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On the Fauna of the Moths (Lepidoptera, Noctuidae) of the Lower Amudarya Region

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Abstract In this article, an annotated list of moths (*Lepidoptera, Noctuidae s.l.*) collected from the Lower Amudarya region and adjacent territories is presented. It includes 69 species, of which seven species, such as (*Bryophila raptricula* (Den. Et Schiff., 1775), *Heliothis feildi* (Ershov, 1874), *Dichagyris forficula* (Eversvann, 1851), *Actebia sollers* (Christoph, 1877), *Anarta cociabilis* (Graslin, 1850), *Hadula ptochica* (Püngeler, 1900), *Mythimna distincta* (Moore, 1881)) were first reported on the territory of the Khorezm Oasis; 2 species, including (*Bryophila maeonis* (Lederer, 1865), *Saragosa siccanorum* (Staudinger, 1870)) were first reported for the Lower Amudarya region and 2 species, such as (*Cucullia improba* (Christoph, 1885), *Cucullia naruenensis* (Staudinger, 1879)) were first reported in adjacent territories. Findings of species *Dichagyris forficula* (Eversvann, 1851), *Actebia sollers* (Christoph, 1877), *Cucullia improba* (Christoph, 1885), which are very rare for the Lower Amudarya region, are presented. The locations of *Hadula ptochica* (Püngeler, 1900), *Mythimna distincta* (Moore, 1881)) in the Lower Amudarya Biosphere Reserve are among the northernmost in their ranges.

Keywords Lepidoptera, Noctuidae, Moths, District, Fauna, Surroundings, Tugai, Gorge

1. Introduction

The specific structure of the Lower Amudarya region is associated with the history of its origin: in the west, the district borders on the Ustyurt plateau, in the east - on the Kyzylkum plateau; in the north - on the Aral district; in the southwest – on Turkmenistan. The total area of the district is about 50,000 square kilometers. Lower Amudarya region stretches from the southeast to the northwest and expands in this direction. The southeastern part of the region starts from the Tuyamuyun gorge and in the north-west reaches the southern coast of the former Aral Sea basin. The length of the region in this direction is 400 km, and the width is constantly changing. Sands and salts blown by the wind settle in the lower reaches of the Amudarya. The flat relief of the lower reaches of the Amudarya contributes to the branching of the Amudarya channel. The main ancient channels of the Amudarya, such as Karauzyak, Shertanbay, Kindiksay, Kazakhdarya, Karakulsay depart from the river to the right and are directed towards the Aral Sea. The ancient channels of Kunyadarya, Daryalyk, Daudan, starting from the left bank of the river, are directed towards the Sarykamysh lake. There are hills and remnants of mountains with a relative height of up to 60-80 meters between these ancient channels. The most significant of them are Kuyanchik, Karatau, Jumurtau, Barlytau, etc.

Today, the dry Aral Sea has been replaced by a salty sandy desert. This desert received a new name - Aralkum. In order to protect people from wind-blown sand and salt, our states have planted 2 species of saxaul. The flat relief of the lower reaches of the Amudarya contributes to the formation of the Amudarya tributaries. The main ancient canals of the Amudarya - Karauzyak, Shertanbay, Kindiksoy, Kazogdarya, Karakulsay - turn to the right of the river and head towards the Aral Sea. Starting from the left bank of the river, the ancient canals Kunyadarya, Daryalik, Daudan lead to Lake Sarikamysh. Among these ancient canals are the remains of hills and mountains with a relative height of 60-80 meters. The most important of them are Kuyanchik, Karatau, Yumurtau, Barlytau and others.

The climate in the lower reaches of the Amudarya is sharply continental, with long and cold winters, dry and hot summers. The northern part of the region is a plain, where cold air masses freely penetrate from the north from the Arctic and from the northeast from Siberia. Therefore, the winter is cold here, the average January temperature is kept within the range of –14.5° –17.6°C. Sometimes cold air masses are retained, then the air temperature drops in January to –32° –33°C. The average July temperature is + 26° ... + 27°C, sometimes the temperature can rise to + 44° ... + 46°C.

The lower reaches of the Amudarya receive the smallest amount of precipitation in Uzbekistan - 80–100 mm per year. The evaporation rate exceeds the amount of precipitation 20 times and reaches 2,000 mm per year. [Khasanov I.A., Gulomov P.N. National geography of Central Asia, Toshkent, 2002].

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Vegetation. Tugai – tree-shrub and herbaceous vegetation is developed in the river valleys, in their low areas adjacent directly to the river floodplain. Sometimes the tugai vegetation is very dense and is a difficult-to-pass solid massif of plant communities. Of the trees, there are several *Populus* species, species from the genus: a *Salix, Elaeagnus angustifolia*. Among the shrubs, several species of *Tamarix gallica L, Halimodendron halodendron* ornamental plant are common. *Halimodendron argenteum* is less common. Herbaceous communities are represented by *Glycyrrhiza glabra L, Alhagi persarum, Aelúropus, Calamagrostis* reeds and eriantus. In sandy deserts, species such as *Calligonum L., Aristida L, Artemisia, Haloxylon, Cárex, Ammodendron, Salsola Richteri, Astrāgalus, Ephedra strobilacea, Senecio vulgaris, Chenopodioideae* are widespread. Many of the plants use their long roots to prevent the sands from moving in the desert.

The vegetation in the gypsum desert is scarce. *Anabasis salsa, Artemisia* sprawling, various species of *Poa bulbosa, Cárex, Haloxylon* are found here. In some humid and warm years, ephemeral vegetation develops on the Ustyurt plateau. In Ustyurt, *Rheum Tataricum* is widespread, with leaves up to 1.2 meters in diameter.

This edaphotype is common within gypsum and sandy deserts. Salt-rich wet marshes are almost devoid of vegetation, with the exception of some species: *Kalidium, Halostachys, Halocnemum, Aelúropus*. On salt marshes and saline soils, there are annual saltwort and the most valuable tree - *Haloxylon*. Takirs are the bottoms of dried shallow waters, practically devoid of vegetation, but *Monopetalae* still spreads along the cracks.

2. Materials and Methods

The basic material for this article was collected by the researchers in more than 10 expeditions on the territory of the Lower Amudarya region. The collection of imagos was carried out at night by attracting a light with a screen to a light source and during the day using an entomological net. Catching of imago moths was carried out using various light sources (different incandescent lamps, DRL Phillips-250 W Philips TL 8W / 05 lamps and solar batteries and panels). In addition to trapping on the screen, battery light traps with chloroform were widely used. The material was processed using standard techniques. When choosing key sites, all the nature and landscape features of the study area were taken into account in order to maximize the study of the species composition in areas with different ecological conditions for the existence of these animals. To determine the collected material, literary and multimedia sources were used, such as "Keys to insects of the Russian Far East" (Kononenko V.S.), "Catalog of Lepidoptera in Russia" (Matov A.Y., Kononenko V.S., Sviridov A.V), "Atlas of butterflies and some caterpillars" edited by Kholodkovsky N.A, atlas-guide -for students to independently identify various types of butterflies, establish their scientific names and individual characteristics; "Atlas of butterflies and caterpillars of Europe and partly Russian-Asian countries" edited by K. Lampert, N. Kholodkovsky.

In total, the researchers collected about 1500 copies of moths stored in the author's collection at Urgench State University. (UrSU). The collections were carried out at the following points.

1. **Lower Amudarya State Biosphere Reserve**. (41°59'31.43"C ., 60°21'33.90"B). Lower Amudarya State Biosphere Reserve - riparian forests, in the environs - desert thickets.
2. **Sultan Uvais mountains**. (42° 0'26.09"C., 60°39'29.80"B). Sultan-Uvais refugium (mountain refugium). A large mountainous refugium with different herbal-fescue-grass steppes on stony soils and weak anthropogenic impact. Vegetations are ephemera and ephemeroids.
3. **Tollic tukai**. Tollik-Tukay district of Khorezm region (TTKR): the collection was carried out at night under lanterns on the eastern outskirts of the Vazir settlement: (41°57'1.00"C., 60°29'47.70"B) on the territory of a mixed tugai forest in the upper left part of the Amudarya.
4. **Kakrali tugai**. Tollik-Tukay district of Khorezm region (TTKR): the collection was carried out in a light trap of a mixed tugay forest, the area is mainly dominated by turanga (41°56'1.53"C., 60°23'26.11"B., about 100 m above sea level) about 300 m from the highway to Toshkent - Nukus.
5. **Akhcha kul**. Ellikala region of the Republic of Karakalpakstan: the collection was carried out in a light trap at the cordon (41°52'19.43"C., 60°52'19.65"B., about 450 m above sea level), located on the territory of Lake Akhcha kul.
6. **Tuyamuyun gorge.(41°13'54.38"C., 61°23'19.71"B)**. Tuyamuyun gorge, located in the lower reaches of the Amudarya river, continues to be the subject of disagreements between Uzbekistan and Turkmenistan. In this region, the main deserts are thickets.
7. **The Karauzyak**. Settlement of the city is in Karakalpakstan, Uzbekistan. The center of the Karauzyak district is located in the Amudarya delta. The settlement is located 29 km from the Chimbay railway station (43° 1'23.24"C., 60° 0'36.75"B). Trees and shrubs include *Salix, Populus, Ulmus, Támarix, Halimodendron, Týpha, Scirpus.*
8. **Karakalpak avul. (41°55'43.87"C., 60°32'44.23"B).** A rural settlement, but biotopes and agrocenoses are mixed here. The distribution of economically valuable species by life forms showed that most of them are herbaceous plants. Woody plants: trees, shrubs and semi-shrubs are represented very little.
9. **Pitnyak**. Pitnak city is situated in the Tuprakkala district of the Khorezm region of Uzbekistan from the city: a 7 km south. **(41°12'38.92"C., 61°17'53.18"B)**

is located in the desert zone.

Data on the distribution of species were taken from various sources [2–14,17,20–22,24,25]. Below is an annotated list of the Noctuidae species in the Lower Amudarya region collected by the author.

In this article, the Noctuidae family is considered in a broad sense for convenience of presentation. At present, many authors regard the moth as a complex of closely related families. After the name of the species, only those literary sources in which it is indicated for the territory of the Lower Amudarya State Biosphere Reserve are given. One asterisk (*) marks the species first found on the territory of the Khorezm Oasis. Two asterisks (**) for the first time listed species in the Lower Amudarya region; with three asterisks (***) are species that were first discovered in adjacent territories.

Subfamily Acronictinae.

Genus: Moma.

1. Moma alpium (Osbeck, 1778).

Place and date of detection: Lower Amudarya State Biosphere Reserve: 07.V.2018, 28.V.2018; 2 ♂♂, 1 ♀♀. Sulton Uvais mountains: 04.V.2019; 7 ♂♂, 7 ♀♀. Tuyamuyin gorge: 05.V.2018, 28.V.2003; 4 ♂♂, 2 ♀♀.

Note. Their flying time is from June to July. Caterpillar period is from July to the beginning of September. They feed on the plant *Quercus* and deciduous trees. They winter in the pupa period in the underlay. These species are micropermesoterm, feeding on deciduous dendrobiums. Moreover, they are oligophage species and begin to fly in early summer, live near waters around tugai.

Tribe Acronictini.

Genus: Acronicta.

2. Acronicta alni (Linnaeus, 1767).

Place and date of detection: Lower Amudarya State Biosphere Reserve: 07.V.2018, 28.V.2018; 5 ♂♂, 7 ♀♀. Sulton Uvais mountains: 03.V.2019, 04.V.2019; 5 ♂♂, 8 ♀♀. Tuyamuyin gorge: 05.V.2018, 28.V.2003; 4 ♂♂, 2 ♀♀. Karakalpak Avul: 04.VI.2019, 17.V.2019; 4 ♂♂ 2 ♂♂.

Note. Their flying time is from May to June. Caterpillar period is from July to August. They feed on the plants, such as *Betula, Quercus, Ulmus, Crataegus* and other trees. They winter in the pupa period. These species are micropermesoterms, dendrotamnobionts and polyphages. Moreover, they begin to fly in early summer, live in meadow-tugai.

3. Acronicta cuspis (Hubner, 1813).

Place and date of detection: Lower Amudarya State Biosphere Reserve: 07.VII.2018, 28.VII.2018; 3 ♂♂, 5 ♀♀. Sulton Uvais mountains: 03.VII.2019, 04.VII.2019; 9 ♂♂, 7 ♀♀. Tuyamuyin gorge: 05.VII.2018, 28.VII.2003;7 ♂♂, 5 ♀♀. Karakalpak Avul: 04.VII.2019, 17.VII.2019; 1 ♂♂ 2 ♂♂.

Note. Their flying time is from June to July. The caterpillar period is late summer and autumn. They feed on plants, such as *Betula, Alnus, Sorbus* (Seppanen, 1970). These species are micropermesoterm, feeding on deciduous dendrobiums. Moreover, they are polyphage species and begin to fly in early summer, live near waters around tugai.

4. Acronicta psi (Linnaeus, 1758).

Place and date of detection: ♀♀. Karakalpak Avul: 14.VII.2018; 6 ♂♂.: 14.VII.2018; 6 ♂♂. Kakrali tugai: 09.VII.2018; 13 ♂♂. Karauzyak: 07.VIII.2018; 15 ♂♂.

Note. Their flying time is from June to August. The caterpillar period is from August to the beginning of October. They feed on plants, such as *Betula, Quercus, Ulmus Crataegus, Sorbus, Prunus, Tilia* and other trees. These species are micropermesoterms, dendrotamnobionts and polyphages. Moreover, they begin to fly in mid-summer, live near waters around meadow-tugai.

5. Acronicta aceris (Linnaeus, 1758).

Place and date of detection: Kakrali tugai: 14.V.2018; 7 ♂♂. Tuyamuyin gorge: 05.VII.2018, 12.V.2003; 2 ♂♂, 6 ♀♀. Tollik tugai: 07.VII.2018, 28.V.2018; 18.V.2018; 2 ♂♂. Tollik tugai: 08.V.2018; 4 ♂♂, 21 ♀♀. Pitnyak: 28.V.2018; 4 ♂♂, 20 ♀♀.

Note. Their flying time from May to June. The caterpillar period is from August to September. They feed on plants, such as *Ácer, Populus* and other deciduous trees. They winter in the pupa period. These species are micropermesoterm, feeding on deciduous dendrobiums. Moreover, they are polyphage species and begin to fly in early summer, live in tugai.

6. Acronicta leporina (Linnaeus, 1758).

Place and date of detection: Pitnyak: 10.VIII.2018; 6 ♂♂. Akhcha kul: 03. VIII.2019, 04. VIII.2019; 5 ♂♂, 2 ♀♀. Tollik tugai: 27.VIII.2018, 23. VIII.2018; 6 ♂♂, 3 ♀♀.

Note. Their flying time is May-June, July. The caterpillar period is from July to the beginning of October. They feed on plants, such as *Alnus, Betula, Corylus, Salix, Populus tremula, Populus, Sorbus, Acer, Fraxinus, Quercus*. They winter in the pupa period. These species are micropermesoterms, dendrotamnobionts and polyphages. Moreover, they begin to fly in summer, live in meadow-tugai. The length of front wing is 23—26 mm. Wingspan is 34—44 mm.

7. Acronicta megacephala (Denis et Schiffermuller, 1775).

Place and date of detection: Lower Amudarya State Biosphere Reserve: 07.VI.2018, 28.VIII.2018; 16 ♂♂, 32 ♀♀. Karauzyak: 07.VII.2018; 6 ♂♂, 2 ♀♀.

Note. Their flying time is from the end of May to the beginning of August. The caterpillar period is from July to September. They feed on plants, such as *Alnus, Salix, Populus*. They winter in the pupa period in a thin silk cocoon, usually under loose bark. These species are micropermesoterms, dendrotamnobionts and oligophages. Moreover, they begin to fly in early summer, live around meadow-tugai.

Subfamily Acontiinae.

Genus: Glossodice (Berio, 1991).

8. Glossodice polygramma (Duponchel, 1842).

Place and date of detection: Sulton Uvais mountains: 03.VII.2019, 04.VII.2019; 23 ♂♂, 28 ♀♀. Tuyamuyin gorge: 05. VIII.2018, 28.VIII.2003; 19 ♂♂, 21 ♀♀. Karakalpak Avul: 04.VII.2019, 17.VIII.2019; 34 ♂♂ 28 ♂♂.

Note. Their flying time is from May to July. The plants, which caterpillars feed on, are not defined. (Hoffmann, Kholodgovskiy 1894; Sukhareva, 1986).

Genus: Eublemma (Hubner, 1821).

9. Eublemma gratiosa (Eversmann, 1854).

Place and date of detection: Pitnyak: 10.VIII.2018; 6 ♂♂,2 ♀♀. Sulton Uvais mountains: 03.VII.2019, 04. VII.2019; 11 ♂♂, 6 ♀♀. Akhcha kul: 03. VIII.2019, 04. VIII.2019; 22 ♂♂, 20 ♀♀. Tollik tugai: 27.VII.2018, 23. VIII.2018; 16 ♂♂, 19 ♀♀.

Note. Their flying time is from late April to September. They develop in three generations. The plants, which caterpillars feed on, are not defined. (Yershov 1874; Shetkin 1965).

Subfamily Bryophilinae.
Genus: Bryophila.

****10. Bryophila raptricula (Den. et Schiff, 1775).***

Place and date of detection: Lower Amudarya State Biosphere Reserve: 07.VIII.2018, 28.VIII.2018; 3 ♂♂, 8 ♀♀. Sulton Uvais mountains: 03.VIII.2019, 04.VIII.2019; 9 ♂♂, 6 ♀♀. Tuyamuyin gorge: 05.VIII.2018, 28.VIII.2003; 6 ♂♂, 3 ♀♀. Karakalpak Avul: 04.VII.2019, 17.VIII.2019; 14 ♂♂ 23 ♂♂.

Note. Their flying time is from late May to August. They winter in the old caterpillar period. Caterpillars feed on tree trunks and stones (Merzheevskaya 1967, Shek 1975; Ishkov and Sukhareva 1986).

*****11. Bryophila maeonis (Lederer, 1865).***

Place and date of detection: Kakrali tugai: 14.VIII.2018; 13 ♂♂, 18 ♀♀. Tuyamuyin gorge: 05.VII.2018, 12.VIII.2003; 3 ♂♂, 8 ♀♀. Tollik tugai: 07.VII.2018, 28.VII.2018; 18.VIII.2018; 22 ♂♂. Pitnyak: 28.VII.2018; 21 ♂♂, 11 ♀♀.

Distribution: Central Asia (Kyrgyzstan) (Milko, 1996).

Note. Not studied.

Subfamily Heliothinae.
Genus: Heliothis.

****12. Heliothis feildi (Ershov, 1874).***

Place and date of detection: Karakalpak Avul: 04.VII.2019, 17.VIII.2019; 4 ♂♂, 5 ♂♂. Akhcha kul: 04.VI.2019; 50 ♂♂, 25 ♀♀.

Note. Their flying time is from April to May. They are multi-cycle species and caterpillars feed on *Haloxylon* (Daricheva 1965; Sukhareva, 1972).

Subfamily Cuculliinae
Genus: Cucullia Schrank, 1802

******13. Cucullia improba (Christoph, 1885).***

Place and date of detection: Karakalpak Avul: 04.VII.2019, 17.VIII.2019; 5 ♂♂ 7 ♂♂. Akhcha kul: 03.VI.2019, 04.VI.2019; 14 ♂♂, 12 ♀♀. Pitnyak: 03.VIII.2019; 19 ♂♂, 21 ♀♀.

Note. Not studied.

******14. Cucullia naruenensis (Staudinger, 1879).***

Place and date of detection: Karakalpak Avul: 04.VII.2019, 17.VIII.2019; 31 ♂♂ 16 ♂♂. Akhcha kul: 03.VI.2019, 04.VI.2019; 17 ♂♂, 25 ♀♀. Pitnyak: 03.VIII.2019; 19 ♂♂, 13 ♀♀.

Note. Not studied.

Subfamily Noctuinae.
Tribe Noctuini.
Subtribe Noctuina.
Genus: Diarsia.

15. Diarsia dahlii (Hubner, 1813).

Place and date of detection: Pitnyak: 10.V.2018; 11 ♂♂. Sulton Uvais mountains: 03.IV.2019, 04.IV.2019; 2 ♂♂, 7 ♀♀. Tollik tugai: 27.IV.2018, 23.IV.2018; 11 ♂♂, 14 ♀♀. Karauzyak: 07.V.2018; 4 ♂♂.

Note. Their flying time is August-September. The caterpillar period is from September to early spring. They feed on plants, such as, *Betula*, *Vaccinium myrtillus*, *Plantágo*. They winter in the caterpillar period. These species are micromesotherms, dendrochamechortobionts and polyphages. They begin to fly in late summer, live in tugai.

16. Diarsia brunnea (Denis et Schiffermuller, 1775).

Place and date of detection: Pitnyak: 10.V.2018; 6 ♂♂. Sulton Uvais mountains: 03.IV.2019, 04.IV.2019; 2 ♂♂, 4 ♀♀. Akhcha kul: 03.V.2019, 04.V.2019; 2 ♂♂, 20 ♀♀. Tollik tugai: 27.IV.2018, 23.IV.2018; 5 ♂♂, 7 ♀♀. Karauzyak: 07.V.2018; 1 ♂♂, 4 ♀♀.

Note. Their flying time is from June to August. The caterpillar period is from September to April. They feed on plants, such as *Vaccinium myrtillus, Salix, Betula, Rumex* and other trees, plants. They winter in the caterpillar period. These species are micromesotherms, dendrochamechortobionts and polyphages. They begin to fly in mid-summer, live in tugai.

Genus: Chersotis.

17. Chersotis cuprea (Denis et Schiffermuller, 1775).

Place and date of detection: Pitnyak: 10.V.2018; 17 ♂♂, 14 ♀♀. Sulton Uvais mountains: 03.IV.2019, 04.IV.2019; 23 ♂♂, 43 ♀♀. Akhcha kul: 03.V.2019, 04.V.2019; 7 ♂♂, 2 ♀♀. Tollik tugai: 27.IV.2018, 23.IV.2018; 16 ♂♂, 4 ♀♀. Karauzyak: 07.V.2018.

Note. Their flying time is from June to August. The caterpillar period is from August to May. They feed on plants, such as, *Vaccinium myrtillus* and different species of *Calluna*. They winter in the caterpillar period. These species are micropermesoterm, chamebiont, oligophage species. They begin to fly in mid-summer, live in tugai.

Genus: Paradiarsia.

18. Paradiarsia punicea (Hubner, 1803).

Place and date of detection: Pitnyak: 10.V.2018; 7 ♂♂,

4 ♀♀. Akhcha kul: 03.V.2019, 04.V.2019; 7 ♂♂, 2 ♀♀. Tollik tugai: 27.IV.2018, 23.IV.2018; 6 ♂♂, 4 ♀♀. Karauzyak: 07.V.2018; 1 ♂♂, 4 ♀♀.

Note. Their flying time is the end of June and July. The caterpillar period is in the spring. They feed on plants, such as *Cáltha, Rubus, Taraxacum* (Seppanen, 1970). These species are submicrotherm, tamnochortobiont and polyphage. They begin to fly in mid-summer, live in meadow tugai.

Genus: Eurois.

19. Eurois occulta (Linnaeus, 1758).

Place and date of detection: Pitnyak: 10.V.2018; 2♂♂, 8 ♀♀. Sulton Uvais mountains: 03.IV.2019, 04.IV.2019; 23 ♂♂, 43 ♀♀. Akhcha kul: 03.V.2019, 04.V.2019; 27 ♂♂, 20 ♀♀. Tollik tugai: 27.IV.2018, 23.IV.2018; 16 ♂♂, 34 ♀♀. Karauzyak: 07.V.2018; 6 ♂♂, 5 ♀♀.

Note. Their flying time is from June to August. The caterpillar period is from September to May. They feed on plants, such as *Myrica, Vaccinium uliginosum, Alnus, Salix, Betula, Populus tremula, Ribes, Rosa, Prunus padus Prunus padus, Vaccinium myrtillus, Calluna vulgaris, Sedum, Thymus, Epilobium, Lathyrus*. They winter in the caterpillar period. These species are micromesotherm, tamnochamechortobiont, polyphage species. They begin to fly in the mid-summer, in tugai.

Genus: Graphiphora.

20. Graphiphora augur (Fabricius, 1775).

Place and date of detection: Pitnyak: 10.V.2018; 8 ♂♂, 2 ♀♀. Sulton Uvais mountains: 03.IV.2019, 04.IV.2019; 5 ♂♂, 3 ♀♀. Akhcha kul: 03.V.2019, 04.V.2019; 27 ♂♂, 20 ♀♀. Tollik tugai: 27.IV.2018, 23.IV.2018; 16 ♂♂, 34 ♀♀. Karauzyak: 07.V.2018; 13 ♂♂, 7 ♀♀.

Note. Their flying time is the end of June and the end of August. The caterpillar period is from August to April. They feed on plants, such as *Prunus, Salix, Crataegus, Betula, Ulmus, Rumex, Rubus*. They winter in the caterpillar period. These species are micromesotherm, dendrotamnochamechortobiont, polyphage species. They begin to fly in the mid-summer, live in meadow tugai.

Genus: Xestia.

21. Xestia ditrapezium (Denis et Schiffermuller, 1775).

Place and date of detection: Pitnyak: 10.V.2018; 6 ♂♂. Akhcha kul: 03.V.2019, 04.V.2019; 7 ♂♂, 12 ♀♀. Tollik tugai: 27.IV.2018, 23.IV.2018; 16 ♂♂, 4 ♀♀. Karauzyak: 07.V.2018; 11 ♂♂, 14 ♀♀.

Note. Their flying time is the end of June and the end of August. The caterpillar period is from September to April. They feed on plants, such as *Rubus, Urtica, Lamium, Stellaria, Plantago*, and herbaceous plants– *Bellis, Taráxacum, Primula*. They winter in the caterpillar period. These species are micropermesoterm, dendrotamnochamechortobiont, polyphage species. They begin to fly in early summer, live in meadow tugai.

22. Xestia triangulum (Hufnagel, 1766).

Place and date of detection: Pitnyak: 10.VIII.2018; 14 ♂♂13 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 3 ♂♂, 3 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 1 ♂♂, 1 ♀♀.

Note. Their flying time is from June to August. The caterpillar period is from September to April. They feed on plants, such as *Salix, Crataegus, Betula, Rumex, Rubus caesius*, and other herbaceous plants. They winter in the caterpillar period. These species are micropermesoterm, chortobiont, polyphage species. They begin to fly in the mid-summer, live in meadow tugai.

23. Xestia baja (Denis et Schiffermuller, 1775).

Place and date of detection: Pitnyak: 10.VIII.2018; 4 ♂♂21 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 6 ♂♂, 3 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 5 ♂♂, 2 ♀♀.

Note. Their flying time is from June to August. The caterpillar period is from September to May. They feed on plants, such as *Prunus, Rubus, Betula, Rumex, Salix, Vaccinium myrtillus, Antirrhinum, Rheum* and herbaceous plants. They winter in the caterpillar period. These are micropermesoterm, dendrotamnochamechortobiont, polyphage species. They begin to fly in late summer, live in meadow tugai.

Genus: Protolampra.

24. Protolampra sobrina (Duponchel, 1843).

Place and date of detection: Pitnyak: 10.VIII.2018; 14 ♂♂13 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 4 ♂♂, 3 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 4 ♂♂, 5 ♀♀.

Note. Their flying time is from June to August. The caterpillar period is from September to May. They feed on plants, such as *Betula, Vaccinium myrtillus* and herbaceous plants. They winter in the caterpillar period. These species are micromesotherm, dendrotamnochortobiont, polyphage species. They begin to fly in the mid-summer, live in meadow tugai.

Subtribe Agrotina.

Genus: Actebia.

25. Actebia praecox (Linnaeus, 1758).

Place and date of detection: Pitnyak: 10.VIII.2018; 1 ♂♂3 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 4 ♂♂, 5 ♀♀. Akhcha kul:, 04.VII.2019; 3 ♂♂, 4 ♀♀. Tollik tugai: 23.VII.2018; 11 ♂♂, 7 ♀♀.

Note. Their flying time is from August to September. The caterpillar period is from September to June. They feed on plants, such as *Salix repens, Lupinus arboreus* and other plants, typical for dunes, etc. plants of sandy soils. They winter in the caterpillar period. These are micropermesoterm, tamnochortobiont, polyphage species. They begin to fly in late Summer, live in water basins near the meadow tugai.

Genus: Dichagyris (Lederer, 1857).

****26. Dichagyris forficula (Eversvann, 1851).***

Place and date of detection: Pitnyak: 10.VIII.2018; 24 ♂♂13 ♀♀. Sulton Uvais mountains: 04.VI.2019; 13 ♂♂, 20 ♀♀.

Note. Their flying time is in May. These are multicycle species. The plants, which caterpillars feed on, are not known. (Kozhanchikov 1937; Sukhareva 1972).

Genus: Actebia (Boursin 1946).

****27. Actebia sollers (Christoph, 1877).***

Place and date of detection: Pitnyak: 10.VIII.2018; 7 ♂♂6 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 4 ♂♂, 3 ♀♀. Akhcha kul:, 04.VII.2019; 3 ♂♂, 7♀♀. Tollik tugai: 23.VII.2018; 2 ♂♂, 3 ♀♀.

Note. Their flying time is from late May to mid June and after the summer diapause in September, early October. They feed on shrubs and semi-shrubs such as *Calligonum, Salsola*. (Kozhanchikov 1937; Falkovich 1969; Davletshina et al. 1979).

Tribe Hadenini.
Subtribe Discestrina.
Genus: Anarta (Hampson, 1905).

28. Anarta stigmosa (Christoph, 1887).

Place and date of detection: Pitnyak: 10.VIII.2018; 1 ♂♂3 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 2 ♂♂, 6 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 7 ♂♂, 1 ♀♀.

Note. Their flying time is from April to September. The plants, which caterpillars feed on, are not known. (Sukhareva 1972; Shek 1975).

****29. Anarta cociabilis (Graslin, 1850).***

Place and date of detection: Pitnyak: 10.VIII.2018; 1 ♂♂11 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 7 ♂♂, 3 ♀♀. Akhcha kul: 04.VII.2019; 3 ♂♂, 8 ♀♀. Tollik tugai: 23.VII.2018; 9 ♂♂, 1 ♀♀.

Note. Their flying time is from April to September. They develop up to 4 generations a year. Caterpillars feed and live on *Athrophytum, Haloxylon, Tamarix* (Shchetkin, 1965; Sukhareva 1972; Daricheva 1965).

Genus: Hadula (Staudinger, 1889).

****30. Hadula ptochica (Püngeler, 1900).***

Place and date of detection: Pitnyak: 10.VIII.2018; 5 ♂♂4 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 7 ♂♂, 9 ♀♀. Akhcha kul: 04.VII.2019; 3 ♂♂, 8 ♀♀. Tollik tugai: 23.VII.2018; 5 ♂♂, 1 ♀♀.

Note. Their flying time is in April-May and in August-September. Caterpillars feed on *Haloxylon* (Sukhareva 1972).

31. Hadula sabulorum (Alpheraky, 1882).

Place and date of detection: Pitnyak: 10.VIII.2018; 11 ♂♂12 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 4 ♂♂, 3 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 11 ♂♂, 1 ♀♀.

Note. Their flying time is from early April to mid-May. They develop in one generation. Caterpillars feed on *Salsola, Haloxylon, Tamarix*. (Daricheva 1965; Shchetkin, 1965; Sukhareva 1972; Nekrasov et al. 1988; Rakhimov 1997).

Subtribe Mamestrina.
Genus: Saragosa (Staudinger, 1900).

*****32. Saragosa siccanorum (Staudinger, 1870).***

Place and date of detection: Pitnyak: 10.VIII.2018; 7 ♂♂13 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 5 ♂♂, 3 Tollik tugai: 27.VII.2018, 23.VII.2018; 1 0 ♂♂, 1 ♀♀.

Note. Their flying time is in August and September. These are multi-cycle species. The plants, which caterpillars feed on, are not defined. (Shek 1975).

Tribe Leucaniini
Genus: Mythimna Ochsenheimer, 1816

****33. Mythimna distincta (Moore, 1881).***

Place and date of detection: Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 3 ♂♂, 3 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 6 ♂♂, 4 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018;9 ♂♂, 1 ♀♀.

Note. Their flying time is from late April to May. They develop in one generation. The caterpillars feed on plants, such as *Haloxilon, Salsola, Halocneum*. (Falkovich, 1969; Sukhareva, 1972).

Tribe Phlogophorini.
Genus: Euplexia.

34. Euplexia lucipara (Linnaeus, 1758).

Place and date of detection: Akhcha kul: 03.VII.2019, 04.VII.2019; 3 ♂♂, 4 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 8 ♂♂, 1 ♀♀.

Note. Their flying time is from June to September. The caterpillar period is from August to September. They feed on plants, such as *Pteridium aquilinum, and Hedera, Quercus, Salix, Betula* and many other wild and cultivated plants. They winter in the pupa period. These are micropermesoterm, dendrotamnochamechortobiont, polyphage species. They begin to fly in early summer, in tugai.

Tribe Xylenini.
Subtribe Cosmiina.
Genus: Ipimorpha.

35. Ipimorpha retusa (Linnaeus, 1761).

Place and date of detection: Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 3 ♂♂, 3 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 3 ♂♂, 4 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 7 ♂♂, 1 ♀♀.

Note. Their flying time is from June to August. The caterpillar period is from April to May. They feed on plants, such as *Salix, Salix pentandra, Salix aurita*. They winter in the egg period on the leaves. These are micropermesoterm, tamnobiont, monophage species. They begin to fly in summer, live in tugai.

36. Ipimorpha subtusa (Denis et Schiffermuller, 1775).

Place and date of detection: Pitnyak: 10.VIII.2018; 6 ♂♂13 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 7 ♂♂, 3 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 6 ♂♂, 1 ♀♀.

Note. Their flying time is from June to September. The caterpillar period is from April to May. They feed on plants, such as *Populus tremula, Salix*. Ipimorpha subtusa can be found on forest edges, flood meadows and along the banks of the Amudarya and ponds. They winter in the egg period. These are micromesotherm, dendrotamnobiont, oligophage species, they begin to fly in the mid-summer, live in tugai.

Genus: Enargia.

37. Enargia paleacea (Esper, 1788).

Place and date of detection: Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 3 ♂♂, 3 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 3 ♂♂, 4 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 4 ♂♂, 1 ♀♀.

Note. Their flying time is from June to September. The caterpillar period is from April to the beginning of June. They feed on plants, such as shoots *Betula, Populus tremula, Alnus*. They winter in the egg period. These are micropermesoterm, dendrobiont, polyphage species. They begin to fly in late summer, live in tugai.

Genus: Parastichtis.

38. Parastichtis suspecta (Hubner, 1817).

Place and date of detection: Pitnyak: 10.VIII.2018; 3 ♂♂1 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 8 ♂♂, 3 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 3 ♂♂, 1 ♀♀.

Note. Their flying time is from July to August. The caterpillar period is from April to May. They feed on plants, such as *Betula, sometimes Salix, Populus catkins*, then herbaceous plants. They winter in the egg period. These are micromesotherm, dendrotamnochortobiont, polyphage species. They begin to fly in late summer, live in tugai.

Genus: Apterogenum.

39. Apterogenum ypsillon (Denis et Schiffermuller, 1775).

Place and date of detection: Akhcha kul: 03.VII.2019, 04.VII.2019; 3 ♂♂, 4 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018;5 ♂♂, 1 ♀♀.

Note. Their flying time is from June to August. The caterpillar period is from April to June. They feed on plants, such as *Salix, Populus, Populus tremula*. They winter in the egg period. These are micropermesoterm, dendrotamnobiont, oligophage species. They begin to fly in the mid-summer, live near waters around tugai.

Subtribe Antitypina.

Genus: Mesogona.

40. Mesogona oxalina (Hubner, 1803).

Place and date of detection: Pitnyak: 10.VIII.2018; 1 ♂♂13 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 3 ♂♂, 4 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 8 ♂♂, 1 ♀♀.

Note. Their flying time is from August to September. The caterpillar period is from April to May. They feed on plants, such as *Populus, Alnus, Salix*. These are micropermesoterm, dendrotamnobiont, oligophage species. They begin to fly in late summer, live near waters around tugai.

Subtribe Cosmiina.

Genus: Cosmia.

41. Cosmia pyralina (Denis et Schiffermuller, 1775).

Place and date of detection: Pitnyak: 10.VIII.2018; 12 ♂♂13 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 9 ♂♂, 3 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 7 ♂♂, 4 ♀♀.

Note. Their flying time is from June to August. The caterpillar period is from April to June. They feed on plants, such as *Ulmus, Crataegus, Prunus, Malus. Ulmus, Crataegus, blackthorn, Malus, Quercus, fruit trees*. They winter in the egg period. These are micropermesoterm, dendrotamnobiont, polyphage species. They begin to fly in early summer, live in tugai.

42. Cosmia trapezina (Linnaeus, 1758).

Place and date of detection: Pitnyak: 10.VIII.2018; 14 ♂♂13 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 10 ♂♂, 3 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 1 ♂♂, 4 ♀♀.

Note. Their flying time is from June to September. The caterpillar period is from April to June. They feed on different trees and shrubs, such as *Lonicera, Quercus, Ulmus, Betula, Crataegus, Salix, Ácer*. They winter in the egg period. These are micropermesoterm, dendrotamnobiont, polyphage species. They begin to fly in mid-summer, live in tugai.

Subtribe Xylenina.

Genus: Xanthia.

43. Xanthia togata (Esper, 1788).

Place and date of detection: Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 3 ♂♂, 3 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 3 ♂♂, 4 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 1 ♂♂, 1 ♀♀.

Note. Their flying time is from the end of August to September. The caterpillar period is from March to the beginning of June. They feed on willow catkins, later – *Plantágo, Rubus*. They winter in the egg period. These are micropermesoterm, tamnochamechortobiont, polyphage species. They begin to fly in autumn, live near waters around tugai.

44. Xanthia icteritia (Hufnagel, 1766).

Place and date of detection: Pitnyak: 10.VIII.2018; 14 ♂♂13 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 11 ♂♂, 3 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 3 ♂♂, 4 ♀♀.

Note. Their flying time is from August to October. The caterpillar period is from March to June. They feed on plants, such as, *Salix, Ulmus*, adult caterpillars feed on low-growing plants, *Plantago and Rubus*. They winter

in the egg period. These are micropermesoterm, tamnochamechortobiont, polyphage species. They begin to fly in autumn, live in meadow tugai.

Genus: Agrochola.

45. Agrochola circellaris (Hufnagel, 1766).

Place and date of detection: Pitnyak: 10.VIII.2018; 5 ♂♂3 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 7 ♂♂, 4 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 12 ♂♂, 7 ♀♀.

Note. Their flying time is from August to October. The caterpillar period is from April to June. They feed on plants, such as *Salix, Ulmus, Populus*, later – *Plantago, Rubus.* They winter in the egg period. These are micropermesoterm, dendrotamnochamechortobiont, polyphage species. They begin to fly in autumn, live in meadow tugai.

Genus: Eupsilia.

46. Eupsilia transversa (Hufnagel, 1766).

Place and date of detection: Pitnyak: 10.VIII.2018; 10 ♂♂9 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 4 ♂♂, 3 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 12 ♂♂, 1 ♀♀.

Note. Their flying time is from September to April. The caterpillar period is from May to June. They feed on plants, such as *Quercus, Betula, Salix, Ulmus, Populus, Acer* and other trees. They winter in the imago period. These are micropermesoterm, dendrotamnobiont, polyphage species. They begin to fly in autumn-spring, live in tugai.

Genus: Conistra.

47. Conistra vaccinii (Linnaeus, 1761).

Place and date of detection: Pitnyak: 10.VIII.2018; 6 ♂♂13 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 1 ♂♂, 3 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 3 ♂♂, 1 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 9 ♂♂, 8 ♀♀.

Note. Their flying time is from September to May. The caterpillar period is from May to June. They feed on plants, such as *Betula, Quercus, Salix, Ribes, Rubus, Malus, Sorbus, Prunus, Vaccinium myrtillus* and herbaceous plants. They winter in the imago period. These are micropermesoterm, dendrotamnochamechortobiont, polyphage species. They begin to fly in autumn-spring, live in tugai.

48. Conistra rubiginea (Denis et Schiffermuller, 1775).

Place and date of detection: Pitnyak: 10.VIII.2018; 5 ♂♂7 ♀♀. Sulton Uvais mountains: 04.VI.2019; 4 ♂♂, 3 ♀♀. Akhcha kul: 04.VII.2019; 3 ♂♂, 4 ♀♀. Tollik tugai: 23.VII.2018; 3 ♂♂, 2 ♀♀.

Note. Their flying time is from October to November and after wintering, in March and April. The caterpillar period is from May to June. They feed on plants, such as *Salix, Quercus, Prunus, Rosa, Rubus* and other deciduous trees, later they feed on herbaceous plants. They winter in the imago period. These are micropermesoterm, dendrotamnochamechortobiont, polyphage species. They begin to fly in autumn-spring, live in tugai.

Genus: Lithomoia.

49. Lithomoia solidaginis (Hubner, 1803).

Place and date of detection: Pitnyak: 10.VIII.2018; 3 ♂♂2 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 4 ♂♂, 5 ♀♀. Akhcha kul: 04.VII.2019; 6 ♂♂, 1 ♀♀. Tollik tugai: 23.VII.2018; 6 ♂♂, 4 ♀♀.

Note. Their flying time is from August to September. The caterpillar period is from April to June. They feed on plants, such as *Vaccinium, Betula, Calluna, Sallow, Prunus* and other *Vaccinium myrtillus, Arctostáphylos, Betula, Salix,* briar, *Vaccinium myrtillus, lingonberry,* wild rosemary. They winter in the egg period. These are micropermesoterm, dendrotamnochamechortobiont, polyphage species. They begin to fly in autumn, live in tugai.

Subgenus: Lithophane.

50. Lithophane socia (Hufnagel, 1766).

Place and date of detection: Pitnyak: 10.VIII.2018; 2 ♂♂3 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 2 ♂♂, 3 ♀♀. Akhcha kul: 04.VII.2019; 5 ♂♂, 4 ♀♀. Tollik tugai: 23.VII.2018; 5 ♂♂, 1 ♀♀.

Note. Their flying time is from October to May. The caterpillar period is from April to June. They feed on plants, such as: *Fraxinus, Prunus, Salix, Betula , Rubus , Malus, Sorbus, Vaccinium myrtillus, Viburnum, Syringa, Quercus, Ulmus, Tilia, Rumex*. They winter in the imago period. These are micropermesoterm, dendrotamnochamechortobiont, polyphage species. They begin to fly in autumn-spring, live in tugai.

51. Lithophane ornitopus (Hufnagel, 1766).

Place and date of detection: Pitnyak: 10.VIII.2018; 14 ♂♂13 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 3 ♂♂, 3 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 3 ♂♂, 4 ♀♀.

Note. Their flying time is from September to April. The caterpillar period is from the end of April to the beginning of July. They feed on plants, such as *Prunus padus, Prúnus spinosa and Quercus*. They winter in the imago period. These are micropermesoterm, dendrotamnochamechortobiont, polyphage species. They begin to fly in autumn-spring, live in tugai.

52. Lithophane furcifera (Hufnagel, 1766).

Place and date of detection Pitnyak: 10.VIII.2018; 4 ♂♂1 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 3 ♂♂, 1 ♀♀. Akhcha kul: 04.VII.2019; 3 ♂♂, 4 ♀♀. Tollik tugai: 23.VII.2018; 1 ♂♂, 3 ♀♀.

Note. Their flying time is from September to May. The caterpillar period is from April to June. They feed on plants, such as *Alnus, Betula, Populus, Salix, Quercus*. They winter in the imago period. These are micropermesoterm, dendrobiont, polyphage species. They begin to fly in autumn-spring, live in tugai. Their habitat are mainly in flooded meadows and swamp forests.

53. Lithophane consocia (Borkhausen, 1792).

Place and date of detection: Pitnyak: 10.VIII.2018; 3

♂♂ 3 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 8 ♂♂, 7 ♀♀. Akhcha kul: 04.VII.2019; 6 ♂♂, 5 ♀♀. Tollik tugai: 23.VII.2018; 3 ♂♂, 4 ♀♀.

Note. Their flying time is in August. The caterpillar period is in June. They feed on plants, such as *Alnus*. These are micropermesoterm, dendrobiont, monophag species.They begin to fly in late summer, live near waters around tugai.

Subfamily Noctuinae.
Tribe Hadenini.
Genus: Lacanobia.

54. Lacanobia thalassina (Hufnagel, 1766).

Place and date of detection: Pitnyak: 10.VIII.2018; 5 ♂♂7 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 1 ♂♂, 2 ♀♀. Akhcha kul: 04.VII.2019; 5 ♂♂, 6 ♀♀. Tollik tugai: 23.VII.2018; 4 ♂♂, 2 ♀♀.

Note. Their flying time is from the end of May to the beginning of July. The caterpillar period is from July to September. They feed on plants, such as *Quercus, Crataegus, Cytisus, Berberis, Lýcium* and other herbaceous plants. These are micropermesoterm, dendrotamnochamechortobiont, polyphage species. They begin to fly in mid-summer, live in meadow tugai.

Genus: Melanchra.

55. Melanchra pisi (Linnaeus, 1758).

Place and date of detection: Pitnyak: 10.VIII.2018; 1 ♂♂1 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 3 ♂♂, 5 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 1 ♂♂, 4 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 2 ♂♂, 1 ♀♀.

Note. Their flying time is from June to July. The caterpillar period is from July to September. They feed on plants, such as *Quercus, Betula, Salix, Acer, Crataegus, Lonicera* and other herbaceous plants. They winter in the pupa period. These are micropermesoterm, dendrochortobiont, polyphage species. They begin to fly in early summer, live in meadow tugai.

Subtribe Poliina.
Genus: Polia.

56. Polia bombycina (Hufnagel, 1766).

Place and date of detection: Pitnyak: 10.VIII.2018; 6 ♂♂11 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 6 ♂♂, 3 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 3 ♂♂, 6 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 11 ♂♂, 5 ♀♀.

Note. Their flying time is from June to July. The caterpillar period is from autumn to spring (May). They feed on plants, such as *Rumex, Taraxacum*, in autumn – *Betula*, in spring – *Vaccinium myrtillus, Ononis, and Rumex, Taráxacum*. They winter in the caterpillar period. These are micropermesoterm, dendrochortobiont, polyphage species. They begin to fly in early summer, live in meadow tugai.

57. Polia hepatica (Clerck, 1759).

Place and date of detection: Lower Amudarya State Biosphere Reserve: 10.VIII.2018; 5 ♂♂3 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 5 ♂♂, 3 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 4 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 1 ♀♀.

Note. Their flying time is from June to July. The caterpillar period is from the end of summer to May. They feed on plants, such as *Betula, Myrica, Salix, Crataegus*. They winter in the initial caterpillar period. These are micropermesoterm, dendrochamebiont, polyphage species. They begin to fly in early summer, live in tugai.

Tribe Orthosiini.
Genus: Orthosia.

58. Orthosia incerta (Hufnagel, 1766).

Place and date of detection: Pitnyak: 10.VIII.2018; 7 ♂♂13 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 7 ♂♂, 3 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 7 ♂♂, 4 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 7 ♂♂, 1 ♀♀.

Note. Their flying time is from March to May. The caterpillar period is from May to June. They feed on plants different trees and shrubs, but prefers *Betula, Quercus, Trifolium, Vaccinium*. They winter in the pupa period. These are micropermesoterm, dendrotamnobiont, polyphage species. They begin to fly in spring, live in meadow tugai.

59. Orthosia gothica (Linnaeus, 1758).

Place and date of detection: Pitnyak: 10.VIII. 2018; 34 ♂♂23 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 33 ♂♂, 23 ♀♀. Akhcha kul: 04.VII.2019; 33 ♂♂, 34 ♀♀. Tollik tugai: 23.VII.2018; 31 ♂♂, 11 ♀♀.

Note. Their flying time is from March to May. The caterpillar period is from May to June. They feed on plants, such as *Linden and Quercusa*, *Populus*, moreover, herbaceous plants. They winter in the pupa period. These are micropermesoterm, dendrotamnobiont, polyphage species. They begin to fly in spring, live in meadow tugai.

60. Orthosia cruda (Denis et Schiffermuller, 1775).

Place and date of detection: Lower Amudarya State Biosphere Reserve: 10.VIII.2018; 14 ♂♂13 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 13 ♂♂, 13 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 13 ♂♂, 14 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 11 ♂♂, 12 ♀♀.

Note. Their flying time is from March to April. The caterpillar period is from May to June. They feed on plants, such as *Quercus, Betula, Salix, Acer, Crataegus, Lonicera*. They winter in the pupa period. These are micropermesoterm, dendrotamnobiont, polyphage species. They begin to fly in spring, live in meadow tugai.

61. Orthosia opima (Hubner, 1809)

Place and date of detection: Pitnyak: 10.VIII.2018; 24 ♂♂23 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 3 ♂♂, 3 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 23 ♂♂,2 4 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 21 ♂♂,26 ♀♀.

Note. Their flying time is from March to May. The caterpillar period is from May to June. They feed on plants,

such as *Quercus, Salix, Betula, Artemisia vulgáris* and others. They winter in the pupa period. These are micropermesoterm, dendrotamnochamechortobiont, polyphage species. They begin to fly in spring, live in meadow tugai.

62. Orthosia populeti (Fabricius, 1775).

Place and date of detection: Lower Amudarya State Biosphere Reserve: 10.VIII.2018; 4 ♂♂1 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 5 ♂♂, 5 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 1 ♂♂, 4 ♀♀. Tollik tugai: 23.VII.2018; 4 ♂♂, 2 ♀♀.

Note. Their flying time is from March to April. The caterpillar period is from May to June. They feed on plants, such as *Populus tremula, Populus*. They winter in the pupa period. These are micromesotherm, dendrobiont, monophage species. They begin to fly in spring, live in meadow tugai.

Tribe Orthosiini.
Genus: Anorthoa.

63. Anorthoa munda (Denis et Schiffermuller, 1775).

Place and date of detection: Lower Amudarya State Biosphere Reserve: 10.VIII.2018; 1 ♂♂11 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 1 ♂♂, 7 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 3 ♂♂, 4 ♀♀. Tollik tugai: 23.VII.2018; 4 ♂♂, 4 ♀♀.

Note. Their flying time is from March to April, during the flowering of willows, from mid-March to the end of April. The caterpillar period is from May to June. They feed on plants, such as *Quercus, Ulmus, Populus, Alnus, and Salix,* and other trees. They winter in the pupa period. These are micropermesoterm, dendrotamnobiont, polyphage species. They begin to fly in spring, live in tugai.

Genus: Panolis

64. Panolis flammea (Denis et Schiffermuller, 1775).

Place and date of detection: Pitnyak: 10.VIII.2018; 22 ♂♂13 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 1 ♂♂, 2 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 7 ♂♂, 4 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 3 ♂♂, 1 ♀♀.

Note. Their flying time is from March to June. The caterpillar period is from June to July. They feed on coniferous trees, such as *Pinus, Picea*. The pupa winters. These are micropermesoterm, dendrobiont, oligophage species. They begin to fly in spring, live in tugai.

Tribe Xylenini.
Subtribe Pseudohadenina.
Genus: Eremohadena.

65. Eremohadena immunda (Eversmann, 1842).

Place and date of detection Pitnyak: 10.VIII.2018; 2 ♂♂4 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 2 ♂♂, 6 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 1 ♂♂, 9 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 5 ♂♂, 3♀♀.

Note. Their flying time is in May, June and, after aeration, in September. They are multi-cycle species. They feed on plants, such as Haloxylon, Salsola, Kochia, Atriplex (Falkovich 1969; Nekrasov et al. 1988).

Subfamily Amphipyrinae.
Tribe Psaphidini.
SubtribePsaphidina.
Genus: Allophyes.

66. Allophyes oxyacanthae (Linnaeus, 1758).

Place and date of detection: Pitnyak: 10.VIII.2018; 14 ♂♂13 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 3 ♂♂, 3 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 3 ♂♂, 4 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 1 ♂♂, 1 ♀♀.

Note. Their flying time is from September to the beginning of November. The caterpillar period is from April to the beginning of June. They feed on plants, such as *Prunus, Crataegus, Betula, Salix, Malus, Sorbus* and fruit trees. They winter in the egg period. These are micropermesoterm, dendrotamnobiont, polyphage species. They begin to fly in autumn, live in tugai.

Genus: Amphipyra.

67. Amphipyra pyramidea (Linnaeus, 1758).

Place and date of detection: Pitnyak: 10.VIII.2018; 11 ♂♂12 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 8 ♂♂, 1 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 3 ♂♂, 1 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 2 ♂♂, 2 ♀♀.

Note. Their flying time is from July to October. The caterpillar period is from May to June. They feed on plants, such as *Prunus, Quercus, Lonicera, Fraxinus, Ligustrum, Crataegus* and other trees and shrubs. These are micropermesoterm, dendrotamnobiont, polyphage species. They begin to fly in late summer, live in tugai. Their habitats are mixed, such as riparian forests, orchards, human settlements.

68. Amphipyra perflua (Fabricius, 1787).

Place and date of detection: Pitnyak: 10.VIII.2018; 6 ♂♂13 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 5 ♂♂, 1 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 3 ♂♂, 2 ♀♀. Tollik tugai: 27.VII.2018, 23.VII.2018; 3 ♂♂, 2 ♀♀.

Note. Their flying time is from July to the beginning of September (Koch, 1984). The caterpillar period is from April to June. They feed on plants, such as *Corylus, Prunus, Lonicera, Ulmus*, and other tress and shrubs.

Subfamily Dilobinae.
Genus: Diloba.

69. Diloba caeruleocephala (Linnaeus, 1758).

Place and date of detection: Lower Amudarya State Biosphere Reserve: 10.VIII.2018; 18 ♂♂13 ♀♀. Sulton Uvais mountains: 03.VI.2019, 04.VI.2019; 3 ♂♂, 1 ♀♀. Akhcha kul: 03.VII.2019, 04.VII.2019; 7 ♂♂, 4 ♀♀. Tollik tugai: 23.VII.2018; 4 ♂♂, 2 ♀♀.

Note. Their flying time is from September to October. The caterpillar period is from May to July. They feed

on plants, such as *Prunus, Crataegus, Sorbus, Malus, Crataegus, blackthorn*. They winter in the egg period. These are micropermesoterm, dendrotamnobiont, oligophage species. They begin to fly in autumn, live in meadow tugai.

3. Conclusions

In conclusion, this work describes 69 species of Noctuidae (s.l.) belonging to 44 genera and 9 subfamilies in the fauna of the Lower Amudarya region. Of the total number of species, seven species, such as (*Bryophila raptricula* (Den. Et Schiff., 1775), *Heliothis feildi* (Ershov, 1874), *Dichagyris forficula* (Eversvann, 1851), *Actebia sollers* (Christoph, 1877), *Anarta cociabilis* (Graslin, 1850), *Hadula ptochica* (Püngeler, 1900), *Mythimna distincta* (Moore, 1881)) were first reported on the territory of the Khorezm Oasis; 2 species, including (*Bryophila maeonis* (Lederer, 1865), *Saragosa siccanorum* (Staudinger, 1870)) were first reported for the Lower Amudarya region and 2 species, such as (*Cucullia improba* (Christoph, 1885), *Cucullia naruenensis* (Staudinger, 1879)) were first reported in adjacent territories. The boundaries of the ranges of some species have been clarified. It is interesting to find in the study area the acronictine Acronicta, which was previously known from the Khorezm Oasis from the old collection. Locations of *Lacanobia thalassina* (Hufnagel, 1766) in the upper reaches of the Lower Amudarya region significantly expand the understanding of the range of this very rare species, known only from a few finds from the Palaearctic, mainly from its eastern part. Taking into account the data published in the work of Dubatolov and Matov [4] , the fauna of the moths of the Lower Amudarya region (without its environs) has 100 species. This figure is far from the final, the projected number of moths species should be at least two hundred. In the future, studies to identify the moth fauna of the Lower Amudarya region will be continued.

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