



SHILAP Revista de lepidopterología

ISSN: 0300-5267

ISSN: 2340-4078

avives@orange.es

Sociedad Hispano-Luso-Americana de Lepidopterología  
España

Dubatolov, V. V.; Poltavsky, A. N.; Ilyina, E. V.  
Lithosiini and Arctiini of Daghestan (NE Caucasus) (Lepidoptera: Erebidae, Arctiinae)  
SHILAP Revista de lepidopterología, vol. 49, núm. 193, 2021, -Marzo, pp. 129-148  
Sociedad Hispano-Luso-Americana de Lepidopterología  
Madrid, España

Disponible en: <https://www.redalyc.org/articulo.oa?id=45568011>

- Cómo citar el artículo
- Número completo
- Más información del artículo
- Página de la revista en redalyc.org

redalyc.org

Sistema de Información Científica Redalyc

Red de Revistas Científicas de América Latina y el Caribe, España y Portugal  
Proyecto académico sin fines de lucro, desarrollado bajo la iniciativa de acceso  
abierto

## Lithosiini and Arctiini of Daghestan (NE Caucasus) (Lepidoptera: Erebidae, Arctiinae)

V. V. Dubatolov, A. N. Poltavsky & E. V. Ilyina

### Abstract

16 species of Lithosiini and 25 species of Arctiini (Erebidae: Arctiinae) are recorded from Daghestan, North-East Caucasus. Nine Lithosiini species and one Arctiini species (*Katha depressa* (Esper, 1787), *Manulea pygmaeola* (Doubleday, 1848), *M. lurideola* (Zincken, 1817.), *Cybosia mesomella* (Linnaeus, 1758), *Eilema caniolum* (Hübner, [1808]), *Atolmis rubricollis* (Linnaeus, 1758), *Pelosia muscerda* (Hufnagel, 1766), *Setina roscida* ([Denis & Schiffermüller], 1775), *Thumatha senex* (Hübner, [1808]), *Epatolmis caesarea* (Goeze, 1781)) were formerly not known from Daghestan territory. Localities, typical biotopes and imago flight period are provided for all species.

KEY WORDS: Lepidoptera, Erebidae, Arctiinae, Arctiini, Lithosiini, Caucasus, Daghestan, Russia.

### Lithosiini y Arctiini de Daguestán (NE Cáucaso) (Lepidoptera: Erebidae, Arctiinae)

### Resumen

Se registran 16 especies de Lithosiini y 25 especies de Arctiini (Erebidae: Arctiinae) de Daguestán, noreste del Cáucaso. Nueve especies de Lithosiini y una especie de Arctiini (*Katha depressa* (Esper, 1787), *Manulea pygmaeola* (Doubleday, 1848), *M. lurideola* (Zincken, 1817.), *Cybosia mesomella* (Linnaeus, 1758), *Eilema caniolum* (Hübner, [1808]), *Atolmis rubricollis* (Linnaeus, 1758), *Pelosia muscerda* (Hufnagel, 1766), *Setina roscida* ([Denis & Schiffermüller], 1775), *Thumatha senex* (Hübner, [1808]), *Epatolmis caesarea* (Goeze, 1781)) formalmente eran desconocidas del territorio de Daguestán. Se proporcionan para todas las especies localidades, biotopos típicos y periodo de vuelo de los imagos.

PALABRAS CLAVE: Lepidoptera, Erebidae, Arctiinae, Arctiini, Lithosiini, Cáucaso, Daguestán, Rusia.

### Introduction

The first collector of Arctiinae of Daghestan (North-Eastern Caucasus) was A. Becker, a professional supplier of herbaria and entomological collections to Russian and foreign museums (NEKRUTENKO, 1990), who visited this region three times in 1868 (Derbent), 1872 (Derbent, Madschalis, Kasumkent, Akhty) and 1880 (Akhty). He published his collections (BECKER, 1869, 1873, 1881) and among a variety of butterfly and moth groups, reported one species of lichen-moths and five species of tiger-moths (the modern names are given): *Manulea palliatella* (Scopoli, 1763), *Spiris striata* (Linnaeus, 1758), *Utetheisa pulchella* (Linnaeus, 1758), *Rhyparia purpurata* (Linnaeus, 1758), *Callimorpha dominula* (Linnaeus, 1758), *Eucharia festiva* (Hufnagel, 1766).

At the same time H. Christoph, along with studying the Lepidoptera of Krasnovodsk and Northern Iran, summarized the materials available to Grand Duke Nicholas Mikhailovich Romanoff from Daghestan (Derbent, Kurush, Magaramkent, Akhty) and reported for Daghestan 4 species of

lichen-moths and 6 species of tiger-moths (CHRISTOPH, 1877). Seven years later, a large report on the butterflies of the Caucasus was published by ROMANOFF (1884), in which he reported for Daghestan 6 species of Lithosiini and 12 species of Arctiini.

During the 20th-40th of the XXth century M. A. Rjabov actively collected moths of the subfamily Arctiinae in Daghestan. His collections were the first comprehensive as including almost all species to date known from this territory and covering almost the entire territory of the republic. During these years small collecting of moths, including tiger-moths, in Daghestan was carried out by other specialists of the Zoological Institute, for example, A. N. Kirichenko. A special mention should be made of the 1939 expedition to Daghestan of the staff of the Zoological Museum of the Kiev State University, in which L. A. Sheljuzhko took part. Unfortunately, the collections of Arctiinae in this expedition were poor and included just two species: *Spiris striata* (L.) and *Phragmatobia fuliginosa* (Linnaeus, 1758). These specimens were examined by V. V. Dubatolov in the 80th-90th of the XXth century, with additional findings of *Rhyarioides metelkana* (Lederer, 1861) (DUBATOLOV, 1996) and descriptions of *Ocnogyna armena daghestana* Dubatolov, 1996 (DUBATOLOV, 1996) and *Chelis reticulata transcaucasica* Dubatolov, 1988 (DUBATOLOV, 1988); the type series of the latter includes specimens from Daghestan also. Since 1992, the Fall Webworm (*Hyphantria cunea* (Drury, 1773)) began to be registered in Daghestan, but probably it had penetrated to this territory earlier. Materials from the Caucasus were published by V. V. Dubatolov both on Lithosiini (DUBATOLOV *et al.*, 1993) and on Arctiini (DUBATOLOV, 1991, 1994, 1996, 2008, 2010, 2019).

Since the 1990s collecting of Lepidoptera in Daghestan was actively continued, including Arctiini and Lithosiini. Occasional collecting was carried out by V. N. Kovtunovich and E. V. Nikolayeva (Moscow). But the most thorough research in recent years was carried out by E. V. Ilyina and A. N. Poltavsky. Since 1998, they have studied the species composition of Daghestan's Heterocera in all vertical zones from plains to high mountain areas by collecting moths by light. The main results of the research were published in a number of papers: on Noctuoidea (ILYINA, 2012; ILYINA & POLTAVSKY, 2014), on Pyraloidea (POLTAVSKY & ILYINA, 2016), on Geometridae (POLTAVSKY & ILYINA, 2018); and also in additions on mentioned groups of Lepidoptera (POLTAVSKY & ILYINA, 2016; POLTAVSKY & ILYINA, 2019).

## Material and methods

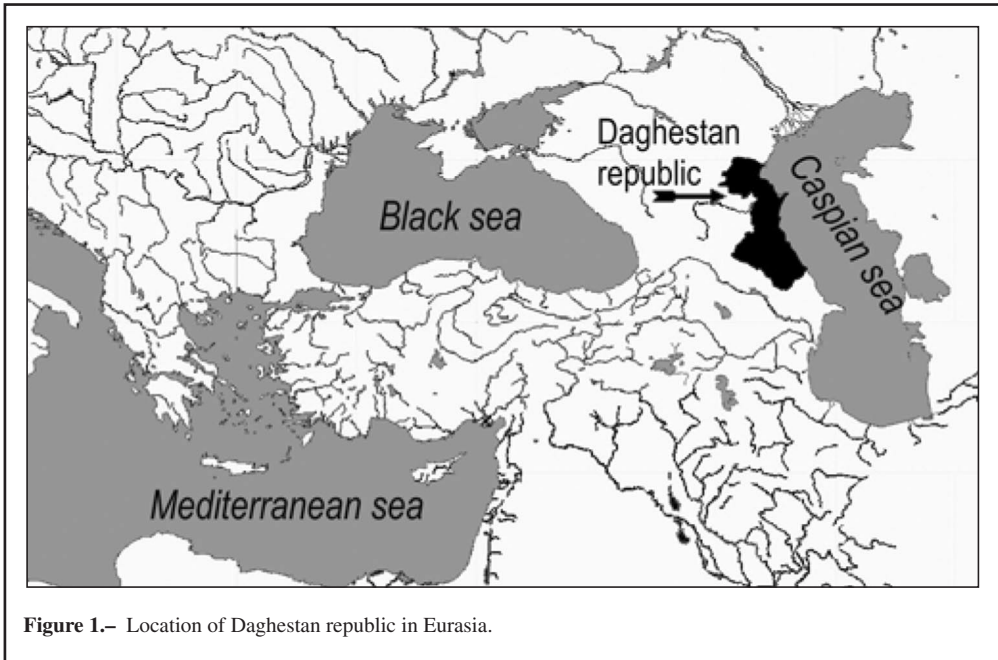
Simultaneously with studying Noctuidae, Pyralidae and Geometridae, other families of Lepidoptera, including Arctiinae, were collected and identified. A small number of Arctiinae species were collected on the territory of Daghestan in 2001-2003, and the main bulk in 2014-2019: totally: 29 species, 371 specimens in 64 locations; this took 111 nights of light-catching. During the same period 154 species 1398 specimens of Pyralidae; 429 species, 3834 specimens of Noctuidae; 171 species, 781 specimens of Geometridae were collected. Thus, the Arctiinae in Daghestan are significantly inferior to other taxa of Heterocera both in species diversity and abundance. Totally 36 species of Arctiinae are indicated for the territory of Daghestan (DUBATOLOV, 2019).

After examination of the collection of Arctiinae of the Zoological Institute of the Russian Academy of Sciences and other scientific collections (mainly collections of the late XIXth - mid XXth century), the general list of the family Arctiidae of Daghestan was expanded to 41 species (from 110 localities). The following complete list of Arctiinae of the Daghestan Republic by old and modern collectors is published for the first time. The number and sexes of specimens and their collecting localities are provided for each species. The data from institution collections specified collector names, not specified - our original catches. This material keeping in the private collection

of A. N. Poltavsky (Rostov-on-Don, Russia). The species list follows the system of Arctiinae on the catalogue of DUBATOLOV (2010, 2019).

### Nature's Conditions of Daghestan

The territory of the Daghestan Republic covers 50.3 square kilometers, located on the eastern part of the North Caucasus along the west coast of the Caspian Sea. It extends from the north to the south for 435 km and in its maximum width in the southern part from the west to the east for 250 km (Fig. 1).



**Figure 1.**– Location of Daghestan republic in Eurasia.

The southern half of the Republic is a mountainous area with contrasting nature conditions. The northern half is occupied by very monotonous plain lowlands. Some parts of this plain lay under the sea level (-28 m).

The Caspian Lowland consists of ancient and present river alluviums. There is no fresh water on large areas. There are 1,200 km<sup>2</sup> of saline and salt marshes, and about the same areas of sandy deserts. In the eastern part of the Lowland there are the stable sands. In the western part there are unstable sandy barchans. The greatest rivers of Daghestan are Kuma, Terek, Sulak in the north and Samur in the south (POLTAVSKY & ILYINA, 2002).

The vegetation in the lowlands is rather variable: psammophytes on sands, dry polyherb steppes with *Artemisia* and *Salsola* complexes. In the Samur River wetlands there are grassy meadows and tugay forests.

The Coastal Lowland spreads like a narrow ribbon to the south from the city of Makhachkala. The Foothills arise to the west and southwest of it. This zone is 20-40 km wide. It spreads from the western to the southern boundaries of Daghestan with altitudes of 150-800 m a.s.l. The Foothills ranges consist of soft rocks, which results in a smooth erosion relief. Semidesert landscapes reach

400 m a.s.l. in the Foothills and then replaced by steppes up to 800 m a.s.l. The steep windward slopes of the Foothills are covered with a tangled low-woods (Fig. 2).

Above the Foothills there is a zone of Front mountain-ranges with oak and beech forests. The tops of the ranges are covered by subalpine meadows. In different regions of the Republic they occupies different heights: 500-600 m a.s.l. in Tabasaran and Kaitag Districts, 800-1500 m a.s.l. on the northern slopes of Salatau Range and the eastern slopes of Gymrin Range. The Front ranges zone surrounds the Central mountain area of Daghestan. This is the great mountain area including many separated ranges, plateaus and deep depressions. Some mountain peaks there are rather high - up to 2959 m a.s.l. The southern slopes of the Andisky, Salatau and Gymrin Ranges are xerophytous with specific plant formations such as: shibljak (bushes) and frigana (bushes and herbs). There are some woods but only on the northern slopes of the Andisky Koisu Valley, the Arakmeer Range and near the Gunib Plateau, at an altitude of 1500 m a.s.l. and higher. On the more gentle slopes, the forests were cut down, the soil tilled and used for agriculture or used like mesophytous meadows. The subalpic zone in this area begins from the heights of 2000-2200 m a.s.l. (POLTAVSKY & ILYINA, 2002).

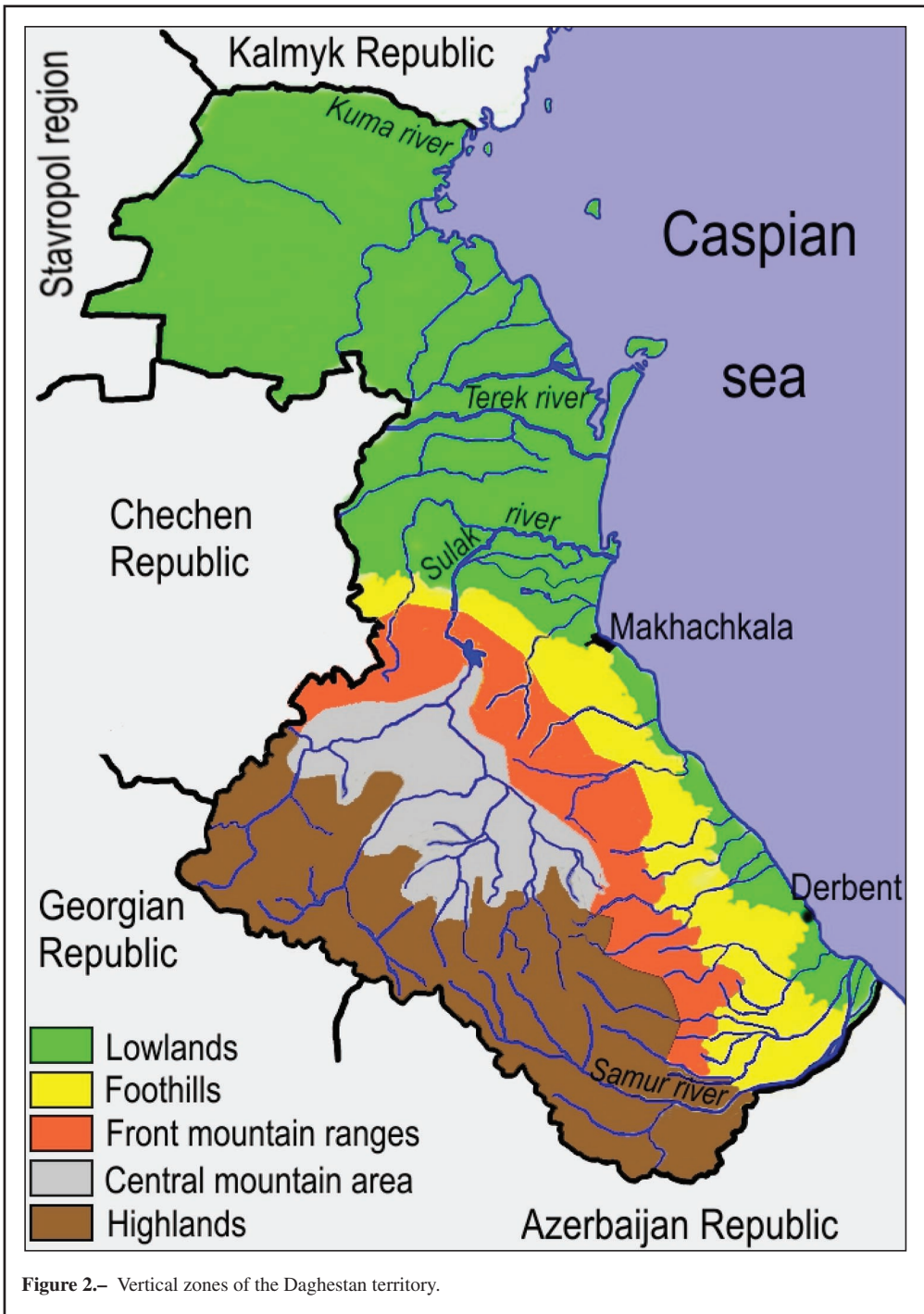
The Daghestan Highland covers southwest part of the Republic and includes the Bokovoy (Lateral) and Vodorazdelny (Watershed) mountain ranges with the elevation of 3500-4400 m (a.s.l.). The Bokovoy mountain range is cut by river valleys into a few separate ranges: Bogosky, Nukatl, Samursky and others. The Highland Daghestan is characterized by relatively high precipitation, but at the same time valleys of large rivers (especially Samur) are dry. The main zonal elements in this area are the mountain steppes. The forest zone is distinct enough in the basins of the Avarsky and Andisky Koisu Rivers and reaches the elevations of 2200-2400 m a.s.l. In the base of the forest zone there are broad-leaves and pine woods, in the mid-forest zone there are only pine woods and up in the 2000 m a.s.l. range there are birch woods and ash-trees. Actually only 7% of the Daghestan territory is covered by forests.

The sub-alpine zone in the high mountain area covers the wide territories between 1770-1900 and 2500-2600 m a.s.l. The great part of subalpine meadows has some signs of steppes. In the western part of the area rhododendron associations (*Rhododendron caucasicum* Pall) are widespread. The alpine zone begins from the elevations of approximately 2500-2600 m a.s.l. and extends up to the everlasting snows (POLTAVSKY & ILYINA, 2002).

## Locations of Arctiinae collecting in Daghestan

### LOWLAND DAGHESTAN

Papas - station in Kayakent district; Tushilovka and Kirov (Kirov's name) - villages in Kizlijar district; Tiulenij - island in Kizlijar bay of Caspian sea; Kizlijar - town, district center; Turali - settlement to the south from Makhachkala; Sulak - village in urban district of Makhachkala; Karaman-2 - settlement in southern suburb of Makhachkala; Magaramkent - village, district center of Magaramkent district; Samur wildlife area - in Magaramkent district, cordon; Gazardkam-Kazmalyar and Primorsky - village and settlement in Magaramkent district; Curve gorge and Almalo - settlement and village in Kumtorkale district; Agrakhansky wildlife area, Agrakhan Bay and Agrakhan Peninsula in Babayurt district; Berikey - village in Derbent district; Terekli-mekteb - village, district center of Nogay district, 22 m a.s.l.; Leninaul - village in Nogay district; Yuzhno-Sukhokumsk - town in Nogay district; Terskaya - biostation in Babayurt district; Adiel-Yangiyurt (5 m a.s.l.) and Germenchik (-1 m a.s.l.) - villages in Babayurt district; Shamkhal - settlement in urban district of Makhachkala (-1 m a.s.l.); Beligy - station in Derbent district on Rubas river; Caspiysk and Izberbash - town and settlement in Karabudakhkent district.





## FOOTHILL DAGHESTAN

Makhachkala (till 1921 - Petrovsk-port) - town, the capital of Daghestan; Ak-gjol - the lake in Makhachkala vicinity; Kanabur - the ridge southern from Makhachkala; Eminkhyur - village in Suleyman-Stalsky district; Kumtorkale - station and district center, 300 m a.s.l.; Gubden (500 m a.s.l.) and Gurbuki (500 m a.s.l.) - villages in Karabudakhkent district; Gubden gorge (900 m a.s.l.) - 20 km NW from Gubden; Sarykum - barkhan in Kumtorkale district, 200-250 m a.s.l.; Shura-Ozen - river in Kumtorkale district, 200-250 m a.s.l.; Talgi - village 8 km S Makhachkala, 150 m a.s.l.; Tarki - settlement on Tarki-tau mount, southern vicinity of Makhachkala; Derbent - town, district center; Rubas - river in Derbent district; Karabudakhkent - village, district center, 240 m a.s.l.; Sergokala - village, district center 500, m a.s.l.; Vanashi-makhi - village in Sergokala district; Agatch-aul - village in Karabudakhkent district; Talginsky gorge in Buynaksk district; Kaptchugai - village in Buynaksk district; in Buynaksk pass - on Narat-tiube ridge; Chirkey (409 m a.s.l.) Arkas (50 m a.s.l.) - villages in Buynaksk district; Khasaviurt - town, district center (121 m a.s.l.); Kiziliurt - town, district center (115 m a.s.l.).

## FRONT MOUNTAIN RANGES OF DAGHESTAN

Termenlik - camp site in Buynaksk district on Gymrin ridge, 1200 m a.s.l.; Upper Kazanishche (800-1000 m a.s.l.), Lower Ishkarty (862 m a.s.l.) and Chirkey (409 m a.s.l.) - villages in Buynaksk district; Dylm (800-1500 m a.s.l.), Dubki (860 m a.s.l.), Gertma (1200 m a.s.l.) and Akhsu (1500 m a.s.l.) - villages in Kazbek district; Mezhyul - village in Khiv district, 800 m a.s.l.; Samur ridge in Magaramkent district; Barshamay (800 m a.s.l.), Madschalis (400 m a.s.l.) and Karatsan (505 m a.s.l.) - villages in Kaytagh district; Ersi (800 m a.s.l.) and Khapil (677 m a.s.l.) - villages in Tabasaran district, Meusisha - village in Dakhadaev district, 1439 m a.s.l.; Ukjuz-tau - mount in the south of Buynaksk district.

## CENTRAL MOUNTAIN AREA OF DAGHESTAN

Gunib plateau (1700 m a.s.l.) and Gunib village (1500 m a.s.l.) in Gunib district; Levashi - village, district center (1269 m a.s.l.); Tsudakhar (1100 m a.s.l.) and Khadjalmakhi (1100 m a.s.l.) - villages in Levashi district; Sogratl (1573 m a.s.l.), Salty (1500-1700 m a.s.l.) and Keger (1600 m a.s.l.) - villages in Gunib district; Harakhi (1500 m a.s.l.) and Uzdalroso (1700 m a.s.l.) - villages in Khunzakh district; Chirkata (425 m a.s.l.), Danukh (1500 m a.s.l.), Araderikh (1700 m a.s.l.), Ingishi (1700 m a.s.l.) - village in Gumbet district; Balakhani - village in Untsukul district, (1700 m a.s.l.).

## HIGHLAND DAGHESTAN

Achty - village, district center (1200 m a.s.l.); Ussuch-tschaj - village, district center (847 m a.s.l.); Tokhota (1900 m a.s.l.), Salda, gorge of the river Dzhurmut (1800 m a.s.l.), Tchioroda (2058 m a.s.l.), Tshada-Kolob (Tshada-Kala) (1327 m a.s.l.) - villages in Tljarata district; Karata (1500 m a.s.l.) and Lologonitl (2000 m a.s.l.) - villages in Akhvakh district, Boghoss ridge; Kufa (1500 m a.s.l.), Rutul (1300 m a.s.l.), Hnyukh (2100 m a.s.l.), Dzhinykh (2216 m a.s.l.) and Kala (1500 m a.s.l.) - villages in Rutul district; Itsari (1500-1700 m a.s.l.) and Urtsaki (1500 m a.s.l.) - villages in Dakhaday district; Tpigh (1500 m a.s.l.), Misi (1817 m a.s.l.), Tsirkhe (1500 m a.s.l.), Burshag (2000 m a.s.l.), Chirag (2000 m a.s.l.) and Shari (1700 m a.s.l.) - villages in Aghul district; Kurush - village in Dokuzpary district, 2500 m a.s.l.; Upper Gakvari (2000 m a.s.l.), Ashia (2100 m a.s.l.), Tindi (1600 m a.s.l.), Aknada (1733 m a.s.l.) and Agvali (800 m a.s.l.) - villages in Tshamada district; Tidib - village in Shamyl district, 1327 m a.s.l.

## Abbreviations

ZIN - Zoological Institute of the Academy of Sciences of Russia (St. Petersburg)  
GDNMR - collection of the Grand Duke Nicholas Romanoff; ZMKSU - Zoological Museum of Kiev's State University (Kiev)

- SZMN - Siberian Zoological Museum of the Institute of Animal Systematics and Ecology of the Siberian Branch of the Russian Academy of Sciences (Novosibirsk)  
 ZMMU - Zoological Museum of the Moscow State University (Moscow); m a.s.l. - meters above the sea level.

Family Erebidae Leach, [1815]  
 Subfamily Arctiinae Leach, [1815]  
 Tribe Lithosiini Billberg, 1820

*Katha depressa* (Esper, 1787)

Material: Derbent, 1 ♂ (ZIN: GDNMR); Agatch-aul, 1 ♂, 28-VIII-1940 (ZIN: coll. M. Rjabov); Samur wildlife area, 1 ♂, 1 ♀, 4-VII-2019.

A trans-Palaearctic forest species. It is quite rare in the Caucasus but besides Daghestan, is known from Krasnodar Region, including the Black Sea coast. It lives on the piedmont plain and in the foothills, in forests. Imago are active in late June - the first half of July, as well as in August and early September. In Daghestan moth specimens were caught by the light at oak/hornbeam forest (Samur wildlife area).

*Wittia sororcula* (Hufnagel, 1766)

[*Lithosia*] *sororcula*, ROMANOFF, 1884: 85 (Derbent)

Material: Beligy, 1 ♂, 25-IV-1926 (ZIN: coll. M. Rjabov); Tarki, 1 ♂, 26-V-1933, 1 ♀, 9-VI-1946 (ZIN: coll. M. Rjabov); Sergokala (Deshi Agar), 1 ♂, V-1946 (ZIN: coll. M. Rjabov); Derbent, 1 ♀ (ZIN: GDNMR - Romaroff); Urtsaki, 3 ♂♂, 29-30-VI-2003 (ZIN: E. Ilyina); Tsirkhe, 1 ♂, 10-VII-2003 (ZIN: E. Ilyina); Primorsky, 3 ♂♂, 16-21-V-1992 (SZMN: Kovtunovitch); Khasaviurt, 1 ♂, 13-V-1992 (SZMN: Kovtunovitch); Dylm, 1 ♂, 24-VII-2013; Samur wildlife area, 4 ♂♂, 4 ♀♀, 24-VII-2019.

An amphi-Palaearctic subboreal forest species, with a range gap between Lake Baikal (Irkutsk region) and the Zeya River in the Amur region. It is common almost everywhere on the northern slope of the Caucasus; up to 1500 m a.s.l. Imagines are active from May (sometimes from late April) to late June; rarely from July to the end of August. In Daghestan it was caught by the light in oak-hornbeam forest (Samur wildlife area, Dylm).

*Manulea complana* (Linnaeus, 1758)

*Lithosia complana*, CHRISTOPH, 1877: 205 (Derbent); ROMANOFF, 1884: 84 (Derbent)

Material: Makhachkala, 1 ♂, 16-X-1925; larva 26-V-1933, cocoon 28-V-1933, imago 1 ♂, 14-VI-1933; 1 ♂, 19-VI-1933 (ZIN: coll. M. Rjabov); Kumtorkale, 2 ♂♂, 26-IX-1926, 1 ♂, 7-X-1940 (ZIN: coll. M. Rjabov); Ak-gjol, 2 ♀♀, 22-IX-1933 (ZIN: coll. M. Rjabov); Tarki, 1 ♀, 18-IX-1939; larva on oak, 24-V-1940, imago 1 ♀, 12-XI-1940; 1 ♂, 23-VII-1946 (ZIN: coll. M. Rjabov); Kapchugai, 1 ♀, 5-IX-1937 (ZIN: coll. M. Rjabov); Upper Kazanishche, 1 ex., 25-VI-1999; Urtsaki, 1 ♂, 29-30-VI-2003 (ZIN: E. Ilyina); Rutul, 1 ♀, 7-10-VII-2004 (ZIN: E. Ilyina); Gubden gorge, 1 ♂, 3 ♀♀, 18-19-VII-2006 (SZMN: E. Nikolaeva, D. Morgun); Barshamay, 6 ♀♀, 29-VI-2010; Samur wildlife area, 1 ex., 24-VII-2019.

A west-central Palaearctic (or transpalaearctic if an old find in Korea (BRYK, 1948, as *Eilema angustiala*) has a correct label) meadow-steppe species. In the Caucasus it is quite numerous and found everywhere, up to an altitude of 1500 m a.s.l. Males are well diagnosed by the presence of a bundle of androconial scales below the fore wings in the middle of the costal edge. However, a dark longitudinal stroke from below the hind wings along the costal edge at some southern instances of *M. complana* may disappear, making the species easy to confuse with the similar *M. pseudocomplana* (Daniel, 1939) (DANIEL, 1939), whose males completely lack the bundle of androconial scales below the front wings. Imagines are active from mid-June to mid-October, probably in two generations. Moths were caught by light in a variety of biotopes: scaffolding forests, shrub slopes of gorges with herbs diversity (Gubden).



*Manulea palliatella* (Scopoli, 1763)*Lithosia unita*, BECKER, 1869: 193 (Derbent)[*Lithosia*] *unita* var. *palleola* (Hübner, [1827]), ROMANOFF, 1884: 84 (Derbent)

Material: Khadjalmakhi, 1 ♂, 25-IX-1932, 1 ♀, 26-IX-1932, 1 ♂, 1 ♀, 27-IX-1932 (ZIN: coll. M. Rjabov); Akhty, 1 ♀, 28-VIII-1933 (ZIN: coll. M. Rjabov); Kaptchugai, 1 ♀ + 1 ex. lost belly, 17-VIII-1937, 1 ♀, 16-VIII-1940, 2 ex. lost belly, 18-VIII-1940, 1 ex. Lost belly, 21-VIII-1940 (ZIN: coll. M. Rjabov); Derbent, 1 ♂ + 1 ♀ (ZIN: coll. Acad. Petrop); river Rubas, steppe, 1 ♂ + 1 ♀, 17-VIII (ZIN: coll. M. Rjabov); Levashi, 3 ♂♂, 28-VII-1940 (ZIN: coll. M. Rjabov); Tarki, 2 ♂♂, 25-VIII-1940, 1 ♂, 19-IX-1947 (ZIN: coll. M. Rjabov).

A west-central Palaearctic semidesertic and steppe species. In the Caucasus it is found almost everywhere in arid places. Imagines are active from the second half of July till the end of September; developing in one generation.

*Manulea pygmaeola* (Doubleday, 1848)

Material: Germenchik, 1 ♂, 27-V-1921 (ZIN: coll. M. Rjabov); Derbent, 1 ♂, 11-VII-1928; 1 ♂, 11-VI-1931 (ZIN: coll. M. Rjabov); Makhachkala, 2 ♂♂, 19-VI-1933, 1 ex., 10-VII-1933 (ZIN: coll. M. Rjabov), 1 ♂, 28-VI-1940 (ZIN); Kaptchugai, 1 ♂, 1 ♀, 2-3-VI-1932, 1 ♂, 3-VI-1932, 1 ♂ + 1 ♀, 5-VI-1937, 1 ♂, 5-IX-1937, 1 ex., 17-VIII-1940, 2 ♀♀, 18-VIII-1940 (ZIN); Upper Kazanishche, 1 ♂, 1 ♀, 17-VI-1941 (ZIN: coll. M. Rjabov); Buynaksk, 1 ♂, 7-IX-1939 (ZIN: coll. M. Rjabov); Tarki, 1 ♂, 24-VIII-1937, 1 ♂, 11-IX-1939 (ZIN), 2 ♂♂, 5-6-VI-1940, 1 ♂, 18-VIII-1940, 1 ♂, 9-VI-1946, 1 ♂, 31-V-1941; 1 ♂, 22-VII-1944 (ZIN: coll. M. Rjabov); Agatch-aul, 2 ♂♂, 1 ex., 28-VIII-1940 (ZIN: coll. M. Rjabov); Levashi, 3 ♂♂, 28-29-VII-1940 (ZIN: coll. M. Rjabov); Beligy, 3 ♀♀, 19-VIII (ZIN: coll. M. Rjabov); Barshamay, 2 ♂♂, 29-VI-2010; 1 ♂, Salda, 17-VII-2019.

A west-central Palaearctic meadow-steppe species, in Southern Siberia penetrating east to the Yenisei River. It is found everywhere in the Caucasus. Imagines are active from late May to mid-September developing probably in two generations. In Salda moth was caught to the light on the river bank with diverse herbs next to a mountain mixed forest area.

Note. Some specimens in ZIN collection were wrongly determined as *Eilema lutarella* (L.)

*Manulea lutarella* (Linnaeus, 1758)[*Lithosia*] *lutarella*, CHRISTOPH, 1877: 205 (Kurusch)

Material: Gunib, northern slope, 1 ♂, 12-VII, 1 ♂, 25-VII (ZIN: coll. M. Rjabov).

A trans-Palaearctic meadow species. In the Caucasus it is rare and so far known only from Stavropol Region, Kabardino-Balkaria and Daghestan. Imagines are active in the second and third decades of July, as well as in the first half of August.

*Manulea (Nuea) lurideola* (Zincken, 1817)

Material: 1 ♂, Salty, 7-VIII-1890 (ZIN: GDNMR), 1 ♂, 28-VII-1893 (ZIN: Mlokosevich); Arkas, 1 ♂, 18-VI-1941 (ZIN: coll. M. Rjabov); Misi, 1 ♀, 12-13-VII-2006 (SZMN: E. Nikolaeva, D. Morgun.); Dylm, 1 ♂, 24-VII-2013; Salda, 1 ♂, 17-VII-2019.

A west central Palaearctic meadow species distributed east to Lake Baikal. In the Caucasus it is known almost from everywhere except for Osetia. Imagines are active from mid-June until the end of August. In Salda moth was caught to the light on the river bank with diverse herbs next to a mountain mixed forest area.

*Cybosia mesomella* (Linnaeus, 1758)

Material: Ukjuz-tau, 4 ♂♂, 6-VII-1940 (ZIN: coll. M. Rjabov).

A west-central Palaearctic forest species, in South Siberia spread east to Lake Baikal. It is found in both the east and west Caucasus (DUBATOLOV *et al.*, 1993). Imagines are active from late May to early July.

*Eilema caniolum* (Hübner, [1808])

Material: Derbent, 1 ♂, 31-VII-1910 (ZIN: K. Satunini); Levashi, larva in cocoon VII-1926, imago 1 ♀, 3-VIII-1926 (ZIN); Makhachkala, 1 ♀, 26-VIII-1946 (ZIN: coll. M. Rjabov).

A western Palaearctic species. In Russia, it is reliably known from the vicinity of Taganrog, North-West Caucasus (Black Sea coast) and North-East Caucasus (Daghestan) (DUBATOLOV *et al.*, 1993; DUBATOLOV, 2008, 2019). In the Catalogue of Lepidoptera of Russia (SINEV, 2019) region #15 (North Ural) is incorrectly indicated instead of region #14 (East Caucasus). The species is easily distinguished from the externally similar species of the genus *Manulea* Wallengren, 1863 by simple oval valves without any processes, which is not very typical for the members of the Lithosiina subtribe. Imagines are active in June-August.

*Atolmis rubricollis* (Linnaeus, 1758)

Material: Tarki, 1 ♀, 9-VI-1946 (ZIN: coll. M. Rjabov); Barshamay, 1 ex., 29-VI-2010; Kufa, 6 ex., 20-VII-2017.

A trans-Palaearctic forest species. In the Caucasus it is very rare recorded only in Teberda (Karachai-Cherkessia) and Daghestan. Imagines are active in June-July. In Kufa lichen-moths were caught by light on the northern slope on a herb meadow.

*Pelosia muscerda* (Hufnagel, 1766)

*Lithosia muscerda*, CHRISTOPH, 1877: 205 (Derbent); ROMANOFF, 1884: 84 (Derbent)

Material: Makhachkala, larvae on vine tree, 1 ♀, 19-VI-1933, 1 ♂, 14-IX-1940 (ZIN: coll. M. Rjabov); Kaptchugai, 1 ♀, 18-VIII-1940 (ZIN: coll. M. Rjabov); Kumtorkale, 2 ex., 18-VI-2019.

A trans-Palaearctic forest species. In the Caucasus it is common both in Krasnodar Region and Daghestan. Imagines are active from the late May to the early July, then from August to the first half of September. Probably two generations take place during summer.

*Pelosia obtusa* (Herrich-Schäffer, 1847)

*Paida obtusa*, ROMANOFF, 1884: 83 (Derbent)

Material: Kaptchugai, 6 ♂♂, 7 ♀♀, 21-22-VIII-1940 (ZIN: coll. M. Rjabov); Tarki, 1 ♂, 15-VII-1947 (ZIN: coll. M. Rjabov).

A trans-Palaearctic subboreal species which prefers moderate arid areas. This species is rarely caught by light-trapping. In the Caucasus it was known from Krasnodar, 1 ♂, 1-11-VIII-2016, A. N. Streltsov leg., and from three locations in Daghestan. Imagines are active from mid July to the end of August they occur near water.

*Lithosia quadra* (Linnaeus, 1758)

*Lithosia quadra quadra*, DUBATOLOV *et al.*, 2016: 180 (Tarki, Ak-gjol, Derbent, 8 km S Makhachkala, Talgi, Kapchugai, Arkas)

Material: Derbent, 1 ♀, 1-IX-1933 (ZIN), 3 ♀♀, 28-VIII-1974 (SZMN); Ak-gjol, 1 ♂, 4-X-1939 (ZIN); Kaptchugai, 1 ♀, 22-VIII-1940 (ZIN: coll. M. Rjabov); Arkas, 1 ♂, 18-VI-1941 (ZIN: coll. M. Rjabov); Tarki, 1 ♀, 23-VII-1946 (ZIN: coll. M. Rjabov); Rutul, 2 ♀♀, VI-1992 (ZIN: E. Ilyina); Karata, 1 ex., 8-VIII-2002; Mezghyul, 1 ex., 17-VI-2003; Burshag, 1 ♂, 10-11-VII-2003 (ZIN: Z. Musaeveà); Tpigh, 3 ♂♂, 8-VII-2003 (ZIN: E. Ilyina); Gertma, 1 ♀, 28-VII-2003 (ZIN: E. Ilyina); Talgi, 1 ♂, 1 ♀, 24-VI-2004 (Museum Witt: coll. Kostjuk, Tikhonov); Hnyukh, 3 ♂♂, 10-VII-2004 (ZIN: E. Ilyina); plateau Gunib, 2 ex., 18-VII-2015, Salda, 1 ex., 18-VIII-2015, 2 ex., 17-VIII-2017; Sarykum, 1 ex., 9-IX-2017; Karaman-2, 1 ex., 12-VII-2017; Kufa, 4 ex., 20-VII-2017; Termenlik, 1 ex., 4-VII-2018.

An amphi-Palaearctic nemoral forest species found throughout the north Caucasus (DUBATOLOV *et al.*, 2016). Imagines are active from June to early October. The species develops probably in two generations or more. Moths are caught in grasslands of various types (mesophytic meadows, steppes) with presence of woody vegetation.

*Setina aurata* (Ménétrières, 1832)

*Setina irrorella*, CHRISTOPH, 1877: 205 (Kurusch); ROMANOFF, 1884: 84 (Balakhani)

Material: Daghestan, 1 ♂, VIII-1887 (ZIN); Salty, 1 ♂, 7-VIII-1890, 1 ♂, 22-VIII-1892 (ZIN); Akhty, 1 ♂, 6-IX-1926 (ZIN: coll. M. Rjabov); Levashi, 1 ♂, 28-VII-1940 (ZIN: coll. M. Rjabov); Kapchugai, 1 ♂, 17-VI-1945 (ZIN); Gunib, 1 ♂, 21-VIII-1987 (SZMN: Sergeev); Chirag, 1 ♂, 14-VII-2003 (ZIN: E. Ilyina); Misi, 1 ♂, 12-13-VII-2006 (SZMN: E. Nikolaeva, D. Morgun); Sulak, 1 ex., 26-VII-1999; Upper Kazanishche, 1 ex., 25-VI-1999; Tokhota 2 ♂♂, 10-20-VII-2001; Kala, 1 ex., 10-VII-2010; Vanashi-makhi, 1 ♂, 5-VIII-2015; Rutul, 1 ex., 10-VII-2017; Itsari, 1 ex., 3-VII-2019; Salda, 1 ♂, 25-VII-2014, 3 ♂♂, 17-VII-2019.

A mountain Minor-Asia-Caucasian endemics. It occurs in the upper forest belt and subalpine meadows at the elevations of 1500-2500 m a.s.l. Imagines are active from mid-June till early September. Moths were caught in meadows of various types (mesophytic, steppefied) and in forest edges.

*Setina roscida* ([Denis & Schiffermüller], 1775)

Material: Kumtorkale, imago on *Celtis*, *Astragalus*, 3 ♂♂, 1-IX-1945 (ZIN: coll. M. Rjabov); Rutul, on *Spirea*, 1 ♀, 31-VIII-1924 (ZIN).

A trans-Palaearctic meadow and steppe species. In the Caucasus it was noted in Adygea (Sohrai), on Mount Mashuk in the Stavropol region, in Lars (North Ossetia) and in Daghestan. Prefers open slopes. Imago active in late May - early June and late August - early September; in high mountains area - in July.

*\*Thumatha senex* (Hübner, [1808])

Material: Kapchugai, 2 ♂♂, 1 ♀, 20-VI-1940 (ZIN: coll. M. Rjabov); Makhachkala, 1 ♂, 26-VIII-1946 (ZIN: coll. M. Rjabov); Tarki, 1 ex., 20-VIII-1937 (ZIN: coll. M. Rjabov); Derbent, 24-VIII (ZIN: GDNMR).

A west-central Palaearctic southern-forest species. It is distributed east to Argun river basin in eastern Transbaikalia. Due to the small size and weakly sclerotized wings, it is infrequent in collections. In the Caucasus it was for the first time reported from Teberda (Karachay-Cherkessia) (DUBATOLOV, 2019) and Daghestan. Moths fly in late June - the first half of July and late August.

## Tribe Arctiini Leach, [1815]

*Callimorpha dominula* (Linnaeus, 1758)

*Callimorpha dominula rossica* Kolenati, 1846

*Callimorpha donna*, BECKER, 1873: 256 (Madschalis)

*Callimorpha dominula* var. *rossica*, CHRISTOPH, 1877: 205 (Petrowsk; Tarki; Akhty); ROMANOFF, 1884: 86 (Akhty)

*Callimorpha dominula*, Dubatolov, 2010: 85, map 6

Material: Daghestan, 1 ♂, VI-1902 (Sheljuzhko, ZMKSU); Upper Kazanishche, 11 ♂♂, 9 ♀♀, 15-VI-1946 (ZIN: coll. M. Rjabov); Lologonitl, 1 ♂ (Moscow: coll. E. Nikolaeva); Khapil, 1 ♂, 28-VI-2006 (ZIN: Kurbanova); Meusisha, 1 ex., 5-VII-1994; Rutul, 1 ♂, 10-VII-1995, 1 ♂, 25-VII-1997; Kosob, 1 ♂, 8-VII-1999; Shari, 1 ex., 10-VIII-2000; Gunib, 1 ex., 4-VII-2002; Salda, 1 ex., 26-VII-2014; Dylym, 2 ex., 15-VII-2017; Termenlik, 1 ex., 4-VII-2018.

A west-Palaearctic species, not reported east of the Urals. In the mountains of the Caucasus it is common and represented by the local subspecies *C. dominula rossica* Kolenati, 1846 which has the hind wings yellow (typical form of the subspecies) or pink (f. *teberdina* Sheljuzhko, 1934). This subspecies, in addition to the Caucasus, also lives in eastern Turkey. It prefers the forest belt. Imagines are active from late May to early August. Moths were caught in mesophytic high herbage, more often near small rivers.

*Euplagia quadripunctaria* (Poda, 1761)

*Euplagia quadripunctaria*, DUBATOLOV, 2010: 86, map 16

Material: Keger, 1 ex., 6-VII-2002; Karata, 1 ex., 10-VIII-2002; Kanabur, 1 ex., 10-VIII-2003;

Rutul, 1 ex., 15-VII-2004; Makhachkala, 1 ex., 17-VII-2006 (Moscow: coll. E. Nicolaeva); Khapil, 1 ♀, 31-VII-2007, 2 ♂♂, 14-17-VIII-2007 (ZIN: Kurbanova); Salda, 1 ex., 18-VIII-2015; Karatsan, 1 ex., 31-VII-2010; Samur wildlife area, 1 ex., 12-VII-2018.

A west-Palaearctic species also not penetrating east of the Ural. It is found throughout the Caucasus. The species inhabits meadow mountain slopes, gorges, glades and forest swamps. Imagines are active from early July till early September. The moths were found among wood vegetation in daylight on trunks; in Keger, Karata, Salda - in pine forest, in Kanabur - in oak forest, in the Samur wildlife area - in oak-hornbeam forest, in Rutul - in a juniper belt and pine forest.

*Cymbalophora rivularis* (Ménétrières, 1832)

*Euprepia Rivularis*, CHRISTOPH, 1877: 205 (Derbent); ROMANOFF, 1884: 88 (Derbent)

*Cymbalophora rivularis*, DUBATOLOV, 1996: 41 (Daghestan); DUBATOLOV, 2010: 7, 88, map 26

Material: Derbent, 1 ♂, 15-X-1875 (ZIN: GDNMR - Komaroff), 1 ♂, 1-IX-1928 (ZIN: Samoilov); Beligy, ex larva, 1 ♀, 13-XI-1926 (ZIN: M. Rjabov); Kumtorkale, 1 ♂, 30-IX-1926 (ZIN: M. Rjabov); Tarki, 3 ♂♂, 24-IX-1933, 6 ♂♂, 5-X-1937, 24 ♂♂, 18-IX-1939, 1 ♂, 11-VIII-1941, 1 ♀, 20-VIII-1941, 2 ♀♀, 23-25-VIII-1941 (ZIN: M. Rjabov, ZMKSU, SZMN); ex larva (on *Phlomis*) ex pupa 1 ♀, 6-IX-1933 (larva V-1933), 3 ♀♀, 15-VIII-20-VIII-1940, 1 ♀, 5-IX-1940 (larva V-1940), 1 ♂, 10-VIII-1941, 2 ♀♀, 11-14-VIII-1941, 10-IX-941 (larva V-1941, pupa 18-VIII-1941) (ZIN: M. Rjabov); Kaptschugai, 4 ♂♂, 10-IX-1937 (ZIN: M. Rjabov; ZMMU: Tsvetaev), 1 ♂, 2-X-1937, 2 ♂♂, 2-X-1940 (ZIN); Ak-gjol, 10 ♂♂, 10-IX-1939, 2 ♂♂, 2 ♀♀, 17-IX-1939, 5 ♂♂, 8-27-IX-1940, 1 ♂, 13-IX-1947 (ZIN: M. Rjabov, SZMN); Kurush, 1 ex., 19-VIII-1990; Khapil, 1 ♂, 25-IX-2007 (ZIN: Kurbanova); Burshag, 1 ex., 23-VII-2007; Salda, 1 ex., 17-VIII-2017; Sarykum, 3 ex., 16-30-IX-2017.

A Mediterranean-Caucasian species. Although its main range covers the eastern part of the North Caucasus, Transcaucasia, north-western Iran and eastern Turkey, local populations are known from Central Italy, Northern Macedonia, Northern Greece, Southeastern Bulgaria and from the Black Sea coast of Ukraine (Kherson). It lives in arid shrub areas. A tiger-moth with late-summer and autumn activity, flying from mid-August to mid-October or even later. M. A. Rjabov noted the feeding of caterpillars on *Phlomis*. In the Daghestan tiger-moths were caught on sections of stepped meadows.

*Tyria jacobaeae* (Linnaeus, 1758)

*Euchelia jacobaeae*, CHRISTOPH, 1877: 205 (Derbent); ROMANOFF, 1884: 85 (Derbent)

*Tyria jacobaeae*, DUBATOLOV, 2010: 88, map 27

Material: Beligy, 1 ♂, 26-VII-1933 (ZIN: M. Rjabov); Tchoroda, 22-VI-1889 (ZIN: GDNMR); Tshada-Kolob, 2 ♂♂, 12-V-1902 (ZMKSU: Galkin); Ersi, 1 ex., 23-VII-2010; Curve gorge, 2 ex., 1-V-2016).

A west-central Palaearctic species. It is found in Siberia east to the Yenisei River; everywhere in the Caucasus. It prefers open stepped areas. Imagines are active from May to late July; higher in the mountains occurring on later dates. Larvae feed on *Senecio*. In the Curve Gorge, these tiger-moths were caught on ruderal vegetation in the seaside zone surrounded by loch growths.

*Lacydes spectabilis* (Tauscher, 1806)

*Lacydes spectabilis*, DUBATOLOV, 2010: 89, map 31

Material: Khasaviurt, 1 ♂, 25-VIII-1928 (ZIN: M. Rjabov); Tarki, 1 ♂, 6-IX-1948 (ZIN: M. Rjabov).

A central Palaearctic species preferring semiarid habitats. It is known from eastern Ukraine (Lugansk region), eastern European Russia, steppes of South-Western Siberia, and across inland Asia from Eastern Turkey through Iran, Afghanistan, North-West Pakistan, entire Central Asia and Kazakhstan to North-West China (Xinjiang) and Western Mongolia. In the Caucasus it is known only from the Stavropol Region (the valley of Kuma and Budyonovsk), as well as from Daghestan, where it is also found in semiarid places. Tiger-moths with late summer and autumn activity, flying from the second half of August to the end of September. Caterpillars develop in spring and early summer. The pupas have a summer diapause (aestivation).

*Spiris striata* (Linnaeus, 1758)*Emydia grammica*, BECKER, 1869: 193 (Derbent)*Emydia striata*, ROMANOFF, 1884: 85 (Derbent)*Spiris striata*, DUBATOLOV, 2010: 89, map 33

Material: Derbent, 1 ♂, V-1878, 1 ♂, VI-1878 (ZIN: Romanoff); Beligy, 1 ♂, 2-IX-1939 (ZMKSU: Sheljuzhko); Tushilovka, 1 ♂, 28-V-1925 (ZIN); Samur wildlife area, 1 ex., 3-V-1986; Buynaksk pass, 2 ♂♂, 7-VI-1992 (SZMN: Kovtunovitch); Papas, 1 ex., 28-V-2002; Talginsky gorge, 1 ex., 29-V-2005; Kirov, 1 ♂, 10-VIII-2007 (ZIN); Eminkhyur, 19-V-2016 (1 ex.); Turali, 1 ex., 28-V-2016; Sarykum, 1 ex., 20-V-2005, 1 ex., 4-VI-2016; Gubden, 1 ex., 18-VI-2017; Upper Gakvari, 1 ex., 10-VII-2000; 1 ex., 25-VI-2017.

A subtrans-Palaearctic, penetrating into Central Yakutia and Eastern Transbaikalia. Prefers forest steppes and steppes. It is found throughout the Caucasus. Imagines are active from May until early September, probably in two generations. The second generation does not seem to develop every year. Tiger-moths were caught in meadows of various types (mesophytic, stepped, sandy).

*Utetheisa pulchella* (Linnaeus, 1758)*Callimorpha pulchra*, BECKER, 1869: 193 (Derbent)*Deiopeia Pulchella*, ROMANOFF, 1884: 85 (Derbent)

Material: Kaptchugai, 1 ♀, 5-IX-1937 (ZIN: coll. M. Rjabov); Makhachkala, 1 ex., 20-VII-2007; Karaman-2, 1 ex., 10-VII-2010; Samur wildlife area (ILYINA *et al.*, 2014).

A Palearctic species common in Africa, southern Eurasia east to Burma (Myanmar); in the XXth century it also entered the West Indies. In East Asia, Australia and Oceania two very similar species of this genus occur with quite different male genitalia: *U. pulchelloides* Hampson, 1907 and *U. lotrix* (Cramer, 1779). Besides, the latter has no red spot in the tornal angle of forewings; it occurs also in Africa and south-western Asia, including southern Iran. *U. pulchella* is very rare at the Caucasus, but recently is caught all over the northern slope. Although these tiger-moths have been collected since late June, they are more likely to be seen in late summer and early autumn. In Daghestan this species is found near the sea coast in the shrub steppe.

*Arctia caja* (Linnaeus, 1758)*Arctia caja ossetica* Dubatolov, 1996*Arctia caja*, DUBATOLOV, 2010: 90, map 37

Material: Daghestan, 1 ♂, VIII-1887 (ZIN); Akhty, 1 ♂, 29-VII-1933 (ZMKSU: Tkachukov); Gertma, 1 ex., 8-VIII-1999, 1 ♂, 10-VII-2005 (ZIN: E. Ilyina); Meusisha, 1 ex., 10-VIII-1999; Shari, 1 ex., 10-VIII-2000; Hnyukh, 1 ♂, 10-VII-2004 (ZIN: E. Ilyina); Misi, 1 ♂, 13-14-VII-2006 (SZMN: E. Nikolaeva, D. Morgun); Chirag, 4 ♂♂, 14-15-VII-2006 (SZMN: E. Nikolaeva, D. Morgun); Salda, 1 ex., 18-VIII-2015; Makhachkala, 1 ♀, 28-VIII-2016.

A trans-Palaearctic species. On the territory of Daghestan it is represented by the North Caucasian subspecies *A. caja ossetica* Dubatolov, 1996; which differs from the nominative one by orange rather than red (as in the nominotypical subspecies) hindwings. Imagines are active from mid-July until the end of August. Inhabits mesophytic high herbage at rivers.

*Epicallia villica* (Linnaeus, 1758)*Arctia villica*, CHRISTOPH, 1877: 205 (Derbent); ROMANOFF, 1884: 87 (Kourouche)*Epicallia villica*, DUBATOLOV, 2010: 91, map 43

Material: Daghestan, 1 ♂, VI-1902 (ZMKSU: Sheljuzhko); Terekli-mekteb, 1 ♂, 19-V-1925 (ZIN: Kirichenko); Gertma, 1 ♂, 20-21-VI-2004 (ZIN: E. Ilyina); Makhachkala, 2 ♂♂, 2-18-VI-1908, (ZMKSU: Kaljuzhny); Agatch-aul, 1 ♂, 30-V-1992 (SZMN: Kovtunovitch); Danukh, 1 ♂, 20-IV-2004 (ZIN: E. Ilyina); Derbent, 1 ♂, 2-VII-1925 (ZIN: Kirichenko); Rutul, 1 ♂, 15-VI-1992 (ZIN: Pekarsky); Samur wildlife area, 2 ex., 22-26-V-2015; 1 ex., 1-VI-2019; Lower Ishkarty, 1 ex., 24-V-2019; Mezghyul, 2 ex., 17-VI-2003; Talgi, 1 ex., 7-VI-1987, 1 ex., 8-V-2012; Terskaya, 1 ex., 10-V-1996; Barshamay, 1 ex., 29-VI-2010; Adiel-Yangiyurt, 1 ex., 12-VI-2011; Harakhi, 1 ex., 10-VI-2002; Gunib,

1 ex., 10-VII-2002; Ersi, 1 ex., 23-VII-2010; Chirkata, 1 ex., 1-VI-2004; Sergokala, 1 ex., 18-VI-2011; Uzdalroso, 1 ex., 5-VII-1982.

A west-Palaeartic species, which penetrates into the southwest West Siberian lowlands. It is found throughout the Caucasus. Imagines are active from the late April to the late July; higher in the mountains the flight takes place later. Inhabit various biotopes: grasslands, shrubs and wood thickets.

*Hyphoraia aulica* (Linnaeus, 1758)

*Hyphoraia aulica*, Dubatolov, 2010: 91, map 44

*Hyphoraia aulica testudinarioides* (Sovinsky, 1905)

Material: Mezhygul, 2 ex., 17-23-VI-2003.

A trans-Palaeartic species. Rare across the North Caucasus found at 800-1300 m above sea level. The subspecies *H. aulica testudinarioides* (Sovinsky, 1905) differs from nominotypical subspecies by longitudinally extended light spots anteriorly the anal vein on the fore wings; it inhabits the Caucasus, Transcaucasia and eastern Asia Minor there is a subspecies. Imagines are active from mid-June to early July (in Stavropol they start flying even from early May). Inhabits the forest zone of foothills and stepped meadows of Daghestan.

*Parasemia plantaginis* (Linnaeus, 1758)

*Parasemia plantaginis*, DUBATOLOV, 2010: 91, map 45

*Parasemia plantaginis caucasica* Ménéttriès, 1832

Material: Kurush, 1 ♂, 2 ♀♀, 19-VII-1886, 1 ♂, 20-VII-1886 (ZIN, GDNMR: Christoph); Ukjuz-tau, 1 ♂, 1 ♀, 8-VII-1940 (ZIN: M. Rjabov); Burshag, 1 ex., 1-VII-2003; Rutul, 1 ex., 15-VII-2004; Hnyukh, 1 ex., 1-VII-2004; Dzhyngkh, 1 ex., 6-VII-2008; Gubden, 1 ex., 18-VI-2017.

A trans-Holarctic species of the Palaeartic origin (DUBATOLOV, 2004). In the Caucasus, Transcaucasus and northeast Turkey there is an endemic subspecies *P. plantaginis caucasica* Ménéttriès, 1832 with bright red hindwings. In captivity it is easily to mate even with specimens of the Yakutian subspecies *P. plantaginis nycticans* (Ménéttriès, 1859). These tiger-moths are found in mountain meadows up to 2,500 m above sea level, flying in June-August.

*Eucharia festiva* (Hufnagel, 1766)

*Arctia hebe*, BECKER, 1881: 206 (Achty)

*Eucharia festiva*, DUBATOLOV, 2010: 91, map 47

Material: Kaptchugai, 1 ♂, 1-V-1938, 1 ♂, 24-IV-1941 (ZIN: M. Rjabov); Ukjuz-tau, 1 ♂, 2-VI-1945 (ZIN: M. Rjabov); Leninaul, 1 ex., 22-V-1999, Karabudakhkent, 200 ex., 12-IV-2001; Dubki, 1 ex., 5-6-VII-2001; Chirkey, 1 ex., 15-IV-2012; Makhachkala, 1 ♀, 28-VI-2016.

A west-central-Palaeartic species penetrating east to Transbaikalia and Southern China. On the northern slope of the Caucasus there is a boundary between the nominative subspecies and *E. festiva nivea* (O. Bang-Haas, 1927), whose females have the middle part of their front wings considerably darkened. *E. festiva festiva* is more common in the foothills and low mountains, but rises as far as the subglacial moraines at 2,500 m a.s.l. Imagines are active in the foothills from mid-April to early June, and higher in the mountains in July-August. In Daghestan these tiger-moths inhabit dry foothills, slopes with *Artemisia* sp. and thick herbage, are active in a daylight, flying or sitting on the ground among plants.

*Chelis maculosa* (Gerning, 1780)

*Chelis maculosa*, DUBATOLOV, 2010: 97, map 93

*Chelis maculosa honesta* (Tauscher, 1806) (= *mannerheimi* Duponchel, 1836)

*Chelis maculosa mannerheimi*, DUBATOLOV, 1988: 89 (Terekli-mekteb)

Material: Terekli-mekteb, 1 ex., 31-V-1928 (ZIN: M. Rjabov); Hnyukh, 1 ♂, 11-VII-2004 (ZIN: E. Ilyina); Kirov, 5 ♂♂, VIII-2006, 2 ♂♂, 10-VII-2007 (ZIN); Sarykum, 1 ♂, 8-IX-2017; Yuzhno-Sukhokumsk, 1 ex., 27-V-2008.

A west-central-Palaeartic species, distributed from the steppes of South and Central Europe to



the south of the West Siberian lowlands and North-West China (NW Xinjiang). It inhabits the North-Caucasus Plain, in the foothills of the Caucasus, in Daghestan also found in the low mountains. Imagines are active from late May to mid-July; rarely they can be observed also from August until mid-September. In Daghestan the species is found in steppes and semi-deserts on the plain and on steppeified meadows in the mountains.

*Chelis reticulata* (Christoph, 1887)

*Chelis reticulata*, DUBATOLOV, 2010: 97, map 94

*Chelis reticulata transcaucasica* Dubatolov, 1988

*Chelis reticulata transcaucasica*, DUBATOLOV, 1988: 92 (Akhty)

*Chelis reticulata*, DUBATOLOV, 1996: 58 (South Daghestan)

Material: Akhty, 2 ♂♂, 1-VIII-1933 (ZIN: M. Rjabov); Rutul, 1 ♂, 7-10-VII-2004 (ZIN: E. Ilyina); Hnyukh, 1 ♂, 11-VII-2004 (ZIN: E. Ilyina); Misi, 1 ♂, 13-14-VII-2006 (SZMN: E. Nikolaeva, D. Morgun).

In Daghestan, the Caucasus subspecies of the Anterior Asian *Ch. reticulata* Chr. is known. It is distinguished from *Ch. maculosa honesta* by the dark border triangular spots of the forewing broken by light veins. The apical process of valve in this subspecies is markedly shorter than in *Ch. maculosa honesta*, and often with a wider base. The species is found clearly higher in mountains than the previous one, at elevations of 1000-2100 m a.s.l. It flies from mid-June to early August; inhabit xerophytic mountain slopes.

*Diacrisia sannio* (Linnaeus, 1758)

*Chelis reticulata*, DUBATOLOV, 2010: 98, map 99

*Diacrisia sannio caucasica* Schaposchnikoff, 1904

*Nemeophila russula*, CHRISTOPH, 1877: 205 (Makhramkent); ROMANOFF, 1884: 86 (Makhramkent)

Material: Salty, 1 ♂, 28-VII-1893 (ZIN: Mlokosevich), 1 ♂, 24-VI-1889 (ZIN: GDNMR); Berikey (ZMKSU); Tarki-tau, 1 ♂, 29-V-1926 (ZIN: M. Rjabov); Derbent, 1 ♀, 1-IX-1931 (ZIN: M. Rjabov); Kapchugai, 2 ♀♀, 7-18-VIII-1937 (ZIN: M. Rjabov); Ukjuz-tau, 1 ♂, 1 ♀, 6-VII-1940, 1 ♂, 7-VII-1940 (ZIN: M. Rjabov); Rutul, 1 ♂, 23-VII-1997, 3 ♂♂, 7-10-VII-2004 (ZIN: E. Ilyina); plateau Gunib, 1 ex., 18-VII-2002; Tpig, 1 ♀, 8-VII-2003 (ZIN: E. Ilyina); Urtsaki, 1 ♂, 29-30-VI-2003 (ZIN: E. Ilyina); Mezhygyl, 1 ex., 17-VI-2003 (ZIN: E. Ilyina); Ingishi, 1 ex., 27-VI-2003 (ZIN: E. Ilyina); Tsirkhe, 12-VII-2003 (ZIN: E. Ilyina); Burshag, 2 ♂♂, 10-11-VII-2003 (ZIN: Magonedibaeva, Musaeva), 1 ex., 18-VII-2015; Chirag, 1 ♂, 15-VII-2006 (SZMN: E. Nikolaeva, D. Morgun); Salda, 1 ex., 25-VII-2014, 1 ex., 19-VII-2019; Itsari, 1 ex., 3-VII-2019; 1 ex., 29-VI-2017.

A temperate trans-Palaearctic species. It is represented in Daghestan by the Caucasus-transcaucas subspecies *D. sannio caucasica* Schaposchnikoff, 1904. In the Caucasus it is everywhere common in the mountains meadows rising above 2,000 m a.s.l. Imagines are active from late May to early September, developing possibly in two generations. In Daghestan the species is found in meadows of various types.

*Rhyarioides metelkana* (Lederer, 1861)

*Rhyarioides metelkana*, DUBATOLOV, 1996: 61 (Derbent), 2010: 36, 98, map 103

Material: Derbent, 1 ex., 27-VI-1928 (ZIN: M. Rjabov); Upper Kazanishche, 1 ex., 25-VI-1999; Akhsu, 1 ex., 7-VII-2001, 1 ex., 25-VII-2003; Gunib, 1 ex., 12-VII-2002; 1 ex., 25-VII-2003; Talginsky gorge, 1 ex., 29-VI-2017; Tsirkhe, 1 ex., 10-VII-2003 (1 ex.).

An amphi-Palaearctic species with strongly disjunctive range in Europe and Western Siberia. While in eastern Asia the species occurs continuously from middle part of the Amur River basin south to the Chinese provinces of Hunan and Zhejiang, as well as the islands of Ryukyu (Japan), in Europe all known habitats are strongly isolated: the Ardennes, the vicinities of Berlin (HAEGER, 1973), Eastern Poland (MALKIEWICZ, 2002), Western Belarus (Brest Region), Hungary, Romania, Ukraine: Rovno

(Dubno district), Kherson and Chernigov (Bobrovitsy district) Regions. In European Russia the species was recorded from Voronezh and Rostov Regions (Taganrog and Nedvigovka), Astrakhan Region (the Volga delta) (KÖNIG, 1985), as well as in Daghestan. In Siberia the only known population lives in the south-western part of the Novosibirsk region near Lake Krotovaya Lyaga 13 km west of Karasuk Town (DUBATOLOV, 1985); however, in 2018 one male specimen was surprisingly collected in Omsk city (KNYAZEV *et al.*, 2019) and in June 2020 the species was found at lake Chany. The species is recorded for the first time for several locations in Daghestan. Although in East Asia *R. metelkana* Led. is a mesophilic meadow species, then in Europe and Western Siberia it is confined to hygrophytic meadows at water bodies. Imagines are active from late June to late July in high herbage of Daghestan mountains.

*Rhyparia purpurata* (Linnaeus, 1758)

*Chelonia purpurea*, BECKER, 1869: 193 (Derbent); DUBATOLOV, 2010: 98, map 105

Material: Salty, 1 ♀, 23-VII-1893 (ZIN); Berikey, 1 ♀, 8-VI-1905 (ZMKSU); Derbent, 1 ♀, 29-VII-1906 (ZMKSU: Xenzhopolsky); Tarki, larva V-1933, imago 1 ♀, VI-1933 (ZIN: M. Rjabov); Akhty, 2 ♂♂, 20-22-VII-1939 (ZMKSU); Levashi, 1 ♂, 28-VII-1940 (ZIN: M. Rjabov); Ukjuz-tau, 2 ♂♂, 6-7-VII-1940 (ZIN: M. Rjabov); Tindi, 1 ♂, 19-VII-1975 (SZMN: Nikolaev), 1 ♂, 1-31-VIII-2004 (ZIN: E. Ilyina); Gunib, 1 ex., 11-VII-1999; Rutul, 1 ex., 20-VI-2001; Karata, 1 ex., 1-VIII-2002; Ingishi, 1 ex., 27-VI-2003 (ZIN: E. Ilyina); Burshag, 1 ♂, 10-VII-2003 (Khaibulaev); Hnyukh, 4 ♂♂, 10-11-VII-2004 (ZIN: E. Ilyina); Ashia, 2 ♂♂, 20-30-VII-2004 (ZIN: E. Ilyina); Aknada, 1 ♂, 28-VII-2004 (ZIN: E. Ilyina); Sogratl, 1 ex., 19-VII-2004.

A trans-Palaearctic species. In the Caucasus it is widespread everywhere, but not very often. It prefers stepped meadows up to 2000-2500 m a.s.l. Imagines are fly from late May to early August.

*Ocnogyna loewii* (Zeller, 1846)

*Ocnogyna loewii* var. *armena*, ROMANOFF, 1884: 88-89 (les plaines de Schamkhor [plain at Shamkhalà])

*Ocnogyna loewii*, SCHETKIN, 1975: 134 (Beligy)

*Ocnogyna armena daghestana*, DUBATOLOV, 1996: 63, 71, 72-73: Fig. 1c, 75: Fig. 2i (Daghestan, Derbent)

*Ocnogyna loewii armena*, DUBATOLOV, 2010: 63, 105, map 147

Material: Derbent, 1 ♂, 16-X-1910 (ZMKSU: Xenzhopolsky), 1 ♂, 21-X-1931 (ZIN: M. Rjabov, coll. M. Rjabov); Beligy, ex larva 1 ♂, 13-XI-1926 (ZIN: M. Rjabov); Makhachkala, 1 ♂, 20-X-1943 (ZIN: M. Rjabov).

An east-mediterranean and south-western Asian species. *O. loewii daghestana* Dubatolov, 1996 was described as characterized by an expansion of the dark spotty pattern on the front wings. However, several males with a less expanded black forewing pattern have been found from Daghestan; so, this subspecies was synonymized with Transcaucasian subspecies *O. loewii armena* Stgr. (DUBATOLOV, 2010). These tiger-moths inhabit rocky foothills, flying late in autumn, in the second and third decades of October. The larvae live in spring in nests on grass or shrub vegetation.

*Watsonarctia deserta* (Esper, 1784)

*Watsonarctia deserta*, DUBATOLOV, 2010: 105, map 144

Material: Levashi, 1 ♂, 4-VII-1926 (ZIN: M. Rjabov); Tarki, 1 ♂, 29-V-1932 (ZIN: M. Rjabov); Ukjuz-tau, 2 ♂♂, 6-VII-1940 (ZIN: M. Rjabov); Arkas, 5 ♂♂, 19-VI-1941 (ZIN: M. Rjabov); Ingishi, 1 ♂, 27-VI-2003 (ZIN: E. Ilyina).

A west-central-Palaearctic species distributed to the west from the Baikal area and Central Mongolia. It is found almost throughout the Caucasus except for the west (Krasnodar Territory, Georgia). Imagines are active from late May to early July on steppe meadows in the mountains of Daghestan.

*Diaphora mendica* (Clerck, 1759)[*Spilosoma*] *mendica*, ROMANOFF, 1884: 89 (Derbent)*Diaphora mendica*, DUBATOLOV, 2010: 102, map 125

Material: Derbent, 1 ♂ (ZIN: GDNMR); Tarki, 1 ♂, 29-V-1936, 5 ♂♂, 6-V-1938, 1 ♂, 12-V-1945 (ZIN: M. Rjabov); Primorsky, 1 ♂, 14-15-V-1992 (ZIN: Zagulaev); Khasaviurt, 4 ♂♂, 13-V-1992 (SZMN: Kovtunovitch); Rutul, 1 ex., 23-VII-1997, Araderikh, 2 ♂♂, 25-VI-2003 (ZIN: E. Ilyina); Ingishi, 1 ex., 27-VI-2003 (ZIN: E. Ilyina); Mezhgyul, 2 ♂♂, 17-19-VI-2003 (ZIN: E. Ilyina); Urtsaki, 1 ♂, 29-30-VI-2003 (ZIN: E. Ilyina); 1 ♂, 29-30-VI-2003 (ZIN: E. Ilyina); Hnyukh, 1 ♂, 11-VII-2004 (ZIN: E. Ilyina); Gertma, 2 ♂♂, 20-21-VI-2004 (ZIN: E. Ilyina); plateau Gunib, 6 ex., 18-VII-2015; Samur wildlife area, 1 ex., 22-V-2015, 1 ex., 10-V-2018; Agrakhansky wildlife area, 1 ex., 30-IV-2018.

A west-central-Palaearctic species. It is distributed to the west of the Baikal area. It is also found throughout the Caucasus, including Daghestan. All collected material refers to f. *rustica* (Hübner, 1790), whose males have a light white wing colour, although some males from the Caucasus, including Daghestan, have a light brown but still pale wing colour. Imagines are active from mid-April till early November, developing in several generations (probably three). In Daghestan it is found in a variety of biotopes, including west-lands (Agrakhan Bay).

*Hyphantria cunea* (Drury, 1773)*Hyphantria cunea*, DUBATOLOV, 2010: 45, 101, map 124

Material: Primorsky, 1 ♂, 26-29-V-1992 (ZIN: Zagulaev); Khasaviurt, 1 ♂, 13-V-1992 (SZMN: Kovtunovitch); Makhachkala, 5 ♂♂, 4 ♀♀, 17-18-VII-2006 (SZMN: E. Ilyina, Nikolaev); Karaman-2, 1 ex., 29-IV-2015, 4 ex., 2-25-V-2016, 1 ex., 30-VIII-2017, 1 ex., 11-V-2018.

A North American species, which in 1949 penetrated the territory of Western Europe, then began to spread to the east and by now reached the Volga region, Kazakhstan and Central Asia. Independently, it settled also in eastern Asia (Japan, northeast China, southern Mongolia). The first reliable record of the Fall Webworm Moth from the territory of Daghestan date back to 1992. But by this time the species was met almost all over the flat-foothills territory of the Republic, as it was found both in Khasaviurt and in Samur wildlife area. In the North Caucasus, it was identified in 1978 in Stavropol, and in the 1980s the species already settled in Transcaucasia in Georgia and Azerbaijan (IZHEVSKY, 2002). Presumably it could penetrate Daghestan in these years. The Fall Webworm Moth is found in almost all districts of Daghestan. It develops apparently in two or three generations. Imagines are active in May, July and late August.

*\*Epatolmis caesarea* (Goeze, 1781)*Phalaena luctifera* [Denis & Schiffermüller], 1775, *nomen nudum*

Material: Sarykum, 1 ex., 24-V-2014; Kufa 1 ex., 20-VII-2017; Agrakhan Peninsula, 1 ex., 7-VI-2014; Kumtorkale, 1 ex., 1-VII-2018; Samur ridge, 2 ex., 15-VII-2018.

A trans-Palaearctic meadow and steppe local species. It has been repeatedly collected in Rostov Region (Rostov-na-Donu, 1 ♂, 11-V-1924, M. Rjabov, ZIN), including in 1993-2018 (coll. of A. N. Poltavsky, Rostov-on-Don), but has never been reported from Caucasus. It is rare in Daghestan, inhabit the foothills plain, foothills and low hills. Imagines are active from early May till late July.

*Spilosoma lubricipedium* (Linnaeus, 1758)[*Spilosoma*] *nenthastri*, ROMANOFF, 1884: 89 (Derbent)

Material: Primorsky, 1 ♂, 16-V-1992 (SZMN: Kovtunovitch); Chirag, 2 ♂♂, 9-VII-2003 (ZIN: Sukhorukova); Khapil, 1 ♂, 29-VII-2007, 1 ♂, 7-VIII-2007 (ZIN: Kurbanova); Karaman-2, 2 ex., 9-21-V-2014; Samur wildlife area, 1 ex., 25-V-2018, 2 ♂♂, 30-V-2019; 4 ♂♂, 1 ♀, 6-24-VII-2019.

A trans-Palaearctic mesophytic meadow species. In the Caucasus it is not uncommon, occurring from foothills to mountain meadows up to elevations of ca 2000 m a.s.l. It differs well from the following species by longer processes of males antennae (although some specimens from the West Caucasus have slightly shortened antenna processes): short front processes are at least twice as long as

the thickness of the shaft of the antennal segments. The wings are wider than those of the following species the hind wings are often with black dots that some specimens may miss. Imagines are active from May till the end of August, developing apparently in two generations.

*Spilosoma urticae* (Esper, 1789)

[*Spilosoma*] *urticae*, ROMANOFF, 1884: 89 (Derbent); DUBATOLOV, 2010: 102, map 130

Material: Derbent, 1 ♂, V-1878 (ZIN: GDNMR - Komaroff) - 1 ♀, no date (ZIN); Makhachkala, 1 ♂, 26-VII-1926 (ZIN: M. Rjabov), 1 ex., 20-V-2014; Akhty, 1 ♂, 21-VII-1939 (ZMKSU: Sheljuzhko); Agrakhan Bay, 4 ex., 18-VII-1987; Mezhgyul, 1 ♂, 17-VI-2003 (E. Ilyina); Vanashi-makhi, 2 ex., 5-VIII-2015; Samur wildlife area, 2 ex., 9-VII-2015; Tiulenij, 1 ex., 1-VI-2015; Tidib, 1 ♂, 26-VI-2008; Almalo, 1 ex., 19-V-2019.

A trans-Palaearctic xerophylic species. In the Caucasus it is found everywhere except for high mountains. It differs from the previous species by short processes of male antennae; with the front ones not longer than the antenna shaft. The number of black spots on the front wings varies greatly from total absence to numerous. There are no black dots on the hind wings, unlike in the previous species; very rarely traces of a discal black dot may appear. Imagines are active from mid-May till early August.

*Phragmatobia fuliginosa* (Linnaeus, 1758)

*Spilosoma fuliginosa* var. *fervida*, CHRISTOPH, 1877: 206 (Derbent, Akhty); ROMANOFF, 1884: 89 (Derbent, Akhty)

*Phragmatobia fuliginosa*, DUBATOLOV, 2010: 104, map 141

Material: Derbent, 1 ♂, 24-IV-1926, 1 ♂, 23-VI-1928, 1 ♂, 30-VIII-1931 (ZIN: M. Rjabov); Berikey, 2 ♂♂, 3 ♀♀, 10-14-VIII-1905 (ZMKSU: Maginenko); Kaptchugai, 1 ♂, 17-VIII-1937 (ZIN: M. Rjabov); Beligy, 2 ♂♂, 17-18-VII-1939 (ZMKSU: Sheljuzhko); Akhty, 7 ex., 19-20-VII-1939 (ZMKSU: Sheljuzhko); Tarki, larva on Fabaceae, 1 ♀, 14-VI-1940 (ZIN: M. Rjabov); Berikey, 1 ex., 3-VII-1999; Karabudahkent, 1 ♂, 24-VI-2000 (ZIN: E. Ilyina); Mezhgyul, 1 ex., 17-VI-2003 (E. Ilyina); Tsirkhe, 1 ♀, 10-VII-2003 (ZIN: M. Rjabov); Tindi, 1 ♂, 30-VII-2004, 1 ♂, 1-31-VIII-2004 (ZIN: E. Ilyina); Agvali, 3 ex., 10-VII-2005; Khapil, 1 ♂, 19-VII-2007, 2 ♂♂, 23-VIII-2007 (ZIN: Kurbanova); Gurbuki, 1 ex., 20-VI-2010; Tsudakhar, 1 ex., 16-VII-2014; Gazardkam-Kazmalyar, 1 ex., 19-VII-2014; Karaman-2, 1 ex., 1-V-2014; Samur wildlife area, 1 ex., 22-V-2015; Shura-Ozen, 2 ex., 5-VII-2017; Primorsky, 1 ♂, 4-VII-2018 (SZMN: Grebenshikov).

A trans-Holarctic species of Palaearctic origin (DUBATOLOV, 2004). It is common throughout the Caucasus except for the highlands. It is more common in foothills and in man-affected places. Imagines are active from late April to late August, developing in at least two generations.

## Discussion

The results of collecting of Arctiinae of Daghestan for many years are presented in the statistical Table 1. More common species are: *Manulea pygmaeola*, *Diacrisia sannio*, *Phragmatobia fuliginosa*, *Epicallia villica*, *Cymbalophora rivularis*, *Lithosia quadra* - more than two dozen catching points for each. At the same time, *Hyphantria cunea* is more common on the lowland part of Daghestan than others, *Cybosia mesomella* in the foothills, *Callimorpha dominula* in the Front mountain ranges, *Epicallia villica* in the Central mountain area, *Lithosia quadra* in the highlands. Two species can additionally be found in Daghestan: *Manulea pseudocomplana* (DANIEL, 1939) is known in Russia from North-Western Caucasus and Low Volga territory (in Saratov Region) (DUBATOLOV, 2019), as well as from Azerbaijan (Nusnus, 2 ♂♂, 30-VII-2-VIII-1935, Rjabov leg., ZIN); *Somatrichia parasita* (Hübner, 1790) is known in Russia from Crimea and Low Volga territory; also from the West Caucasus (Abkhazia) and Azerbaijan (HAJIYEVA, 2013).

Most species of Arctiinae are scarce as representing in collections by single, less frequently 2-4 specimens for one night of catching. The exception is *Hyphantria cunea*, which is numerous during the period of mass flight of imago. In the plain part of Daghestan there was also locally mass flights of *Eucharia festiva*.

**Table 1.**– Arctiidae species distribution in altitude belts of Daghestan.

Species name	Locations number	Altitude belt				
		LOW	FOOT	FRON	CENT	HIGH
<i>Katha depressa</i>	2	1	1			
<i>Wittia sororcula</i>	9	2	4	1		2
<i>Manulea complana</i>	11	2	5	2		2
<i>Manulea lurideola</i>	5		1	1	1	2
<i>Manulea lutarella</i>	2			1	1	
<i>Manulea palliatella</i>	7	1	3		2	1
<i>Manulea pygmaeola</i>	12	3	5	2	1	1
<i>Cybosia mesomella</i>	1			1		
<i>Eilema caniolum</i>	3	1	1		1	
<i>Atolmis rubricollis</i>	3		1	1		1
<i>Pelosia muscerda</i>	3	1	2			
<i>Pelosia obtusa</i>	2		2			
<i>Lithosia quadra</i>	19	1	7	3	1	7
<i>Setina aurata</i>	15	1	2	1	3	8
<i>Setina roscida</i>	2					2
<i>Thumatha senex</i>	4	1	3			
<i>Callimorpha dominula</i>	11			5	1	5
<i>Euplagia quadripunctaria</i>	9	2	1	2	1	3
<i>Cymbalophora rivularis</i>	11	1	6	1		3
<i>Tyria jacobaeae</i>	5	2		1		2
<i>Lacydes spectabilis</i>	2		2			
<i>Spiris striata</i>	13	6	6			1
<i>Uteheisa pulchella</i>	3	2	1			
<i>Arctia caja</i>	9	1		2		6
<i>Epicalia villica</i>	20	5	4	5	5	1
<i>Hyphoraia aulica</i>	1			1		
<i>Parasemia plantaginis</i>	7		1	1		5
<i>Eucharia festiva</i>	7	3	2	2		
<i>Chelis maculosa</i>	5	3	1			1
<i>Chelis reticulata</i>	4					4
<i>Diacrisia sannio</i>	18	1	4	2	3	8
<i>Rhyarioides metelkana</i>	6		2	2	1	1
<i>Rhyaria purpurata</i>	17	1	2	1	5	8
<i>Ocnogyna loewii</i>	3	2	1			
<i>Watsonarctia deserta</i>	5		2	1	2	
<i>Diaphora mendica</i>	14	3	3	2	3	3
<i>Hyphantria cunea</i>	10	6	4			
<i>Epatolmis caesarea</i>	5	1	2	1		1
<i>Spilosoma lubricipedium</i>	5	3		1		1
<i>Spilosoma urticae</i>	10	4	3	1		2
<i>Phragmatobia fuliginosa</i>	18	7	4	2	1	4
Altogether species	41	28	25	15	14	28

Symbols: LOW - lowland, FOOT - foothill, FRON - front mountain ranges, CENT - central mountain area, HIGH - highland.

## Acknowledgments

The authors are sincerely grateful to E. V. Nikolayeva, V. N. Kovtunovitch (Moscow, Russia) and M. G. Sergeev (Novosibirsk, Russia) for collecting of Arctiidae from the territory of Daghestan; to employees of the laboratory of insect systematics of ZIN RAS -A. Y. Matov and Dr. S. Y. Sinev - for invaluable assistance in working with the collection of the Zoological Institute of RAS (St. Petersburg, Russia). The research by V. V. Dubatolov was partly supported by the Federal Fundamental Scientific Research Program for 2013-2020, Project No. AAA-A16-116121410121-7, by A. N. Poltavsky and E. V. Ilyina - by the Ministry of Science and Higher Education of the Russian Federation within the framework of the state task in the field of scientific activity (Southern Federal University, no. 0852-2020-0029). We also thank Dr. O. E. Kosterin (Novosibirsk, Russia) for language correction.

## BIBLIOGRAPHY

- BECKER, A., 1869.– Verzeichniss der um Derbent vom 11-ten bis 27sten Juni neuen Styls gefundenen Insekten.– *Bulletin de la Société des Naturalistes de Moscou*, **42**(1): 171-199.
- BECKER, A., 1873.– Reise nach Baku, Lenkoran, Derbent, Madschalis, Kasum Kent, Achty.– *Bulletin de la Société des Naturalistes de Moscou*, **46**(1): 229-258.
- BECKER, A., 1881.– Reise nach dem Südlichen Daghestan.– *Bulletin de la Société des Naturalistes de Moscou*, **56**(2): 189-208.
- BRYK, F., 1948.– Zur Kenntnis der Grossschmetterlinge von Korea. Pars II. Macrofrenate II (fins); Fam.: Notodontidae, Lymantriidae, Saturniidae, Brahmaeidae, Drepanidae, Epiplemidae, Lasiocampidae, Arctiidae, Thyatiridae, Noctuidae, Geometridae. Heteroneura: Fam.: Cochlidiidae, Zygaenidae. Tineoidea: Fam.: Cossidae, Psychidae.– *Arkiv för Zoologi*, **41A** (1-2): 1-225.
- CHRISTOPH, H., 1877.– Sammelergebnisse aus Nordpersien, Krasnowodsk in Turkmenien und dem Daghestan.– *Horae Societas Entomologica Rossica*, **12**(5-8): 181-299.
- DANIEL, F., 1939.– Beiträge zur Kenntnis der Gattung *Lithosia* F. (Lep. Arct.) I.– *Mitteilungen der Müncher Entomologischen Gesellschaft*, **29**: 44-54.
- DUBATOLOV, V. V. 1985.– [*Rhyparioides metelkana* (Lederer, 1861) (Lepidoptera, Arctiidae) in Siberia].– *Vestnik zoologii*, **5**: 7 (in Russian).
- DUBATOLOV, V. V., 1988.– Species review of the genus *Chelis* Rbr. (Lepidoptera, Arctiidae) of the USSR fauna.– *Taxonomy of Siberian Animals*, **20**: 80-98 (in Russian).
- DUBATOLOV, V. V., 1996.– A list of the Arctiinae of the territory of the former U.S.S.R. (Lepidoptera, Arctiidae). Three contributions to the knowledge of Palaearctic Arctiinae.– *Neue Entomologische Nachrichten*, **37**: 39-87.
- DUBATOLOV, V. V., 2010. Tiger-moths of Eurasia (Lepidoptera, Arctiidae) (Nyctemerini by Rob de Vos & Vladimir V. Dubatolov).– *Neue Entomologische Nachrichten*, **65**: 1-106.
- DUBATOLOV, V. V., 2019.– Family Arctiidae.– In S. Y. SINEV (ed.). *Catalogue of the Lepidoptera of Russia. Edition 2*: 448 pp. Zoological Institute RAS, St. Petersburg. (in Russian).
- DUBATOLOV, V. V., ZOLOTUHIN, V. V. & WITT, Th. J., 2016.– Revision of *Lithosia* Fabricius, 1798 and *Conilepia* Hampson, 1900.– *Zootaxa*, **4107**(2): 175-196.
- HAIJIYEVA, S., 2013.– Tiger-moths of Arctiidae family (Lepidoptera) in the forests of the Big Caucasus within Azerbaijan.– *International Caucasian Forestry Symposium*: 67-79.
- IZHEVSKY, S. S., 2002.– About the possibility of removing the Fall webworm from quarantine objects.– *Plant protection and quarantine*, **12**: 14-17 (in Russian).
- ILYINA, E. V. & POLTAVSKY, A. N., 2014.– Additions to Catalogue of noctuids (Lepidoptera: Nolidae, Erebiidae, Noctuidae) of Daghestan.– *Eversmannia*, **37**: 50-51 (in Russian).
- ILYINA, E. V., POLTAVSKY, A. N., MATOV, A. Y. & GASANOSA, N. M.-S., 2012.– *Catalogue of noctuids (Lepidoptera: Nolidae, Erebiidae, Noctuidae) of Daghestan*: 192 pp. Daghestan-Science, Makhachkala (in Russian).
- ILYINA, E. V., POLTAVSKY, A. N., TIKHONOV, V. V., VINOKUROV, N. B. & KHABIEV, G. N., 2014.– *Rare invertebrates of the "Daghestansky" reserve*: 233 pp. Aleph, Makhachkala (in Russian).
- HAEGER, E., 1973.– *Rhyparioides metelkana* Led. neu für die D.D.R.– *Entomologische Nachrichten*, **17**(9): 137-142.



- KNYAZEV, S. A., IVONIN V. V., USTJUZHANIN, P. YA., VASILENKO, S. V. & ROGALYOV, V. V., 2019.– New data on Lepidoptera of West Siberian Plain, Russia.– *Far Eastern Entomologist*, **386**: 8-20.
- KÖNIG, F., 1978.– *Rhyarioides metelkanus* (Lederer) (Stat. nov. L. Gózmány = *Rh. metelkana* ed.) en Romanie occidentale.– *Linneana belgica*, **7**(6): 166-174.
- MALKIEWICZ, A., 2002.– *Rhyarioides metelkana* (Lederer, 1861) (Lepidoptera, Arctiidae) again in the northern part of Europe.– *Polskie Pismo Entomologiczne*, **71**(4): 351-354.
- NEKRUTENKO, Y. N., 1990.– *Butterflies of the Caucasus*: 216 pp. Naukova dumka, Kiev (in Russian).
- POLTAVSKY, A. N., 2016.– *Noctuides moths (Lepidoptera: Noctuoidea) of Rostov-on-Don region*: 127 pp. Southern Federal university, Rostov-on-Don (in Russian).
- POLTAVSKY, A. N. & ILYINA, E. V., 2002.– The Noctuidae (Lepidoptera) of the Daghestan Republic (Russia).– *Phegea*, **30**(1): 11-36.
- POLTAVSKY, A. N. & ILYINA, E. V., 2016.– Materials for pyralid fauna (Lepidoptera, Pyraloidea) of the Daghestan republic.– *News of the Daghestan State Pedagogical University. Natural and Precise Sciences*, **34**(1): 53-50 (in Russian).
- POLTAVSKY, A. N. & ILYINA, E. V., 2016.– New records of some rare Noctuoidea and Pyraloidea in Daghestan Republic (Russia).– *Entomofauna*, **37**(16): 265-280.
- POLTAVSKY, A. N. & ILYINA, E. V., 2018.– New data on the distribution of geometer moths (Lepidoptera: Geometridae) in Daghestan.– *Biological Diversity of the Caucasus and Southern Russia*: 496-498 (in Russian).
- POLTAVSKY, A. N. & ILYINA, E. V. 2019.– To the fauna of moths (Lepidoptera, Heterocera) of Daghestan.– *Biodiversity and rational use of natural resources*: 102-105 (in Russian).
- ROMANOFF, N. M., 1884.– Les Lépidoptères de la Transcaucasie. Première partie.– *Mémoires sur les lépidoptères*, **1**: 1-92.
- SINEV, S. Y., (ED.), 2019.– *Catalogue of the Lepidoptera of Russia. Edition 2*: 448 pp. Zoological Institute RAS, St. Petersburg.
- STSHETKIN, J. L., 1975.– Pastbistshnaya medveditsa (*Ocnogyna loewii pallidior* Chr.) v Srednei Asii (Lepidoptera: Arctiidae) [Pasturable tiger-moth (*Ocnogyna loewii pallidior* Chr.) in Middle Asia (Lepidoptera: Arctiidae)].– *Entomologiya Tadzhikistana*: 134-138. (in Russian).

V. V. D.  
Institute of Animal Systematics and Ecology  
Siberian Branch of the Russian Academy of Sciences  
Frunze street, 11  
Novosibirsk 630091  
RUSSIA / RUSSIA  
E-mail: vvdubat@mail.ru  
<https://orcid.org/0000-0001-7687-2102>

\*A. N. P.  
Botanical Garden  
Academy of Biology and Biotechnology  
Southern Federal University  
Botanichesky spusk, 7  
Rostov-on-Don 344041  
RUSSIA / RUSSIA  
E-mail: poltavsky54@mail.ru  
<https://orcid.org/0000-0002-1613-0710>

E. V. I.  
Caspian Institute of Biological Resources  
Daghestan Scientific Center of the Russian Academy of Sciences  
Imam Shamil avenue, 13  
Makhachkala, Daghestan Republic 367026  
RUSSIA / RUSSIA  
E-mail: carabus@list.ru  
<https://orcid.org/0000-0002-5426-4015>

\*Autor para la correspondencia / *Corresponding author*

(Recibido para publicación / *Received for publication* 1-VII-2020)

(Revisado y aceptado / *Revised and accepted* 26-IX-2020)

(Publicado / *Published* 30-III-2021)