) – FP: VII; localities: B30, B36.

Hyssia cavernosa (Eversmann, 1842) – FP: VI–VII; localities: Z1, Z6, K10, A46.

Mamestra brassicae (Linnaeus, 1758) – FP: VI–VIII; localities: P11, P12, P13, S23, L28. Reference: Pospelov (1962).

Sideridis (Sideridis) lampra (Schawerda, 1913) – FP: VI; localities: Z2, Z5.

Sideridis (Sideridis) turbida (Esper, 1790) – FP: V–VIII; localities: Z2, Z6, P11, P12, P13, L27, B30, B32, B33, A42, E48. Reference: Pospelov (1962, as *albicolon*).

Sideridis (Sideridis) egena (Lederer, 1853) – FP: VI–VIII; localities: Z6, P12, S23, K10, L24, L28, B32.

Sideridis (Aneda) rivularis (Fabricius, 1775) – FP: VII–VIII; locality: B35.

Heliophobus unicolor (Alphéraky, 1889) – FP: VII; locality: P12.

Heliophobus mongoliensis Simonyi, 2015 – FP: VI–VII; localities: Z1, Z6, Z12, P11, P13, L24, L27, L28, B31, B33, E47, E50, E54.

Saragossa siccanorum (Staudinger, 1870) – FP: VI–VIII; localities: P14, P19, L24, L26, B32, B33.

Saragossa porosa (Eversmann, 1854) – FP: VI–VII; localities: Z4, B29, E46, E47.

Conisania (Conisania) leineri (Freyer, 1836) – FP: VI–VII; localities: P11, S18, L27, B29, M40, A46, E48. References: Pospelov (1962), Shek (1975).

Conisania (Luteohadena) luteago ([Denis & Schiffermüller], 1775) – FP: V–VII; localities: Z1, Z2, Z4, K10, P12, P13, P14, P17, P19, P21, L24, B31.

Conisania (Luteohadena) literata (Fischer von Waldheim, 1840) – FP: V–VI; localities: Z2, P11, P12.

Hecatera bicolorata (Hufnagel, 1766) – FP: V–VIII; localities: Z2, Z4, S23, E50.

Hecatera dysodea ([Denis & Schiffermüller], 1775) – FP: VI–VIII; localities: P11, P12, S23, L24, L28, B32.

Enterpia picturata (Alphéraky, 1882) – FP: VII–VIII; localities: E46, A46, E50.

Hadena (Hadena) capsicola ([Denis & Schiffermüller], 1775) – FP: VII–VIII; localities: Z6, B31, B35.

Hadena (Hadena) magnolii (Boisduval, 1829) – FP: V–VI; localities: Z2, P11, P12, E48, B30, B32. References: Pospelov (1962), Shek (1975).

Hadena (Hadena) compta ([Denis & Schiffermüller], 1775) – FP: VII–VIII; localities: B35, M40, E46.

Hadena (Hadena) variolata (Smith, 1888) – FP: VII; locality: M40.

- Hadena (Hadena) albimacula** (Borkhausen, 1792) – FP: VI–VII, IX; localities: S23, B32, B33, B35, E50. References: Suvortsev (1894).
- Hadena (Hadena) dsungarica** Hacker, 1996 – FP: VI; locality: B32. Reference: Titov et al. (2017).
- Hadena (Hadena) persimilis** Hacker, 1996 – FP: VII; locality: A46. Reference: Titov et al. (2017).
- Hadena (Hadena) filigrana** (Esper, [1788]) – FP: VI; localities: L26, L27, B32.
- Hadena (Anepia) perplexa** ([Denis & Schiffermüller], 1775) – FP: VI–VIII; localities: L24, B32, E46, B33, B35.
- Hadena (Anepia) christophi** (Möschler, 1862) – FP: V–VI; localities: Z2, P12, P19, M38.
- Hadena (Anepia) irregularis** (Hufnagel, 1766) – FP: VI–VII; localities: P12, E48.

Tribe Leucaniini Guenée, 1837

- Mythimna (Mythimna) turca** (Linnaeus, 1761) – FP: VIII; locality: E46.
- Mythimna (Mythimna) velutina** (Eversmann, 1846) – FP: VI–VIII; localities: Z1, Z6, P13, S17, S23, L24, L27, B35, M40, A42, E46, E47, E50. Reference: Pospelov (1962).
- Mythimna (Mythimna) pudorina** ([Denis & Schiffermüller], 1775) – FP: VI–VII; localities: P12, P22, E50.
- Mythimna (Mythimna) conigera** ([Denis & Schiffermüller], 1775) – FP: VII; localities: Z1, M40, E46, E50.
- Mythimna (Mythimna) pallens** (Linnaeus, 1758) – FP: V–IX; localities: Z6, Z12, P11, P13, S23, L24, L27, E46, E47, E48. Reference: Shek (1975).
- Mythimna (Mythimna) deserticola** (Bartel, 1902) – FP: VI–VII, IX; localities: K10, P11, P12, L27. References: Pospelov (1962); Shek (1975).
- Mythimna (Mythimna) impura** (Hübner, [1808]) – FP: VI–VII, IX; localities: P12, S23, A42, E47, E48.
- Mythimna (Mythimna) straminea** (Treitschke, 1825) – FP: VII; locality: Z6.
- Mythimna (Mythimna) vitellina** (Hübner, [1808]) – FP: VI; locality: Z2.
- Mythimna (Sablina) andereggi** (Boisduval, 1840) – FP: V–VI; localities: Z2, L24, B30, B32, B33, M39.
- Mythimna (Sablina) albiradiosa** (Eversmann, 1852) – FP: V–VII; localities: Z2, P12, P19, L27, B32, E46, E47.
- Mythimna (Sablina) opaca** (Staudinger, 1900) – FP: VI; locality: Z2.
- Mythimna (Hyphilare) ferrago** (Fabricius, 1787) – FP: VII–VIII; localities: Z1, Z6, P12, S23, L24, B35, E50.
- Mythimna (Hyphilare) l-album** (Linnaeus, 1767) – FP: VIII; locality: L24.
- Leucania (Leucania) comma** (Linnaeus, 1761) – FP: V–VII; localities: Z2, Z6, P12, P19, E46, B32, E48.
- Leucania (Leucania) obsoleta** (Hübner, 1803) – FP: VI–VII; localities: Z4, Z6, P12, S18, B32.
- Senta flammea** (Curtis, 1828) – FP: VI; localities: Z2, L27.

Tribe Eriopygini Fibiger & Lafontaine, 2005

- Lasionhada proxima** (Hübner, [1808]) – FP: VI–VIII; localities: B29, B31, B35, B36, M40.
- Eriopygodes imbecilla** (Fabricius, 1794) – FP: VI; localities: S17, L27, B34. References: Pospelov (1962), Shek (1975).
- Eriopygodes impar** (Staudinger, 1870) – FP: V; localities: B30, M38, E46.

Tribe Noctuini Latreille, 1809

Subtribe Agrotina Rambur, 1848

- Actebia (Actebia) praecox** (Linnaeus, 1758) – FP: VIII–IX; localities: P12, S23.
- Actebia (Protexarnis) squalida** (Guenée, 1852) – FP: VI–VIII; localities: AK1, AK2, P11, P19, S17, L24, L27, B37, E46. Reference: Pospelov (1962, as *Protexarnis*).
- Dichagyris (Albocosta) musiva** (Hübner, [1803]) – FP: VII–VIII; localities: B31, M40, B30, E46.
- Dichagyris (Albocosta) flammata** ([Denis & Schiffermüller], 1775) – FP: VI; locality: E47.
- Dichagyris (Dichagyris) vallesiaca** (Boisduval, 1837) – FP: VII–VIII; localities: B33, B36.
- Dichagyris (Dichagyris) lutescens** (Eversmann, 1844) – FP: VIII; locality: P12.
- Dichagyris (Dichagyris) truculenta** (Lederer, 1853) – FP: VIII; localities: B31, L26, E46.
- Dichagyris (Dichagyris) signifera** ([Denis & Schiffermüller], 1775) – FP: VII; localities: B30, E50.
- Dichagyris (Dichagyris) orientis** (Alphéraky, 1882) – FP: VI–VIII; localities: P12, P13, P22, S20, S23, B29, E54.
- Dichagyris (Dichagyris) latipennis** (Püngeler, 1909) (Fig. 17) – FP: VI–VIII; localities: P11, S23, B32.
- Euxoa (Chorizagrotis) adumbrata** (Eversmann, 1842) – FP: VIII; localities: AK2, S17, B31. References: Pospelov (1962, as *Chorizagrotis*), Shek (1975, as *inexpectata*).
- Euxoa (Euxoa) conspicua** (Hübner, 1827) – FP: VIII; locality: S23.
- Euxoa (Euxoa) temera** (Hübner, [1808]) – FP: VIII; locality: B31.
- Euxoa (Euxoa) ochrogaster** (Guenée, 1853) – FP: VII–IX; localities: Z1, AK2, P13, S17, L24, B31, E46, E50, U52. References: Pospelov (1962, as *islandica rossica*), Shek (1975, as *islandica*).
- Euxoa (Euxoa) phantoma** (I. Kozhantschikov, 1928) – FP: VI–VIII; localities: Z1, P12, P13, S17, B31. References: Pospelov (1962), Shek (1975).
- Euxoa (Euxoa) cursoria** (Hufnagel, 1766) – FP: VIII–IX; localities: P11, S17, S23, B31, E46. References: Pospelov (1962), Shek (1975).
- Euxoa (Euxoa) distinguenda** (Lederer, 1857) – FP: VII–IX; localities: P12, L24, E50.

- Euxoa (Euxoa) obelisca* ([Denis & Schiffermüller], 1775)** – FP: VIII; locality: B31. Reference: Shek (1975).
- Euxoa (Euxoa) segnilis* (Duponchel, 1836)** – FP: VII–VIII; localities: P11, L24, B31, E46.
- Euxoa (Euxoa) nigrofusca* (Esper, [1788])** – FP: VII–VIII; localities: P12, S23, L24, L26, B31, B35, E46, E50. Reference: Pospelov (1962, as *tritici*).
- Euxoa (Euxoa) eruta* (Hübner, [1817])** – FP: VIII; locality: E46.
- Euxoa (Euxoa) nigricans* (Linnaeus, 1761)** – FP: VII–IX; localities: AK2, P12, P13, S23, L24, B31, B35. Reference: Pospelov (1962).
- Euxoa (Euxoa) aquilina* ([Denis & Schiffermüller], 1775)** – FP: VII–VIII; localities: P11, S23, L24, B31, E46, E50.
- Euxoa (Euxoa) basigramma* (Staudinger, 1870)** – FP: VII–IX; localities: P13, S23, L24, L26, B31, E46. Reference: Shek (1975).
- Euxoa (Euxoa) fallax* (Eversmann, 1854)** – FP: VIII; locality: S23.
- Euxoa (Euxoa) deserta* (Staudinger, 1870)** – FP: VIII; localities: P13, S23. Reference: Shek (1975).
- Euxoa (Euxoa) recussa* (Hübner, [1817])** – FP: VIII; locality: B31. Reference: Shek (1975).
- Euxoa (Orosagrotis) tristis* (Staudinger, 1897)** – FP: VIII; locality: S23.
- Euxoa (Orosagrotis) deficiens* (Wagner, 1913)** – FP: VIII; localities: Z3, P11. References: Kozhantschikov (1929, 1937), Volynkin (2012). Remark: in Pavlodar Region, the species is known only by two old specimens collected by A. Yakobson (both are in coll. ZISP): the holotype of *Euxoa filipjevi* I. Kozhantschikov, 1929 (a junior synonym of *deficiens*) from Zhelezinka (Type locality: "Altai (Shelesinskaja, Irtysh)"), and a female with label "Irtysh river, Pavlodar, 19.VIII.[19]06, A. Yakobson". No new material is known.
- Agrotis characteristica* (Alphéraky, 1892)** (Figs. 4, 18) – FP: VIII–IX; localities: B31, E46, E54.
- Agrotis trifurca* (Eversmann, 1837)** – FP: VIII; localities: P13, S17, S23, E46. References: Pospelov (1962), Shek (1975).
- Agrotis cinerea* ([Denis & Schiffermüller], 1775)** – FP: IX; locality: B31.
- Agrotis exclamationis* (Linnaeus, 1758)** – FP: V–VIII; localities: Z1, Z2, Z6, K10, P11, P12, P13, P19, L28, A42, E48. Reference: Pospelov (1962).
- Agrotis segetum* ([Denis & Schiffermüller], 1775)** – FP: VI–VIII, X; localities: Z1, P11, P12, P13, L28, S23.
- Agrotis clavis* (Hufnagel, 1766)** – FP: VII–VIII; localities: E46, B35, B36.
- Agrotis vestigialis* (Hufnagel, 1766)** – FP: VIII–IX; localities: P12, P13, S17, S23, L24. References: Pospelov (1962), Shek (1975).
- Agrotis ripae* (Hübner, [1823])** – FP: VII–IX; localities: Z4, Z6, P11, S23, L24, L26, L28, B31. Reference: Pospelov (1962).
- Agrotis desertorum* Boisduval, 1840** – FP: VI–VIII; localities: P11, P12, L24. Reference: Shek (1975).
- Agrotis ipsilon* (Hufnagel, 1766)** – FP: VIII–X; localities: P12, L24, B31, E46, E51.
- Subtribe Noctuina Latreille, 1809
- Axylia putris* (Linnaeus, 1761)** – FP: VI–VII; localities: K10, P12, A42.
- Ochroleura plecta* (Linnaeus, 1761)** – FP: VI; locality: P23.
- Diarsia dahlii* (Hübner, [1813])** – FP: VII; locality: P11.
- Diarsia brunnea* ([Denis & Schiffermüller], 1775)** – FP: VIII; locality: B33.
- Diarsia mendica* (Fabricius, 1775)** – FP: VI–VII; localities: P11, P12, E48.
- Sineugraphe exusta* (Butler, 1878)** – FP: VIII; locality: E48.
- Cerastis rubricosa* ([Denis & Schiffermüller], 1775)** – FP: IV; localities: B31, B38.
- Cerastis leucographa* ([Denis & Schiffermüller], 1775)** – FP: V; localities: P14, M39.
- Paradiarsia punicea* (Hübner, [1803])** – FP: VI–VII; locality: P12.
- Netrocercora quadrangula* (Eversmann, 1844)** – FP: VI; localities: Z2, K10.
- Rhyacia caradrinoides* (Staudinger, 1897)** – FP: VI; locality: B33.
- Rhyacia simulans* (Hufnagel, 1766)** – FP: VII; localities: P11, S23. Reference: Shek (1975, as *Caradrina auguroides*).
- Rhyacia arenacea* (Hampson, 1907)** – FP: VIII; locality: B30.
- Chersotis transiens* (Staudinger, 1896)** – FP: VII–VIII; localities: B31, B33, B35, M40, E46.
- Chersotis elegans* (Eversmann, 1837)** – FP: VII–VIII; localities: B31, B35.
- Chersotis margaritacea* (de Villers, 1789)** (Fig. 19) – FP: VIII; localities: B31, B33.
- Noctua interposita* (Hübner, 1790)** – FP: VII–IX; localities: S23, B31, A45.
- Spaelotis ravidata* ([Denis & Schiffermüller], 1775)** – FP: VI, VIII–IX; localities: AK1, AK2, P11, P12, S17, L24, S23, L27, B32, E47, U52. Reference: Pospelov (1962).
- Spaelotis deplorata* (Staudinger, 1896)** – FP: VI–VIII; localities: B31, B34.
- Spaelotis senna* (Freyer, 1829)** – FP: VII–IX; locality: B31.
- Opigena polygona* ([Denis & Schiffermüller], 1775)** – FP: VIII; locality: B31.
- Eurois occulta* (Linnaeus, 1758)** – FP: VI–VIII; localities: Z1, Z2, P12, E48.
- Graphiphora augur* (Fabricius, 1775)** – FP: VII; locality: B35.
- Anaplectoides prasina* ([Denis & Schiffermüller], 1775)** – FP: VI–VIII; localities: P12, A45.
- Pseudohermonassa melancholica* (Lederer, 1853)** – FP: VII–VIII; localities: Z1, P11, L24, B31.
- Xestia (Xestia) baja* ([Denis & Schiffermüller], 1775)** – FP: VII–IX; localities: P11, P12, S23, L24, B35.

Xestia (Megasema) c-nigrum (Linnaeus, 1758) – FP: VI–IX; localities: Z1, Z2, Z6, K10, P11, P12, P13, P19, S23, L24, B32, A42, E48. Reference: Pospelov (1962, as *Amathes*).

Xestia (Megasema) ditrapezium ([Denis & Schiffermüller], 1775) – FP: VI–VII; localities: Z1, Z6, P11, P12, P13, A42, A45, E48.

Xestia (Megasema) triangulum (Hufnagel, 1766) – FP: VI–VIII; localities: Z1, Z4, Z6, P12, P13, B30, B37.

Xestia (Megasema) kollari (Lederer, 1853) – FP: VII–VIII; localities: B31, B35, B36, M40.

Xestia (Megasema) ashworthii (Doubleday, 1855) – FP: VII; locality: E50.

Eugraphe sigma ([Denis & Schiffermüller], 1775) – FP: VI–VIII; localities: Z4, K10, P12, L28, B33.

Coenophila subrosea (Stephens, 1829) – FP: VIII; locality: B31.

Eugnorisma (Eugnorisma) ignoratum Varga & L. Ronkay, 1994 – FP: VII–IX; localities: P12, B31, B32, B33, B35.

Eugnorisma (Eugnorisma) insignata (Lederer, 1853) – FP: VIII–IX; localities: E46, B31, B33, E46.

Eugnorisma (Eugnorisma) eminens (Lederer, 1855) – FP: VIII; locality: B32.

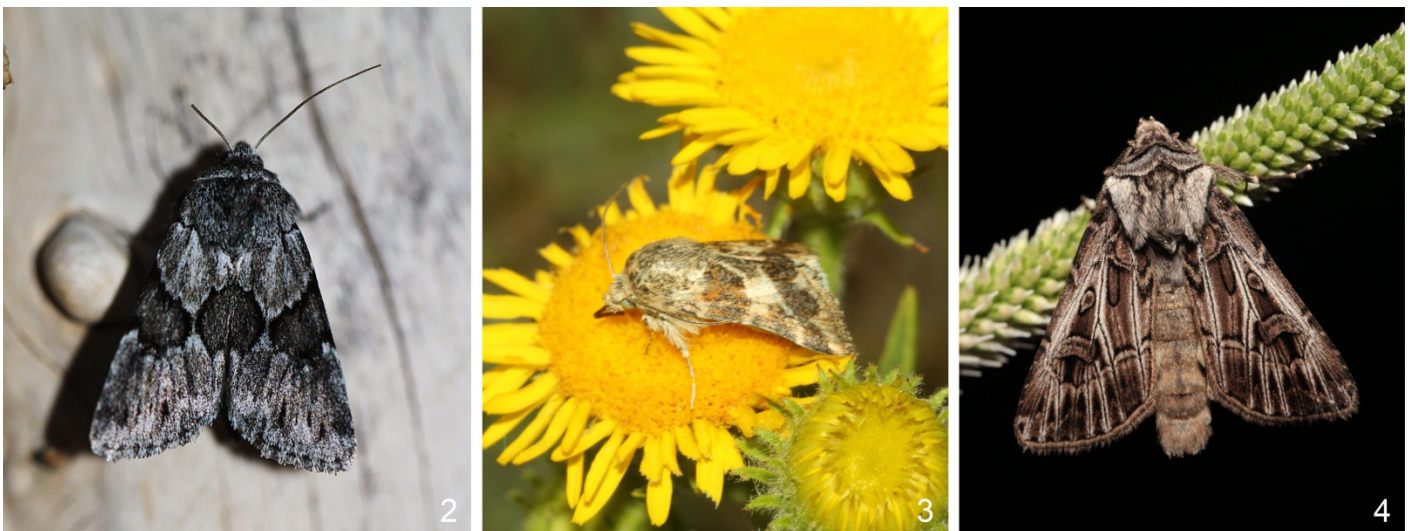
Miniphila miniago (Freyer, 1839) – FP: IX–X; localities: P12, S23.

Protolampra sobrina (Duponchel, 1843) – FP: VII–VIII; localities: B30, B31, E46.

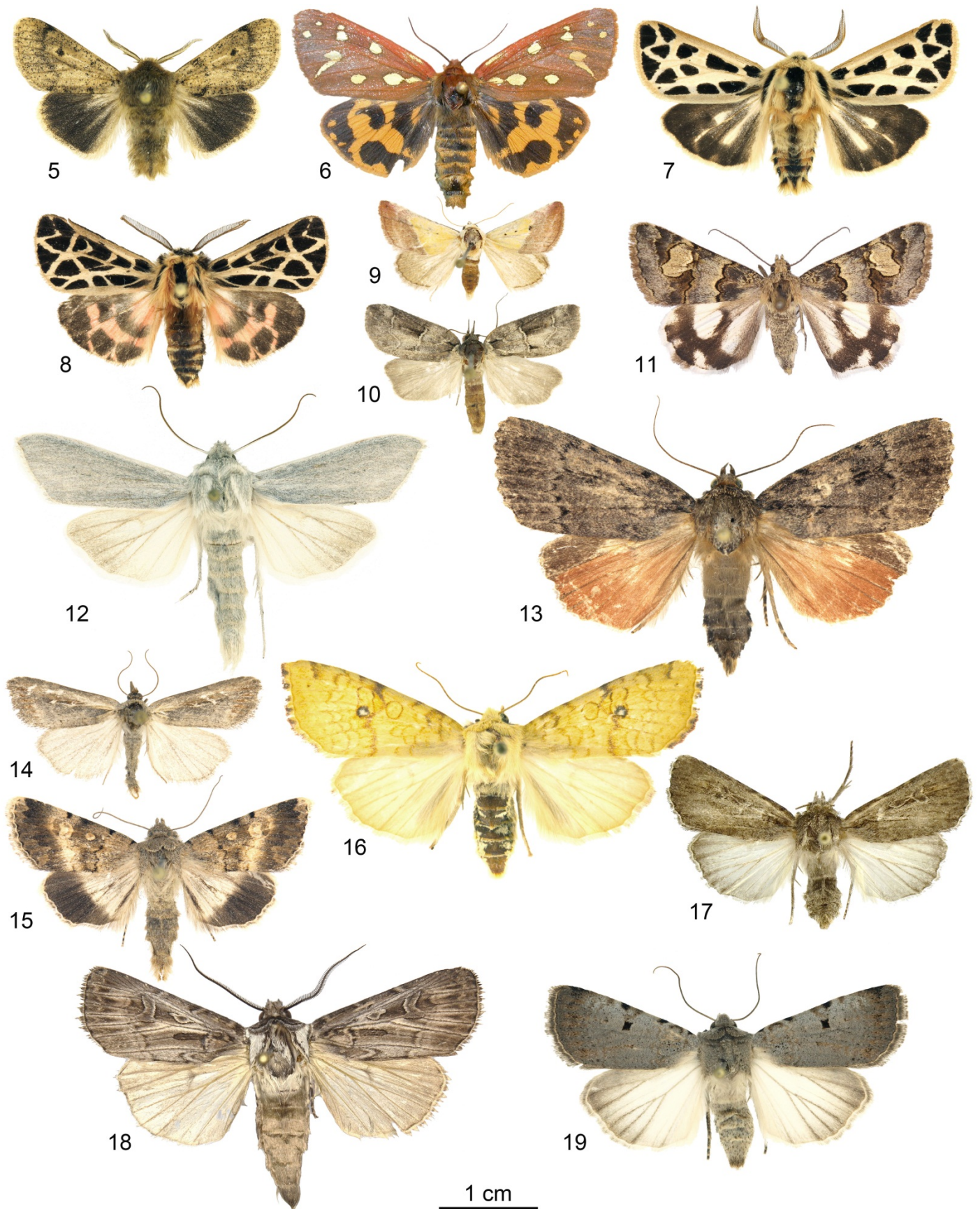
Nyssocnemis eversmanni (Lederer, 1853) – FP: VIII; locality: B31.

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Figures 2–4. Noctuidae: adults in nature. 2 – *Sympistis senica* (dark form), ♂, vic. of Shonai vill., VIII.2014 (Photo by S.V. Titov); 3 – *Schinia cognata*, Maysky district, Ashyozek, 24.VII.2014 (Photo by O.V. Lyakhov); 4 – *Agrotis characteristica*, ♂, vic. of Shonai vill., VIII.2014 (Photo by S.V. Titov).



Figures 5–19. Noctuid moths: adults. 5 – *Gynaephora pumila*, ♂, 14.VIII.2014, vic. of Shonai vill. (CST); 6 – *Hyphoraia aulica*, ♀, 14.IV.2016, Zhumbak natural landmark, ex larva (MCK); 7 – *Chelis caecilia*, ♂, 27.VI.2013, vic. of Shonai vill. (CST); 8 – *Chelis dahurica*, ♂, 21.VII.2013, vic. of Novokuzminka vill. (CST); 9 – *Eublemma panonica*, ♂, 21.VII.2015, Tuz lake (CST); 10 – *Nycteola eremostola*, ♀, 12.VI.2012, vic. of Shiderty vill. (CST); 11 – *Drasteria christophi*, ♀, 21.V.2010, the former Semipalatinsk nuclear test site (CST); 12 – *Cucullia lactea*, ♂, 27.VII.2014, vic. of Old Akshiman vill. (CST); 13 – *Amphipyra pyramidea*, ♂, 18.VII.2015, vic. of Pavlodarskoe vill. (CST); 14 – *Epimecia ustula*, ♂, 01.V.2012, Kurkeli natural landmark (CST); 15 – *Sympistis exacta*, ♂, 29.VI.2013, vic. of Shonai vill. (CST); 16 – *Cirrhia tunicata*, ♀, 13.IX.2015, vic. of Pavlodarskoe vill. (CST); 17 – *Dichagyris latipennis*, ♂, 30.VII.2013, vic. of Kempirtas Mt. (CST); 18 – *Agrotis characteristica*, ♂, 9.VIII.2013, vic. of Shonai vill. (CST); 19 – *Chersotis margaritacea*, ♀, 18.VIII.2013, vic. of Shonai vill. (CST).



Figure 20. Steppe with birch groves in vicinities of Krasnovka vill. (Zhelezinka distr.), 05.VI.2012 (Photo by S.V. Titov).



Figure 21. Poplar-willow forest in Zholpak river duct, Irtysch river valley, Aksu district, 9.VII.2008 (Photo by S.V. Titov).



Figure 22. Dry pine forest in vicinities of Sharbakty vill., 11.VIII.2013 (Photo by S.V. Titov).



Figure 23. Mixed forest in Bayanaul Mts., Kirgichi natural landmark, 30.VI.2013 (Photo by S.V. Titov).



Figure 24. Steppe slopes with bushes and rocky outcrops, vic. of Zhana Zhosaly vill., Kyzyltau Mts., 28.V.2015 (Photo by P. Muhič).



Figure 25. Rocky remnants in vicinities of Kempirtas Mt., Bayanaul Mts., 28.VI.2013 (Photo by S.V. Titov).

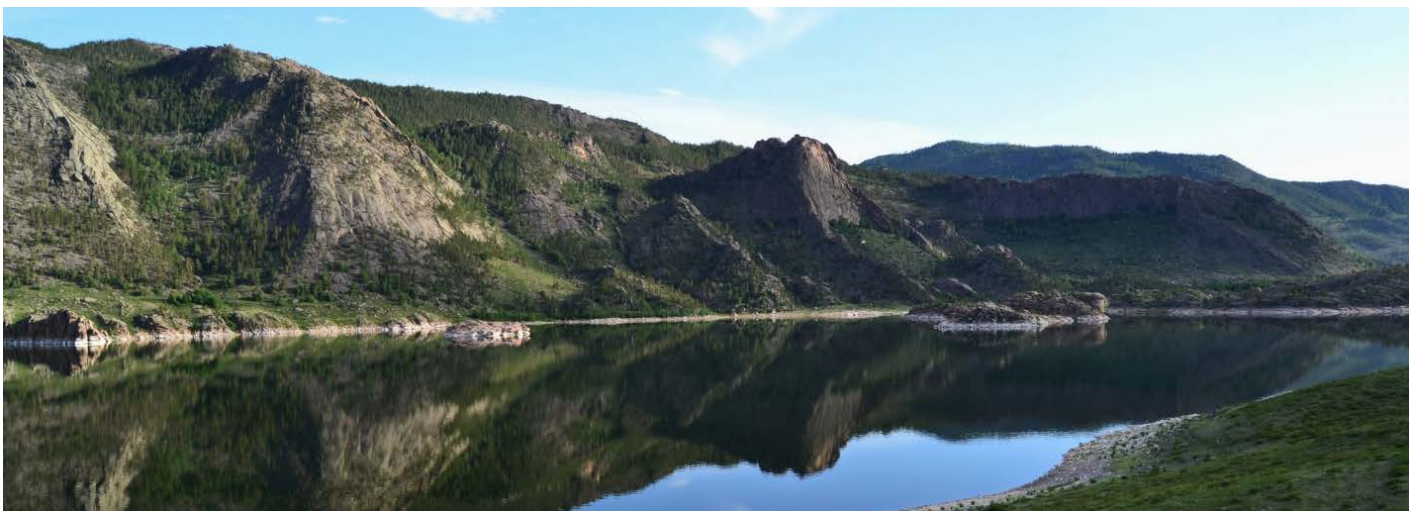


Figure 26. Bayanaul Mts., shore of Toraihyr lake, 11.VI.2013 (Photo by A.V. Volynkin).



Figure 27. Ulken Ak-Zhar cretaceous slope, Ekibastuz district, 3.X.2014 (Photo by S.V. Titov).



Figure 28. Steppe in vicinities of Karasor lake, Maysky district, 21.V.2010 (Photo by S.V. Titov).



Figure 29. Saline steppe at the western shore of Kudaykol lake, Aksu district, 27.VII.2007 (Photo by S.V. Titov).



Figure 30. Meadows in the Irtysh river valley at Pavlodar city, 29.V.2010 (Photo by S.V. Titov).

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