



# *Entomofauna*

ZEITSCHRIFT FÜR ENTOMOLOGIE

---

Band 30, Heft 19: 301-328

ISSN 0250-4413

Ansfelden, 16. Oktober 2009

---

## **The Lasiocampidae (Lepidoptera) of Georgia and neighbouring countries**

**Vadim V. ZOLOTUHIN & Eteri A. DIDMANIDZE**

### **Abstract**

17 species of Lasiocampidae are indicated from the territory of Georgia, and totally 28 species are known from Caucasus and Transcaucasus. *Phylodesma glasunowi* (GRUM-GRZHIMAILO, 1895) is for the first time recorded from Transcaucasus (Armenia).

*Poecilocampa alpina pontica* de FREINA, 1999 is transferred to the status of a subspecies of *Poecilocampa populi* (LINNAEUS, 1758): *Poecilocampa populi pontica* de FREINA, 1999, stat. nov.

### **Introduction**

Even though the Lasiocampidae fauna of Georgia is relatively well known, the territory of the country is very interesting biogeographically. Here, many species have their distributional limit and the variety of landscapes allows an intensive evolution of

different forms and varieties which are often considered as separate subspecies and even species.

The article continues the series of publications started in *Entomofauna* in 2007 (DIDMANIDZE & YAKOVLEV, 2007) and has its aim to compile the available information on the distribution of the Lasiocampidae in Georgia and adjoining areas of Transcaucasus. It is the second edition of our article (ZOLOTUHIN, 1992a), adding considerably new distributional and taxonomical data.

Available literature analysis was already given by DIDMANIDZE & YAKOVLEV, 2007. It should be noted here that some works were devoted especially to the study of Lasiocampidae and related families of the Bombyces group in Georgia and Transcaucasus. The start for the investigations was made by Great Duke Nikolay M. ROMANOV (ROMANOFF, 1885). They were continued in the 20. century by L. SHELJUZHKO (1943), MILJANOVSKY (1957-1971), SHENGELIA (1941, 1964-1966), DIDMANIDZE (1969-1981), and DIDMANIDZE & SIKHARULIDZE (1974). We can find some notes on the species collected in Georgia in the works of de FREINA (1979), DANIEL (1959), and WOJTUSIAK & NIESIOLOWSKI (1946). Most useful works on Transcaucasus were published for Armenia by GEVORKJAN (1986) and MIRZOJAN (1977). These distributional data were later summarized by V. ZOLOTUHIN (1992a) and also by ZOLOTUHIN & ZAHIRI, 2008.

Since that time, more material is available for study from Russian collections and especially from the Simon JANASHIA Museum of Georgia.

At present, 26 species of lasiocampids are known from the region under consideration and it is highly probable that the specific composition is completely known.

The main part of the material studied is kept in the collection of Simon JANASHIA National Museum of Georgia (Tbilisi), but also in the Zoological museum of Russian Academy of Science (St. Petersburg) and Zoological Museum of Kiev State University. Some specimens are known from other museums. They are all mentioned and the following abbreviations are used in the text:

CAHU	collection Armin HAUENSTEIN, Untermuenkheim, Germany;
CMSW	collection Manfred STRÖHLE, Weiden, Germany;
CSIF	collection Siegfried IHLE, Filderstadt-Bonlanden, Germany;
BMNH	The Natural History Museum, London;
GNMT	Georgian national Simon JANASHIA Museum, Tbilisi;
MNHNP	Museum National d'Histoire Naturelle, Paris;
MWM	Museum Thomas J. WITT, Munich;
ZFMK	Zoologisches Forschungsinstitut und Museum Alexander KOENIG, Bonn;
ZMHU	Zoologisches Museum der HUMBOLDT Universität, Berlin;
ZSM	Zoologische Staatssammlung, Munich.

Distributional maps are given only for the species known from the territory of Georgia.

## An annotated check-list of the Lasiocampidae of Caucasus

### L a s i o c a m p i d a e HARRIS, 1941

#### Chondrosteginae TUTT, 1902

*Chondrostega pastrana* LEDERER, 1858

#### Poecilocampinae TUTT, 1902

*Poecilocampa populi* (LINNAEUS, 1758)

*Poecilocampa populi pontica* de FREINA, 1999, **stat. nov.**

*Trichiura crataegi* (LINNAEUS, 1758)

*Trichiura crataegi crataegi* (LINNAEUS, 1758)

*Trichiura crataegi anatolica* DANIEL, 1956

*Trichiura crataegi laristana* de FREINA, 1979

*Trichiura mirzayani* EBERT, 1971

#### Malacosominae TUTT, 1902

*Malacosoma castrense* (LINNAEUS, 1758)

*Malacosoma castrense kirghisicum* STAUDINGER, 1879

*Malacosoma franconicum* ([DENIS & SCHIFFERMÜLLER], 1775)

*Malacosoma squalorum* ZOLOTUHIN, 1992

*Malacosoma neustrium* (LINNAEUS, 1758)

*Malacosoma parallela* (STAUDINGER, 1887)

*Malacosoma parallela* ssp. near *iranica* ZOLOTUHIN & ZAHIRI, 2008

#### Lasiocampinae TUTT, 1902

*Eriogaster henkei* (STAUDINGER, 1879)

*Eriogaster lanestris* (LINNAEUS, 1758)

*Eriogaster neogena* (FISCHER de WALDHEIM, 1824)

*Eriogaster daralagesis* ZOLOTUHIN, 1993

*Lasiocampa eversmanni* (KINDERMANN, 1843)

*Lasiocampa quercus* (LINNAEUS, 1758)

*Lasiocampa quercus quercus* (LINNAEUS, 1758)

*Lasiocampa quercus vassilini* SHELJUZHKO, 1943

*Lasiocampa trifolii* ([DENIS ET SCHIFFERMÜLLER] 1775)

*Lasiocampa piontkovskii* SHELJUZHKO, 1943

*Lasiocampa grandis* (ROGENHOFER, 1891)

*Macrothylacia rubi* (LINNAEUS, 1758)

### **Pinarinae TUTT, 1902**

*Euthrix potatoaria* (LINNAEUS, 1758)

*Gastropacha quercifolia* (LINNAEUS, 1758)

*Phyllodesma joannisi* LAJONQUIERE, 1963

*Phyllodesma farahae* LAJONQUIERE, 1963

*Phyllodesma glasunowi* (GRUM-GRZHIMAILO, 1895)

*Streblote solitaria* ZOLOTUHIN, 1991

*Pachypasa otus* (DRURY, 1773)

*Dendrolimus pini* (LINNAEUS, 1758)

*Dendrolimus pini* f. *montana* STAUDINGER, 1871

*Dendrolimus pini* *witti* de FREINA, 1979

*Odonestis pruni* (LINNAEUS, 1758)

### **Systematic part**

#### ***Chondrostega* LEDERER, 1858**

Wien. ent. Monatschr. **2**: 143. Type-species: *Chondrostega pastrana* LEDERER, 1858 - Wien. ent. Monatschr. **2**: 144, pl. 2, figs 6, 7, by monotypy.

#### ***Chondrostega pastrana* LEDERER, 1858**

*Chondrostega pastrana* LEDERER, 1858 - Wien. ent. Monatschr. **2**: 144, pl. 2, figs 6, 7. Locus typicus: [Damask]. Syntypes: males (ZMHU).

**R e f e r e n c e s** : DUBATOLOV & ZOLOTUHIN 1992; ZOLOTUHIN 1992a; ZOLOTUHIN & ZAHIRI 2008.

**R a n g e** : Syria, Transcaucasus (Nakhitshevan), north-eastern Iran.

**C o m m e n t s** : The species is native to arid biotopes and develops a single generation per year with flight period known in September. Inhabits altitudes of 900 to 1700 m. Females wingless. Caterpillars on different low plants, mostly on grasses and ephemeroïds. Transcaucasus is the northern limit of its distribution.

**M a t e r i a l** : 1♂, [Nakhitshevan] stat. Darasham 2, 14.IX 1893, M. RJABOV leg. (ZISP).

#### ***Poecilocampa* STEPHENS, 1828**

Illustr. Br. Ent. (Haustellata) **2**: 43. Type-species: *Phalaena populi* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) **1**: 502, by monotypy.

#### ***Poecilocampa populi* (LINNAEUS, 1758)**

#### **Map 1**

*Phalaena populi* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) **1**: 502, by monotypy. Locus typicus: not stated [Europa].

***Poecilocampa populi pontica* de FREINA, 1999, stat. nov.**

*Poecilocampa alpina pontica* de FREINA, 1999 - *Atalanta* **30** (1/4): 191, pl. XI, figs 1-3. Locus typicus: Turkey, Erzurum, Soganly Daglari, Ovit-Pass, 10km NW Ispir, 1450-1500 m. Holotype: male (MWM).

**References:** SHENGELIA, 1941, 1964, 1966; MILJANOVSKY, 1964; MIRZOJAN, 1977; DIDMANIDZE, 1981a; GEVORKJAN, 1986; DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992a.

**Range:** from Europe to Far East of Russia including Ciscaucasus (Krasnodar Region, Abkhasia), Transcaucasus and Turkey (Erzurum, Agri); a single specimen is known also from Semirechie (Kopal).

**Comments:**

1. The Caucasian specimens of this species are very poorly represented in collections because of their very late flight period falling in October to November. All specimens seen are characterized by the presence of more or less abundant light scales on the forewings. This character allows us to attribute the caucasian populations to the recently described ssp. *pontica* de FREINA, 1999 originally established as a subspecies of *Poecilocampa alpina*. However, genitalic characters (shape of aedeagus and especially of its coecum) let us remove the taxon from a subspecies of *P. alpina* to a subspecies of *P. populi*. This new status is here established.
2. The species was recorded by MILJANOVSKY (1964) from Abkhasia with remarks "in November in mountain Regions"; and from Armenia (MIRZOJAN, 1977: 262; DIDMANIDZE, 1981: 164; GEVORKJAN, 1986) where it is known from late August to October. Develops one generation per year; eggs hibernate. Known foodplants in Transcaucasus are *Quercus robur*, *Fagus orientalis*, *Alnus*, *Tilia cordata*, *Populus tremula*, *Populus* spp., *Betula* spp., *Salix* spp., *Ulmus laevis*, and fruit trees.

**Material:** 1 ♀, North Caucas, Siginsky r-n, vill. Krasnaja Poljana, 22.VIII 1922, M. EPIL leg. (ZMMU); 3 ♂♂, Northern Caucasus, Krasnodar Region, Azish-Tau Mts, 1350 m, 19-20.X 2007, on light in *Fagus-Abies* forest, V. STSHUROV leg. (coll. V. STSHUROV); 1 ♂, Kleinasien, Prov. Erzurum, Soganli Dagli, Ovit-Paß, 10 km NW Ispir, 1450-1500 m, 18-19.X 1985, de FREINA leg. (MWM); 1 ♂, Turkey, Prov. Agri, 5 km E of Sarican, 1800-2000m, 42°39'E, 39°49'N, 16-17.X 1993, FABIAN and al. leg. (MWM); 2 ♂♂, Turkey, Prov. Agri, 2300 m, Karasu-Aras Daghari, 7 km E Aydintepe, 42°22'E, 39°53'N, 12-13.X 1989, G. CSORBA & G. RONKAY leg. (MWM); 1 ♂, Borjom, 16.IX 1900, coll. ROMANOV (GNMT); 1 ♂, Borjom, 6.X 1900, coll. ROMANOV (GNMT); 1 ♂, Borjom, IX 1902, coll. ROMANOV (GNMT).

***Trichiura* STEPHENS, 1828**

Ill. Br. Ent. (Haustellata) **2**: 42. Type-species: *Phalaena Bombyx crataegi* LINNAEUS, 1758 - Sys. Nat. (ed. 10) **1**: 502, by monotypy.

***Trichiura crataegi* (LINNAEUS, 1758)**

**Map 2**

*Phalaena Bombyx crataegi* LINNAEUS, 1758 - Sys. Nat. (ed. 10) **1**: 502, by monotypy. Locus typicus: not stated [Europe].

**References:** ROMANOFF, 1885; RADDE, 1899; SHENGELIA, 1941, 1964, 1966; MILJANOVSKY, 1941, 1964; MIRZOJAN, 1977; GEVORKJAN, 1986; DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992a.

**Range:** in different subspecies from Europe to Far East of Russia including Turkey, Caucasus, Transcaucasus, northern Kazakhstan and Mongolia.

**Comments:** All specimens were collected at light, mostly in mountain ranges. Develops one generation per year, is on the wings in late July to October; eggs hibernate. *Alnus* spp. and *Crataegus* spp. are hostplants in Abkhasia, and *Quercus macranthera* F. et M., *Crataegus orientalis* PALL., *Populus* spp. including *Populus tremula*, *Salix* spp., are recorded for the Armenian population (GEVORKJAN 1986). Two different subspecies can be distinguished in the Caucasus. Ciscaucasus including Abkhasia, Krasnodar Region and Stauropol Region as well as Daghestan is inhabited by the nominate subspecies and for Transcaucasus (Georgia and Armenia), the subspecies *anatolica* DANIEL, 1956 with dominant whitish to light greyish scale covering is typical. The range of *Trichiura crataegi anatolica* DANIEL, 1956, includes Great Caucasus, Transcaucasus and eastern Turkey (it was originally described from "Syria sept., Taurus c., Marash, 600-900 m"). A very dark coloured specimen, related to ssp. *laristana* de FREINA, 1979 (locus typicus: Rize, Soganli-Daghlari, Aygir-Pass), is known from Svanetia (southern Georgia).

**Material:** 6♂♂, Ciscaucasus, pr. Pjatigorsk, ms. Mashuk, M. RJABOV leg. (ZMKU); 5♂♂, Transcaucasus, Jelisavetpol (ZMKU); 1♂, Caucasus s., Teberda, v. alt. fl. Muchu, 27.VIII 1933, L.SHELJUZHKO leg. (ZMKU); 1♂, Tiflis Gub., Zakatal. okr., Lagodekhi, 9.IX 1893, MLOKOSSEVITSH leg. (ZISP); 1♂, Dagestan, Dzhurmut okr., Salta, 28.VII 1893, MLOKISSEVITSH leg. (ZISP); 7♂♂, Lagodekhi, 9.IX-11.XI 1885 (ZISP); 1♂, Tschiani (ZISP); 2♂♂, Caucasus, Jalty, 22.VIII 1892 (ZISP); 1♂, Caucasus, Alasan, 6.VIII 1892 (ZISP); 1♂, Borzhom (ZISP); 2♂♂, vill. Makhuntseti, 24.XI 1924, GRÜNBERG leg. (ZISP); 8♂♂, Ciscaucasus, mt. Tarki [5.X 1937 – 12.IX 1945], M. RJABOV leg. (ZISP); 2♂♂, Borjom, 7.IX 1900, coll. ROMANOV (GNMT); 1♀, Kodjori, Caucasus, 29.VIII 1908 (GNMT); 1♂, Lagodekhi, 7.VIII 1957, E. DIDMANIDZE leg. (GNMT); 1♀, Lagodekhi, 7.VII 1959, E. DIDMANIDZE leg. (GNMT); 1♂, Kobuleti, Kintrishi Reserve, 6.X 1972, E. DIDMANIDZE leg. (GNMT); 1♂, Svaneti, Adishi, 2.VIII 1979, E. DIDMANIDZE leg. (GNMT).

### ***Trichiura mirzayani* EBERT, 1971**

*Trichiura mirzayani* EBERT, 1971 - Beitr. naturk. Forsch. SüdWtl. **30**: 70, text-fig. 8, 9, pl. 1, fig. 5. Type-locality: Nord-Iran, 12 km S Amol, 250 m. Holotype: male (SMK).

**References:** DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992; ZOLOTUHIN & ZAHIRI, 2008.

**Range:** Northern Iran (Guilan, Mazandaran, Golestan and Tehran provinces), south-eastern Azerbaijan (Talysh) and north-eastern Turkey (Ovit-Ges.).

**Comments:** All specimens were collected at light in the altitude of 250 to 3000 m from August to November. Develops one generation per year; supposedly eggs hibernate. Nothing is known about its preimaginal stages.

**Material:** 2♂♂, Azerbaijan SSR, Talysh, Lenkoran, Isti-Su, 25.IX 1968, R. EFFENDI leg. (ZMMU).

### ***Malacosoma HÜBNER [1820] 1816***

Verz. bekannter Schmett.: 192. Type-species: *Bombyx franconica* [DENIS & SCHIFFERMÜLLER], 1775 - Ankündigung syst. Werkes Schmett. Wienergegend: 57, by subsequent designation by KIRBY, 1892 - Synon. Cat. Lepid. Heterocera 1: 819 (but cited as '*franconica* ESPER', an incorrect authorship).

### ***Malacosoma neustrium* (LINNAEUS, 1758)**

### **Map 3**

*Phalaena neustria* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) 1: 500. Locus typicus: not stated [Europa]. Types: males and females (LSL).

**R e f e r e n c e s :** ROMANOFF, 1885; RADDE, 1899; SHENGELIA, 1941, 1964, 1966; MILJANOVSKY, 1941, 1947, 1964; MIRZOJAN, 1977; DIDMANIDZE, 1971, 1973, 1974, 1975, 1976, 1978, 1980, 1981a; GEVORKJAN, 1986; DUBATOLOV & ZOLOTUHN, 1992; ZOLOTUHN, 1992; ZOLOTUHN & ZAHIRI, 2008.

**R a n g e :** as different subspecies is known from northern Africa, Europa, Caucasus, Turkey, northern Iran, Siberia, Mongolia, Far East of Russia, Korea, China, Japan.

**C o m m e n t s :** This species is known from lowland to mid altitudes and is on the wings from late June to August, according to elevation. *Malus*, *Pyrus*, *Prunus*, *Armeniaca*, *Cerasus*, *Quercus orientalis*, *Ulmus*, *Crataegus orientalis*, *Carpinus*, *Hippophae rhamnoides*, *Rosa canina* are hostplants. MILANOVSKY (1947) recorded the species also from *Eucalyptus* and *Laurus nobilis*. Sometimes, it is a pest.

**M a t e r i a l :** 3♂♂, Kislovodsk (ZMKU); 6♂♂, Pjatigorsk (ZMKU); 15♂♂, Transcaucasus, Abas-tuman, Gub. Tiflis (ZMKU); 1♂, Azerbaijan, Baku (ZMKU); 1♂, Armenia, Erivanj (ZMKU); 1♂, Taganrog (ZISP); 1♂, Manglis (ZISP); 1♂, Helenendorf (ZISP); 1♂, Hadji-Kent (ZISP); 1♂, Borzhom, 27.VI 1892 (ZISP); 1♂, Lagodekhi (ZISP); 1♂, Nord Kaukasus, Kislovodsk, 7.VII 1895, KELER leg. (ZISP); 1♂, Borjom, 17.VI 1899, coll. ROMANOV (GNMT); 2♂♂, Borjom, 8-10.VII 1899, coll. ROMANOV (GNMT); 1♂, Kodjori, Caucasus, 27.VII 1905 (GNMT); 1♂, Tbilisi, Caucasus, 21.VII 1907 (GNMT); 2♂♂, Manglisi, pr. Tbilisi, VII 1909, NIKOLAJEV leg. (GNMT); 2♂♂, Kojori, 3-18.VII 1911 (GNMT); 1♂, Tbilisi, 28.VIII 1912, KOZLOVSKI leg. (GNMT); 2♂♂, Gok-gol, distr. Elisavetpol, VII 1913, HETLING leg. (GNMT); 4♂♂, Khudadov, Tbilisi, VII 1938, WASHAKIDZE leg. (GNMT); 1♂, Lagodekhi Reserve, 29.VI 1959, DIDMANIDZE leg. (GNMT); 1♂, Bachmaro, 18.VII 1961, DIDMANIDZE leg. (GNMT); 1♂, Bachmaro, 15.VIII 1963, DIDMANIDZE leg. (GNMT); 1♂, Uravely, distr. Achalcyche, 25.VII 1964, DIDMANIDZE leg. (GNMT); 1♂, Kakliani, distr. Dmanisi, 22.VII 1966, DIDMANIDZE leg. (GNMT); 2♂♂, 1♀, Gomarethi, distr. Dmanisi, 22-23.VII 1966, DIDMANIDZE leg. (GNMT); 4♂♂, Mamulo, distr. Dmanisi, 23-24.VII 1966, DIDMANIDZE leg. (GNMT); 1♂, Sarkinethi, distr. Dmanisi, 24.VII 1966, DIDMANIDZE leg. (GNMT); 14♂♂, 2♀♀, Zugdidi, PRK-2, 22-28.V 1968, DIDMANIDZE leg. (GNMT); 4♂♂, Chkhorotzku, PRK-2, 5.VI 1968, DIDMANIDZE leg. (GNMT); 1♂, Zeraboseli, Kobuleti, 10.VII 1969, DIDMANIDZE leg. (GNMT); 3♂♂, Saguramo Reserve, 3-14.VII 1970, DIDMANIDZE leg. (GNMT); 1♂, Gudermes, Armeia, 26.V 1974, DIDMANIDZE leg. (GNMT); 6♂♂, Tzagveri, 12.VIII 1978, DIDMANIDZE leg. (GNMT).

### ***Malacosoma parallela* (STAUDINGER, 1887)**

### **Map 4**

*Bombyx neustria* var. *parallela* STAUDINGER, 1887 - Stett. Ent. Ztg. 48: 98. Locus typicus: Samarkand, Namangan, Issyk-Kul. Types: males, females (MHUB).

**R e f e r e n c e s :** ROMANOFF, 1885; SHENGELIA, 1941; MIRZOJAN, 1977;

DIDMANIDZE, 1981a; GEVORKJAN, 1986; DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992a; ZOLOTUHIN & ZAHIRI, 2008.

**R a n g e :** northern Iran, Kopet-Dagh Mts in Turkmenistan, eastern Turkey, Transcaucasia (at least Armenia; status of Georgian populations need special investigation); mountains of Middle Asia and Afghanistan. Single specimens recently became known from Daghestan (I. KOSTJUK and V. TIKHONOV, pers. comm.).

**C o m m e n t s :** The species is known from the altitudes of 130-3000 m, mostly above 1600-1800 m, and is on the wings from late June to early August, depending on the altitude. Food plants are *Amygdalus*, *Malus*, *Prunus*, *Pyrus*, *Cerasus*, *Rosa*, *Sorbus*, *Crataegus*, *Cydonia*, *Chaemomeles*, *Padus*, *Ribes*, *Hippophae*, *Carpinus*, *Berberis*, *Juglans*, *Populus*, *Salix*, *Quercus* (*macranthera* F. et M. and *iberica* STEV.), *Atraphaxis*, *Myricaria*, *Fraxinus*, *Lonicera*, *Vitis* (partly from GEVORKJAN 1986, also original records). Eggs hibernate. Caterpillars live in common web, can damage seriously fruit trees. Iranian and Kopet Dagh populations were recently described as ssp. *iranica* ZOLOTUHIN & ZAHIRI, 2008; status of Georgian populations needs special investigation.

**M a t e r i a l :** 2♀♀, Dagestan, Achty (ZMKU); 2♂♂, 3♀♀, Armenia, Daralagez, pag. Martiros, 2000 m alt., e.l. 24.VII 1938, L. SHELJUZHKO & N. PAVLITZKAJA leg. (ZMKU); 1♂, Armenia, Eriwan, 18.VII 1934, M. RJABOV leg. (ZISP); 3♂♂, Nakhitschevan, Paraga NW from Ordubad, 24.VI 1933, ZNOJKO leg. (ZISP); 1♂, Nakhitschevan, Tylljak on Giljanchaj river, 31.VII 1933, ZNOJKO leg. (ZISP); 3♀♀, Dagestan, Samur okr., Akhty, 1.VIII 1933, ZNOJKO leg. (ZISP); 4♂♂, [Nakhitschevan] Armenia, mt. Aragatz, vill. Inaklju, 2000 m, 5-15.VII 1936, A.TSVETAJEV leg. (ZMMU).

### ***Malacosoma castrense* (LINNAEUS, 1758)**

**Map 5**

*Phalaena castrensis* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) I: 500. Locus typicus: not stated. Types: in coll LSL.

### ***Malacosoma castrense kirghisicum* STAUDINGER, 1879**

*Malacosoma castrensis* v. *kirghisica* STAUDINGER, 1879 - Stett. ent. Ztg. **40**: 318. Locus typicus: "Narün, nordöstlich von Astrachan zwischen Wolga- und Ural-Fluß, etwa 15 deutsche Meilen ostwärts von der Wolga". Types: males and females (ZMHU).

**R e f e r e n c e s :** ROMANOFF, 1885; RADDE, 1899; SHENGELIA, 1941, 1966; MIRZOJAN, 1977; DIDMANIDZE, 1975, 1978, 1981a, 1981b; GEVORKJAN, 1986; DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992a; ZOLOTUHIN & ZAHIRI, 2008.

**R a n g e :** Caucasus, Transcaucasus, western, northern and central Iran; widely distributed from Europe and Caucasus to Far East of Russia, China, Central Asia and Asia Minor.

**C o m m e n t s :** The species is monovoltine in its whole range. Flight period falls in June to late July. Inhabits lowlands to mid altitudes and is known up to 3000 m; more typical for arid biotopes and lowlands. Larvae are polyphagous, live in a tent until last instar and were recorded in Armenia (GEVORKJAN, 1986) from different plants such as *Euphorbia* spp., *Plantago latifolia*, *Medicago* sp., *Onobrychis* sp., *Trifolium alpestris*; also known from *Artemisia* spp., *Geranium* spp. and *Atraphaxis spinosa* (Polygonaceae). Pupation in a silky cocoon which is yellowish powdered, on food plants and under stones. Eggs are the hibernating stage.



**Material:** 2♂♂, 1♀, Armenia, Erivanj, VI-VII 1934 (ZMKU); 1♂, Armenia, Etshmiadzin (ZMKU); 2♂♂, Armenia, Leninakan (ZMKU); 1♂, 1♀, Armenia, mis. Daralagez, pag. Azizbekov, 27.VII 1938 (ZMKU); 1♂, Turkey, Prov. Kars, Sarykamysch (ZMKU); 1♂, Transcaucasus m. oc., prov. Kars (ZMKU); 1♀, Russ. Armenia, Erivan, ex p. 2.VII 1931, M. RJABOV leg. (ZISP); 1♂, Nakhitschevan, Paraga NW from Ordubad, 24.VI 1933, ZNOJKO leg. (ZISP); 1♀, Nakhitschevan, near Tevi, 28.VII 1933, ZNOJKO leg. (ZISP); 1♂, ♀, Azerbaijan, Dash-Burun, steppe, 29.V 1931, MISTCHENKO (ZISP); 1♂, ♀, Lagodekhi (ZISP); 6♂♂, 2♀♀, Helenendorf (ZISP); 1♂, Dagestan, Derbent, at light, 11.VI 1931, M. RJABOV leg. (ZISP); 1♂, ♀, Nakhitschevan, mt. Aragatz, vill. Inaklju, 24.VII 1936, A. TSVETAEV leg. (ZMMU); 2♂♂, 1♀, Nakhitschevan, Daralagez gorge, vill. Kjukjui, 9.VII 1970, A. TSVETAEV leg. (ZMMU); 1♀, Nakhitschevan, Zangezur gorge, vill. Bichenek, 2400 m, 25.VII 1970, A. TSVETAEV leg. (ZMMU); 1♀, Nakhitschevan, Daralagez gorge, vill. Buzgov, 2000 m, 24.VII 1974, A. TSVETAEV leg. (ZMMU); 4♂♂, Tbilisi, Caucasus, 19-20.VI 1912, KOENIG leg. (GNMT); 1♂, Aresch, Caucasus, 1911, KOENIG leg. (GNMT); 1♀, Bakuriani, VII 1916 (GNMT); 3♂♂, Karim-abad, Exp. Urmiana, 17.VII 1916 (GNMT); 1♂, Vashlovani Reserve, V 1970, DIDMANIDZE leg. (GNMT); 1♂, Gomareti, distr. Mamulo, 23.VII 1966, DIDMANIDZE leg. (GNMT); 1♂, Chrami, distr. Dmanisi, 26.VII 1966, DIDMANIDZE leg. (GNMT); 1♀, Elizavetpol, Caucasus, 2.V 1910, WASSILININ leg. (GNMT); 2♂♂, Elizavetpol, Caucasus, X 1910, WASSILININ leg. (GNMT); 1♂, Kodjori, Caucasus, 16.V 1912 (GNMT); 14♂♂, 15♀♀, Garemiskaja, pr. Kriagino, 2.VI 1931, ZAITZEV leg. (GNMT); 1♀, Tbilisi, Caucasus, 29.V 1924, ARCHANGELSKY leg. (GNMT); 1♂, Saguramo Reserve, 3-14.VII 1970, DIDMANIDZE leg. (GNMT); 1♂, Vashlovani Reserve, 6.V 1979, DIDMANIDZE leg. (GNMT).

***Malacosoma franconicum* ([DENIS & SCHIFFERMÜLLER], 1775)**

**Map 6**

*Bombyx franconica* [DENIS & SCHIFFERMÜLLER], 1775 - Ankündigung syst. Werkes Schmett. Wienergegend: 57. Locus typicus: [Germany] Frankfurt. Types: probably destroyed.

**References:** ROMANOFF, 1885; RADDE, 1899; SHENGELIA, 1966; MIRZOJAN, 1977; DIDMANIDZE, 1971, 1976, 1981a; GEVORKJAN, 1986; DUBATOLOV & ZOLOTUHIN, 1992; Zolotuhin, 1992a, 1992b; ZOLOTUHIN & ZAHIRI 2008.

**Range:** steppes of Europe, northern Kasakhstan, Caucasus, northern Turkey and northern Iran (province Mazandaran).

**Comments:** The species is monovoltine in its whole range. Flight period falls in June-July. Inhabits mid to high altitudes, in Iran is known from 2000 to 3100 m; more typical for dry meadow biotopes. Larvae are polyphagous and were recorded in Europe from different plants such as grasses (Poaceae), *Artemisia* spp., *Achillea* spp. (Asteraceae), *Rumex* spp. (Polygonaceae). Pupation in a silky cocoon which is yellowish powdered, on food plants and under stones. Eggs are the hibernating stage. Males are day fliers and do not come to the light; therefore they are rare in collections and the species is represented in museums mostly by females if not reared. From Turkey, it was formerly incorrectly listed under *Malacosoma alpicola* ssp. *prima* STGR. (de FREINA, 1982).

**M a t e r i a l :** 1 ♀, Ciscaucasus, ms. Mashuk, 21.VI 1923 (ZMKU); 1 ♂, 3 ♀ ♀, Caucasus s., Teberda, end VII-VIII 1926 (ZMKU); 1 ♂, 2 ♀ ♀, Transcaucasus, Borzhom (ZMKU); 1 ♀, Transcaucasus, Abas-tuman (ZMKU); 2 ♀ ♀, Armenia, Daratshitshag, 23.VII 1935 (ZMKU); 4 ♀ ♀, Armenia, ms. Alager, pag. Inaklju, end VI 1935 (ZMKU); 1 ♂, 6 ♀ ♀, Transcaucasus, Prov. Kars, Sarykamysch (ZMKU); 1 ♂, Chukhunchan, 8000', 12.VII (ZISP); 1 ♀, Transcaucasia, Distr. Zangezour, log. Litshk, 30.VI 1910, E. MILLER leg. (ZISP); 1 ♂, Ciscaucasus, Tarki, 4.VI 1946 ex p., M. RJABOV leg. (ZISP); 1 ♀, Georgia (ZISP); 1 ♀, Lenkoran (ZISP); 2 ♀ ♀, slopes of Great Ararat, 1.VII 1908, A.MOLCHANOV leg. (ZISP); 1 ♀, Lagodekhi (ZISP); 1 ♀, Nakhitshevan, Tylljak on Giljanchaj river, 4.VIII 1933, ZNOJKO leg. (ZISP); 1 ♀, Dagestan, Detlagar, 2.VI 1909, A.BERG (ZISP); 3 ♂ ♂, 1 ♀, Ordubad (ZISP); 1 ♂, 2 ♀ ♀, Pjatigorsk (ZISP); 1 ♀, Darat-schichan (ZISP); 1 ♂, ♀, Bakuriani (ZISP); 1 ♀, Kazikoporan (ZISP); 1 ♂, ♀, Georgia, Imeretin gorge, vill. Likani, 2000 m, 5.VIII 1936, A.TSVETAEV leg. (ZMMU); 1 ♂, Armenia, Darachichag, vill. Tsahkadzor, 22.VII 1936, A.TSVETAEV leg. (ZMMU); 21 ♀ ♀, Armenia, mt. Aragatz, vill. Inaklju, 2000 m, 12-18.VII 1936, A.TSVETAEV leg. (ZMMU); 2 ♀ ♀, [Nakhitshevan] Armenia, Daralagez gorge, vill. Kjukjui, 12.VII 1970, A.TSVETAEV leg. (ZMMU); 1 ♀, Kasicaparan 15.VII 885 (GNMT); 1 ♂, Mynadze, distr. Achalcyche, 20.VIII 1964, DIDMANIDZE leg. (GNMT).

### ***Malacosoma squalorum* ZOLOTUHIN, 1992**

*Malacosoma squalorum* ZOLOTUHIN, 1992 - Zoologicheskij Zhurnal **73**: 62, figs 1-1, 2. Locus typicus: Northern Ossetia ASSR, Alagyr Distr., alpcamp "Torpedo", 1900-2000 m. Holotype: female (ZISP).

**R a n g e :** The species is only known from Ciscaucasus (Northern Ossetia, Daghestan).

**C o m m e n t s :** The species is known only from the type series and distinguished externally from the closely related *M. franconicum* ([DEN. & SCHIFF.], 1775) by being much darker; males with reduced transparent fields on the forewings. Inhabits higher altitudes, is known from 1900 to 2300 m. The biology is still unknown.

**M a t e r i a l :** 1 ♀, holotype, Eastern Caucasus, Northern Ossetia ASSR, Alagyr Distr., alpcamp "Torpedo", 1900-2000 m, 15-25.VIII 1990, A. BELOV leg. (ZISP); 1 ♀, paratype, Daghestan, west circle of Samur Gorges, 2300 m, 13.VIII 1991. V. TIKHONOV leg. (ZISP); 1 ♂, [North-western Georgia] Mestiya, Krugozor (GNMT).

### ***Eriogaster* GERMAR, 1810**

Diss. sistens Bombycum Species (1): 16. Type-species: *Phalaena lanestris* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) **1**: 499, by subsequent designation by WESTWOOD, 1840, Introd. mod. Class. Insects **2** (Synopsys Genera Br. Insects): 89.

### ***Eriogaster lanestris* (LANESTRIS, 1758)**

*Phalaena Bombyx lanestris* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) **1**: 499. Locus typicus: not stated [Europa]. Types: in coll. LSL.

**R e f e r e n c e s :** DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992.

**R a n g e :** Europe; Russia to Amur, local in Turkey (Thrakia, Bolu, Erzurum).

**C o m m e n t s :** The species was known only from Beshtau Mt. and recently was found by Valery STSHUROV near Novorossijsk; probably not distributed southwards. However, its early flight period (February to March) results in the fact that it is very rare in collections and therefore it is quite possible that the species is more widely distributed

in the Caucasus. Recently it was found in some localities of Turkey, thus it can be also found in southern Georgia. No information is available on the biology of the species in the region under investigation.

**M a t e r i a l :** 1♂, Ciscaucasia, ms. Beshtau, e. l., 20.XII 1923, N. EGOROV leg. (ZMKU); caterpillars in a nest, Novorossiysk, V 2008, V. STSHUROV leg. (coll. V. STSHUROV).

### ***Eriogaster daralagesis* ZOLOTUHIN, 1991**

*Eriogaster daralagesis* ZOLOTUHIN, 1991 - Atalanta **22**(2/4): 118, figs 2a, 3a-c. Locus typicus: Caucasus, Armenia, Daralagez. Holotype: male (ZISP).

**R e f e r e n c e s :** DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992.

**R a n g e :** Armenia and Nakhichevan.

**C o m m e n t s :** This species is known only from a very few arid localities in southern Transcaucasus, where it occurs allopatrical with *E. pfeifferi* DANIEL, 1932. No information on the biology of the species is available for the region under investigation.

**M a t e r i a l :** 1♂, holotype, Caucasus, Armenia, Daralagez, 20.IX 1963, coll. E. MILANOVSKI (ZISP).

### ***Eriogaster henkei* (STAUDINGER, 1879)**

*Bombyx henkei* STAUDINGER, 1879 - Stettin ent. Ztg **40**(7-9): 318. Locus typicus: [Nartün, nordöstlich von Astrachan zwischen Wolga- und Ural-Fluß, etwa 15 deutsche Meilen ostwärts von der Wolga]. Types: males and females (ZMHU).

*Bombyx henkei* Auct. - misspelling.

**R e f e r e n c e s :** DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992; ZOLOTUHIN & ZAHIRI, 2008.

**R a n g e :** Deserts of Saudi Arabia, Northern Oman and Iran (ssp. *arabica* WILTSHIRE); deserts of southern Russia including Ciscaucasus and lower Volga, Kazakhstan, Uzbekistan and Turkmenistan (ssp. *henkei* STAUDINGER).

**C o m m e n t s :** The species is monovoltine in its whole range. Flight period falls in the winter period, in deserts of Chechen Republic it is known from September. Inhabits sand deserts with host plants – different species of *Calligonum* (Polygonaceae); mature larvae were observed from Arpil to early May in common webs. Pupation in the soil in a tough cone-shaped cocoon.

**M a t e r i a l :** 1♂, Caucasus borealis, Pieski, 22.IX 1891 (ZISP); 1♂, 1♀, north Caucasus, Groznyj obl., Karakchajsk r-n, 19.IX (ZMMU).

### ***Eriogaster neogena* (FISCHER de WALDHEIM, 1824)**

**Map 7**

*Bombyx neogena* FISCHER de WALDHEIM, 1824 - Entomographia Imperii Rossici, Mosquae **2**: 250, pl. 10, fig. 4. Locus typicus: Russia, Ural superior. Types: not traced.

**R e f e r e n c e s :** ROMANOFF, 1885; SHENGELIA, 1941; MIRZOJAN, 1977; DIDMANIDZE, 1978, 1981a (*Eriogaster neogena* F. d. W. ?ssp. *acanthophylli* Chr.), 1981b (*Eriogaster neogena* ssp. *acanthophylli* Chr.); DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992; ZOLOTUHIN & ZAHIRI 2008.

**R a n g e :** Caucasus, Transcaucasus, Lower Volga and southern Siberia of Russia, Kazakhstan, Kirghizstan; Afghanistan, Iran (province Semnan).

**C o m m e n t s :** The species is monovoltine in its whole range. Flight period falls in autumn, in late August to October. Inhabits middle and high altitudes of mountain ranges and is known mostly from Transcaucasus where it is represented by a population with darker hindwings probably forming a new as yet undescribed subspecies; in Iran, it is known from 620 to 700 m. As food plants for caterpillars, only *Caragana* spp. are known (in Russia *Caragana frutex*), but probably food spectrum is wider; MIRZOJAN (1977) listed also *Cytisus* (?*Chamaecytisus*) spp., *Salsola dendroides* PALL. and *Robinia pseudoacacia* L. (as white acacia). Pupation in the soil in a strong cocoon. Eggs hibernate under scale cover. The specimen from the Vashlovan Reserve has distinctly blackish hindwings and resembles Afghan moths: the status of this form needs special investigation.

**M a t e r i a l :** 1♂, Transcaucasus, Jelisavetpol (ZMKU); 1♂, 6♀, Ordubad (ZISP); 1♂, 1♀, Caucasus, Elisabethpol, 2.X 1912, A.VASSILININ leg. (ZISP); 2♂♂, Elizavethpol (Chrysal), Caucasus, 13.IX 1913, WASSILININ leg. (GNMT); 1♂, Vashlovani Reserve, 6.V 1973, DIDMANIDZE leg. (GNMT); 1♂, 1♀, Khosrov Reserve, 10.X 1974, DIDMANIDZE leg. (GNMT).

### ***Lasiocampa* SCHRANK, 1802**

Fauna Boica 2(2): 153. Type-species: *Phalaena Bombyx quercus* LINNAEUS, 1758 - Syst. Nat. (Ed.10) 1: 498, by subsequent designation by CURTIS, 1827, Br. Ent. 4: 181.

### ***Lasiocampa quercus* (LINNAEUS, 1758)**

**Map 8**

### ***Lasiocampa quercus quercus* (LINNAEUS, 1758)**

*Phalaena Bombyx quercus* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) 1: 498. Locus typicus: not stated [Europa].

### ***Lasiocampa quercus vassilini* SHELJUZHKO, 1943**

*Lasiocampa quercus vassilini* SHELJUZHKO, 1943 - Z. wien. ent. Ges. 28: 247, pl. 13, figs 1, 2. Locus typicus: Mahindzhauri bei Batum (im Süden der Westküste Transkaukasiens). Holotype: male (ZMKU).

**R e f e r e n c e s :** ROMANOFF, 1885; SHENGELIA, 1964, 1966; MILJANOVSKY, 1941, 1964; DIDMANIDZE, 1973, 1978, 1981a; GEVORKJAN, 1986; MIRZOJAN, 1977; DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992; SERGEEV & ZOLOTUHIN, 2008.

**R a n g e :** From Europe to Baikal Lake; Turkey, Caucasus, Transcaucasus.

**C o m m e n t s :** The species is monovoltine in its whole range. Flight period falls in July to August. Inhabits middle and high altitudes of mountain ranges and forms a lot of individual, altitude and geographical races. *Quercus*, *Betula*, *Alnus*, *Salix* spp., *Chamaecytisus*, *Sorbus*, *Prunus spinosa* and other plants are listed as hostplants by SHENGELIA (1964) and MIRZOJAN (1977). Pupation on the soil or on hostplant in a strong cocoon. Larvae of middle instars are the hibernating stage.

Rather polymorphic species. Population from Ciscaucasus as well as from the Great Caucasus should be attributed to the nominate subspecies. However, ssp. *vassilini* SHELJUZHKO was described in 1943 from "Mahindzhauri bei Batum (im Sueden der Westkueste Transkaukasiens)" and seems to be endemic for a narrow coastal zone of south-western Georgia.

**M a t e r i a l :** 2♂♂, 7♀♀, Ciscaucasia, Pjatigorsk (ZMKU); 2♂♂, 2♀♀, Ciscaucasus, Kislovodsk (ZMKU); 3♀♀, Prov. Kubanj, Batalpa shinsk (ZMKU); 1♂, 1♀, Caucasus, Teberda (ZMKU); 2♂♂, Caucasus oc., Tuapse (ZMKU); 1♂, Caucasus oc., Sotshi (ZMKU); 9♂♂, Transcaucasia, Borzhom (ZMKU); 4♂♂, 6♀♀, Transcaucasus prope Batum (among them holotype of ssp. *vassilini* SHEL.) (ZMKU); 1♂, Tshernomorskaja Gub., Gelendzhik, N.VOROBYEV leg. (ZISP); 5♂♂, 1♀, Tshernomorskaja Gub., Ashe, 12.VII-10.VIII [?], V. DOROGOSTAJSKI leg. (ZISP); 1♂, 1♀, Ciscaucasus, Stauropol, 22-23.VII 1920 (ZISP); 2♀♀, Borzhom (ZISP); 1♀, Svanetia (ZISP); 4♂♂, Tsihis-Dziri, 13-20.VIII 1927, GOLITZYN leg. (ZISP); 2♀♀, mt. Tarki, 20.VII 1947, M. RJABOV leg. (ZISP); 1♀, Abkhasia, Sukhumi, V. MILJANOVSKI leg. (ZMMU); 1♂, 2♀♀, Borjom, VI 1899, coll. ROMANOV (GNMT); 1♂, Kojori, 10.VIII 1911 (GNMT); 1♂, Gegetshkory, 8.VIII 1962, DIDMANIDZE leg. (GNMT); 1♂, Gremi, pr. Kvareli, VIII 1963, NACVLISHVILI leg. (GNMT); 1♀, Gergeti, Mount Kazbek, 31.VII 1976, DIDMANIDZE leg. (GNMT); 1♀, Svanetia, Xalde, 15.VI 1985, DIDMANIDZE leg. (GNMT).

***Lasiocampa eversmanni* (KINDERMANN, 1843)<sup>1</sup>**

**Map 9**

*Gasteropacha* [sic!] *eversmanni* KINDERMANN, 1843, in EVERS-MANN - Bull. Soc. Imper. Nat. Moscou 16(3): 542, pl. 10, figs 2abc. Locus typicus: Sarepta. Types: males, female (ZISP).

**R e f e r e n c e s :** ROMANOFF, 1885; RADDE, 1899; SHENGELIA, 1941; DIDMANIDZE, 1978, 1981a, 1981b; GEVORKJAN 1986; MIRZOJAN, 1977; DUBATOLOV & ZOLOTUHN, 1992; ZOLOTUHN, 1992; KOSTJUK & TIKHONOV, 2007; ZOLOTUHN & ZAHIRI 2008.

**R a n g e :** from southern Russia and Caucasus through Siberia, Kazakhstan, Kyrgyzstan, Uzbekistan, Tadjikistan, Turkmenistan, western China to Israel, Turkey, Syria, Iraq, Iran and Afghanistan.

**C o m m e n t s :** The species is monovoltine in its whole range. Flight period falls in August to October. Inhabits lowlands to mid altitudes; more typical for arid biotopes and lowlands. Larvae are polyphagous and were recorded from Fabaceae such as *Astragalus* sp., *Caragana* and *Trifolium alpestris* (MIRZOJAN 1977), in Middle Asia also known from *Ammodendron conollyi* Bunge, *Medicago* sp., *Ammodendron conollyi* (Fabaceae), *Calligonum setosum*, *C. turkestanicum*, *C. griseum* (Polygonaceae), *Haloxylon persicum* (Chenopodiaceae), *Carex physodes* (Carecaceae), *Bromus tectorum* L. (Poaceae), *Ephedra strobilacea* (Ephedraceae), *Artemisia* sp. (Asteraceae), *Rosa persica* (Rosaceae), *Ferula* sp. (Apiaceae), *Zygophyllum gontscharovi*. Pupation in a parchment-like cocoon on the soil or in bark. Eggs are the hibernating stage.

---

<sup>1</sup> The widely accepted authorship EVERS-MANN has been replaced by KINDERMANN by DUBATOLOV & ZOLOTUHN (1992).

**Material:** 16♂♂, 4♀♀, Transcaucasus, Jelisavetpol (ZMKU); 7♂♂, Armenia, Erevanj (ZMKU); 2♂♂, 1♀, Armenia, Etshmiadzin (ZMKU); 6♂♂, Armenia, Daralagez, pag. Azizbekov (Pashahi) (ZMKU); 2♂♂, 1♀, Helenendorf (ZISP); 8♂♂, 4♀♀, Ordubad (ZISP); 1♂, Georgia, Gori (ZMMU); 1♀, Borjom, 27.VII 1900, coll. ROMANOV (GNMT); 1♂, Aresch, 17.IX 1910 (GNMT); 1♀, Helenendorf, 27.VIII 1911, WASSILININ (GNMT); 1♀, Helenendorf, Chrysal, 3.IX 1911, WASSILININ (GNMT); 1♀, Elenendorf, Elizavetpol, 4.IX 1911, WASSILININ (GNMT); 1♀, Kojori, 17.VIII 1911 (GNMT); 1♂, Aresch, Caucasus, VIII 1912, WASSILININ (GNMT); 1♂, 1♀, Helenendorf, 1886 (GNMT); 2♂♂, Vashlovani Reserve, 20.IX 1973, DIDMANIDZE leg. (GNMT).

***Lasiocampa trifolii* [DENIS et SCHIFFERMÜLLER] 1775**

**Map 10**

*Bombyx trifolii* [DENIS & SCHIFFERMÜLLER], 1775 - Ankündigung syst. Werkes Schmett. Wienergegend: 57. Locus typicus: [Austria] Vienna District. Types: probably destroyed.

**References:** ROMANOFF, 1885; RADDE, 1899; SHENGELIA, 1941, 1964, 1966; MIRZOJAN, 1977; GEVORKJAN, 1986 (*Lasiocampa trifolii* var. *medicaginis* BRKH.); DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992; ZOLOTUHIN & ZAHIRI, 2008.

**Range:** northern Africa, Saudi Arabia, Asia Minor, Central Asia, Europe to Siberia, Caucasus, Transcaucasus, Kazakhstan.

**Comments:** The species is monovoltine in its whole range. Flight period falls in August to October. Inhabits lowlands to mid altitudes; more typical for arid biotopes and lowlands. Larvae are polyphagous and were recorded from different plants such as *Ammodendron*, *Caragana fruticosa*, *Astragalus* spp., *Medicago* sp. (Fabaceae), *Calligonum* (Polygonaceae), *Haloxylon* (Chenopodiaceae), *Artemisia* sp. (Asteraceae). Pupation in a parchment-like cocoon on the soil or in bark.

**Material:** 2♂♂, Caucasus oc., Novorossijsk (ZMKU); 3♂♂, 1♀, Ciscaucasia, Pjatigorsk (ZMKU); 6♂♂, 3♀♀, Caucasus, Teberda (ZMKU); 3♂♂, Dagestan, Berikej (ZMKU); 9♂♂, 3♀♀, Transcaucasia, Jelisavetpol (ZMKU); 3♂♂, 2♀♀, Prov. Terskiensis, log. Groznyj, 8-26.VIII 1907, N. RODNENSKIJ leg. (ZISP); 2♂♂, 1♀, Helenendorf (ZISP); 3♂♂, 1♀, Nord Caucasus, Elbrus, 8000 [ft], E. KOENIG leg. (ZISP); 1♂, Nord Kaukasus, Kislovodsk, 11.VIII 1895, KELER leg. (ZISP); 5♂♂, 1♀, Tshernomorskaja Gub., Gelendzhik, 11.VI-23.VIII 1910, N. VOROBJEV leg. (ZISP); 1♂, Caucasus bor., Cuban., 16.VIII 1907 (ZISP); 1♂, Ciscaucasus, Gagry, 28.VII 1905, N. VOROBJEV (ZISP); 2♂♂, Ciscaucasus, mt. Tarki, steppe, 9-12.IX 1947, M. RJABOV leg. (ZISP); 1♂, Dagestan, Derbent, 1.IX 1931, M. RJABOV leg. (ZISP); 1♂, Elisabethopolski uезд, Delizhan, 19.VIII 1903, M. BALYNLEJSKIJ leg. (ZISP); 1♂, 2♀♀, Kojori, Caucasus, 10.VIII 1905 (GNMT); 3♂♂, Mashaver, Borchalo, VII 1907 (GNMT); 1♀, Karachai, Kuban, VIII 1907 (GNMT); 1♂, Kojori, Caucasus, 26.VII 1908 (GNMT); 2♂♂, Kojori, Caucasus, 3.VIII 1908 (GNMT); 1♂, 1♀, Kojori, Caucasus, 17-18.VIII 1908 (GNMT); 1♀, Kala, distr. Svanetia, 8.VIII 1910 (GNMT); 1♀, Adjikend, Caucasus, 8.VIII 1910, WASSILININ leg. (GNMT); 1♀, Tbilisi, Caucasus, 1910, KOENIG leg. (GNMT); 3♂♂, 2♀♀, Kojori, 10.VIII 1911 (GNMT); 2♂♂, Adjikend, Caucasus, VIII 1911, WASSILININ leg. (GNMT); 3♂♂, Kojori, V 1912 (GNMT); 1♂, Kojori, Caucasus, 16.VI 1912 (GNMT); 1♂, 1♀, Kojori, 6-18.VIII 1914 (GNMT); 2♂♂, Manglis, 22-25.VIII 1930, BURJANADZE leg. (GNMT); 1♂, 1♀, Helenendorf, 1887 (GNMT).

***Lasiocampa piontkovskii* SHELJUZHKO, 1943**

*Lasiocampa piontkovskii* SHELJUZHKO, 1943 - Z. wien. ent. Ges. 28: 248, pl. 13, figs 3-5. Locus typicus: [Nakhitschevan Rep.] im Tale des Arax-Flusses, Post 1. Holotype: male (ZMKU).

**R e f e r e n c e s :** DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992; ZOLOTUHIN & ZAHIRI 2008.

**R a n g e :** Transcaucasus (southern Armenia, Nakhitschevan, southern Azerbaijan), Iran (prov. Mazandaran, Tehran, Qazvin, Kohkiluye va Boyerahmad, Fars and Hormozgan); a couple from Pakistan (near Tanai vill.) from the collection of M. STRÖHLE (Weiden) seems to be mislabeled.

**C o m m e n t s :** The species is monovoltine on its range. Flight period falls on September-November. Inhabits lowlands to mid altitudes and is known in Iran from lowland to 2000 m; more typical for arid biotopes such as clay deserts. Biology and larvae are unknown.

**M a t e r i a l :** 2♂♂, Transcaucasia m., prov. Nachitschevan, Dzhulfa, stat. Derasham 1 ad fl. Arax, 25.VIII 1932, M. RJABOV leg. (ZMKU); 3♂♂, Transcaucasia m., prov. Nachitschevan, stat. Derasham 2 ad fl. Arax, 14.IX 1931, M. RJABOV leg. (ZMKU); 3♂♂, Armenia, pag. Njuvady (ad fl. Arax, distr. Zangezur prope Migry), 2.IX 1932, M. RJABOV leg. (ZMKU); 7♂♂, 1♀, Armenia, Distr. Zangezur, vall. Arax, Post 25 klm ab Myndzhevan, 4.IX 1932, M. RJABOV leg. (ZMKU); 2♂♂, 1♀, Armenia, Distr. Zangezur, vall. Arax, Post 25 klm ab Myndzhevan, 3.IX 1932, M. RJABOV leg. (ZMKU); 1♂, Azerbaijan, st. Mindzhevan, 4.IX 1932, M. RJABOV (ZMMU); 3♂♂, Armenien, Garni, E von Eriwan, 21-23.VIII 1995, leg. Kazajan (MWM); 3♂♂, Armenia, Khosrov, 28.IX 1985, P. Kazarjan (MWM); 1♂, 1♀, Nachitschevan, Buzgov, VII 1990 (MWM).

### ***Lasiocampa grandis* (ROGENHOFER, 1891)**

*Gastropacha trifolii* E. var. *grandis* ROGENHOFER, 1891 - Verhandlungen der zoologisch-botanischen Gesellschaft zu Wien **41**: 86. Locus typicus: «Syrien». Types: males and female [not found].

**R e f e r e n c e s :** ZOLOTUHIN, 1991; DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992; ZOLOTUHIN & ZAHIRI, 2008.

**R a n g e :** from southern Europe (Balcans) to Turkey, Syria, Lebanon, Iraq, Iran (provinces Kermanshah, Lorestan, Qazvin, Kerman), Nakhitschevan and southern Armenia.

**C o m m e n t s :** The species is monovoltine in its whole range. Flight period falls in July to August, in Armenia, it was collected in late August. Inhabits lowlands to high altitudes (up to 3000 m); more typical for arid biotopes and lowlands. Larvae are polyphagous and were recorded from different herbacious plants. For Iran, RAJABI (1986) lists *Amygdalus* and *Crataegus* and Modarres AWAL (1994 & 1997) adds "sloe tree" (*Prunus spinosa*: Rosaceae) as host plants in Iran. Pupation in a parchment-like cocoon on the soil or in bark. Eggs are the hibernating stage. Transcaucasus is the northernmost limit of the distribution of the species.

**M a t e r i a l :** 1♂, Armenia, PRK-4, 19.VIII 1955, Ch. ARUTUNJAN leg. (ZISP); 1♂, Armenia, PRK-4, 21.VIII 1955, Ch. ARUTUNJAN leg. (ZISP).

### ***Macrothylacia* RAMBUR, 1866**

Cat. syst. Lepid. Andalousie (2): 358. Type-species: *Phalaena rubi* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) **1**: 498, by original designation.

***Macrothylacia rubi* (LINNAEUS, 1758)**

**Map 11**

*Phalaena Bombyx rubi* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) 1: 498. Locus typicus: not stated [Europa]. Types: LSL.

**R e f e r e n c e s :** DUBATOLOV & ZOLOTUHN, 1992; ZOLOTUHN, 1992.

**R a n g e :** From Europe to Russian Far East; very local in Turkey and a single specimen is known from Georgia.

**C o m m e n t s :** The species is known after a single male kept in ZISP. No additional material known. A very few specimens are also known from near territories in Turkey.

**M a t e r i a l :** 1♂, Borshom (ZISP).

***Euthrix* MEIGEN, 1830**

Syst. Beschreibung eur. Schmett. 2 (4): 191. Type-species: *Phalaena potatoria* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) 1: 498, by subsequent designation by GROTE, 1898, Ilte Z. Ent. 3: 71.

***Euthrix potatoria* (LINNAEUS, 1758)**

*Phalaena Bombyx potatoria* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) 1: 498. Locus typicus: not stated [Europa]. Types: LSL.

**R e f e r e n c e s :** DUBATOLOV & ZOLOTUHN, 1992; ZOLOTUHN, 1992.

**R a n g e :** From Europe to Russia Far East, Sakhalin, Korea, Japan, northern China.

**C o m m e n t s :** The species is known only from 2 localities in Ciscaucasus, probably representing the southernmost limits of the distribution. No material is known from the Great Caucasus and labels "Caucasus" by A. FEOKTISTOV (see "Material") should be regarded to report places on Northern Caucasus (Kislovodsk, Pjatigorsk, Minvody etc).

**M a t e r i a l :** 3♂♂, 2♀♀, Ciscaucasus, Kislovodsk (ZMKU); 1♂, Ciscaucasus, Pjatigorsk (ZMKU); 2♂♂, Caucasus, A. FEOKTISTOV leg. (ZISP).

***Gastropacha* OCHSENHEIMER, 1810**

Schmett. Eur. 3: 239. Type-species: *Phalaena quercifolia* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) 1: 497, by subsequent designation by CURTIS, 1824, Br. Ent. 1:24.

***Gastropacha quercifolia* (LINNAEUS, 1758)**

**Map 12**

*Phalaena Bombyx quercifolia* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) 1: Locus typicus: not stated [Europa]. Types: (LSL).

**R e f e r e n c e s :** ROMANOFF, 1885; SHENGELIA, 1966; MILJANOVSKY, 1941, 1964; MIRZOJAN, 1977; DIDMANIDZE, 1973, 1974, 1975, 1978, 1981a; GEVORKJAN, 1986; DUBATOLOV & ZOLOTUHN, 1992; ZOLOTUHN, 1992; ZOLOTUHN & ZAHIRI 2008.

**R a n g e :** In different subspecies known from Europe through Siberia, Kazakhstan, Kyrgyzstan and Far East of Russia to Korea, China and Northern Vietnam; Caucasus, Transcaucasus, Turkey, Iran (province East Azerbaijan).

**C o m m e n t s :** The species is monovoltine in its whole range. Flight period falls in July to August. Inhabits mid altitudes of mountain ranges and is more typical for sparse



forest formations. Larvae are polyphagous and were recorded from different plants such as *Quercus orientalis* (Fagaceae), *Malus*, *Pyrus*, *Crataegus*, *Prunus spinosa*, *Cerasus* (Rosaceae) more willingly on young plants (DIDMANIDZE, 1978; GEVORKJAN, 1986; MILJANOVSKY, 1941). Pupation in a silky cocoon between leaves or in bark. Middle instars larvae are the hibernating stage.

**Material:** 1♂, 1♀, Ciscaucasus, Kislovodsk (ZMKU); 10♂♂, Ciscaucasus, Pjatigorsk (ZMKU); 2♂♂, Caucasus, Ossetia (ZMKU); 3♂♂, Dagestan, pag. Kaptshugaj (ZMKU); 4♂♂, Dagestan, prope Petrovsk (ZMKU); 2♂♂, Dagestan, stat. Belidzhi prope Derbent (ZMKU); 2♂♂, Elisabethpol. Gub., Geok-Tapa, 21-24.VII 1901, SCHMIDT leg. (ZISP); 1♂, 2♀♀, Taganrog (ZISP); 2♂♂, Tsihis-Dziri, 27.VIII 1927, GOLITZYN leg. (ZISP); 1♂, Staupopol, 23.VII 1920 (ZISP); 3♂♂, 2♀♀, Prov. Terskiensis, log. Groznyj, 1.VI 1906, N. RODNESKI leg. (ZISP); 1♀, Abkhasia, N. Gagry, VII 1912 (ZMMU); 1♂, Armenia, mt. Aragatz, vill. Inaklju, 12.VII 1936, A. TSVETAEV leg. (ZMMU); 8♂♂, ♀, Borjom, 1-28.VII.1899, coll. ROMANOV leg. (GNMT); 4♂♂, Aresch, Caucasus, 30.1906, SCHELKOWNIKOW leg. (GNMT); 1♂, Tbilisi, Caucasus, 10.VI.1907, KOENIG leg. (GNMT); 2♂♂, Kojori, Caucasus, 6-12.VII 1908 (GNMT); 3♂♂, Tbilisi, 28.VI.1910 (GNMT); 3♂♂, Aresch, Caucasus, 10-14.VI 1911, WASSILININ leg. (GNMT); 1♀, Aresch, Caucasus, 4.VIII 1912, WASSILININ leg. (GNMT); 1♂, Gok-gol, distr. Elisavetpol, VII 1913, HETLING leg. (GNMT); 1♂, 2♀♀, Achbulag, distr. Tbilisi, 10.VII 1927 (GNMT); 1♂, Djava, VIII 1932, BURJANADZE leg. (GNMT); 1♂, Helenendorf, 1888 (GNMT); 1♂, Tbilisi, 1.VIII 1932, CHIABERASHVILI leg. (GNMT); 1♂, Gegetsory, distr. Salchino, 24.VI 1962, DIDMANIDZE leg. (GNMT); 1♂, Mynadze, Distr. Achalcyche, 24.VII 1964, DIDMANIDZE leg. (GNMT); 1♂, Zugdidi, 22.V 1968, DIDMANIDZE leg. (GNMT); 1♂, Tzkhawasi, distr. Tzalenjicha, 24.VI 1968, DIDMANIDZE leg. (GNMT); 1♂, Saguramo Reserve, 21.V 1968, DIDMANIDZE leg. (GNMT); 1♂, Saguramo Reserve, 3-14.VII 1970, DIDMANIDZE leg. (GNMT).

### ***Phyllodesma* HÜBNER, [1820] 1816**

Verz. bekannter Schmett.: 190. Type-species: *Phalaena ilicifolia* LINNAEUS, 1758 - Syst. Nat. (Edn 10) 1: 497, by subsequent designation by GROTE, 1898, Illte Z. Ent. 3: 71.

### ***Phyllodesma joannisi* LAJONQUIÈRE, 1963**

### **Map 13**

*Phyllodesma joannisi* LAJONQUIÈRE, 1963 - Ann. Soc. ent. Fr. 132: 71, 131, pl. 1, figs 19, 20, pl. 8, figs 122-124, pl. 9, figs 138-140. Locus typicus: [Caucasus, Azerbaijan, Geok-Tapa] erroneously interpreted by de LAJONQUIÈRE to be Turkmenia, Geok-Tepe. Holotype: male (ZFMK).

= *Phyllodesma joannisi pontica* DUBATOLOV, 1990, Izv. Akad. Nauk Turkm. SSR., Ser. biol. nauk, 2: 30-31, fig 3. Locus typicus: Ciscaucasus, Sotchi. Holotype: male (Biological Institute, Novosibirsk).

**References:** ROMANOFF, 1885 (as both *L[asiocampa]. tremulifolia* & *L. ilicifolia*); Radde, 1899 (both *Lasiocampa tremulifolia* & *L. ilicifolia*); SHENGELIA, 1966 (*Epicnaptera ilicifolia*); MILJANOVSKY, 1941 (*Epicnaptera tremulifolia*), 1964 (*Epicnaptera tremulifolia*); MIRZOJAN, 1977 (*E. tremulifolia*); DIDMANIDZE, 1973 (*Epicnaptera tremulifolia*), 1975 (*Epicnaptera tremulifolia*), 1978 (*Epicnaptera tremulifolia*), 1981a (*Epicnaptera tremulifolia*); GEVORKJAN, 1986 (*Epicnaptera tremulifolia*); DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992, 1994; ZOLOTUHIN & ZAHIRI 2008.

**Range:** South of Russia (Lower Volga Region), Ciscaucasus, Caucasus, Transcaucasus, eastern Turkey and north-western Iran (province Kordestan).

**C o m m e n t s :** The biology of this species is poorly known. In Armenia, caterpillars were observed on *Quercus*, *Populus tremulae*, *Populus* spp., *Malus*, *Pyrus*, *Prunus spinosa* (GEVORKJAN, 1986: 687), on *Populus* spp. in Abkhasia (MILJANOVSKY 1964) and on *Quercus*, *Alnus*, *Populus*, *Betula* in Georgia (DIDMANIDZE 1978: 89). Develops two generations per year; both generations are extremely dimorphic; the summer one is very dark and looks like European *Ph. ilicifolium* L., whereas the spring generation is lighter, with reduction of whitish pattern and looks similar to a reddish *Ph. tremulifolium* ESPER.

**M a t e r i a l :** 1♂, Pjatigorsk (ZMKU); 1♂, Mashuk (ZMKU); 1♂, Essentuki (ZMKU); 1♂, Dagestan, Achty (ZMKU); 1♀, Borzhom (ZISP); 1♂, Nord Kaukasus, Ekaterinodar, VOROBJEV leg. (ZISP); 2♂♂, Lagodekhi Zakatal. okr., Tiflis Gub., 5-31.VII 1893, MLOKOSSEVITSH leg. (ZISP); 5♂♂, 1♀, Lagodekhi [26.IV 1887] (ZISP); 1♀, Borzhom, 2.III 1877, ex larva (ZISP); 2♂♂, Elisabethpol. Uezd, Geok Tapa, 21.VII 1901, P. SCHMIDT leg. (ZISP); 1♀, North Caucasus, Essentuki, 18.IV 1930, ex l. (ZMMU); 1♂, Krasnodarskij Kraj, env. Sotshi, 1958 (ZMMU); 2♂♂, Abkhasia, env. Sukhumi, E. MILJANOVSKIJ leg. (ZMMU); 1♂, Borjom, 29.IV 1899, coll. ROMANOV (GNMT); 1♂, Borjom, 17.VII 1899, coll. ROMANOV (GNMT); 1♂, Borjom, 4.VIII 1900, coll. ROMANOV (GNMT); 1♂, Aresch, Caucasus, 28.VII 1910, SCHELKOVNIKOV leg. (GNMT); 1♂, Aresch, Caucasus, 14.V 1911, WASSILININ leg. (GNMT); 1♂, Aresch, Caucasus, 8.VI 1912, WASSILININ leg. (GNMT); 1♂, Lagodekhi Reserve, 30.VII 1959, DIDMANIDZE leg. (GNMT); 1♀, Uravely, distr. Achalcyche, 5.VI 1964, DIDMANIDZE leg. (GNMT); 1♂, Areni, Nakhchevan, 15.VI 1973, DIDMANIDZE leg. (GNMT); 1♂, Adjamethi Reserve, 21.VII 1980, DIDMANIDZE leg. (GNMT).

### ***Phyllodesma farahae* LAJONQUIÉRE, 1963**

*Phyllodesma farahae* LAJONQUIERE, 1963 - Ann. Soc. ent. France **132**: 72, 131, pl. 1, fig. 17, pl. 8, fig. 121, pl. 9, fig. 137. Locus typicus: Nord Persien. Holotype: male (ZMHU).

### ***Phyllodesma farahae abadonna* ZOLOTUHIN, 1994**

*Phyllodesma farahae abadonna* ZOLOTUHIN, 1994 - Entomol. Obozr. **73**(1): 136, figs 1-2; 2-7, 8; 3-3. Locus typicus: Azerbaijan, Lenkoran, Station of subtropic plants. Holotype: male (ZMMU).

**R e f e r e n c e s :** DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992; ZOLOTUHIN, 1994; ZOLOTUHIN & ZAHIRI, 2008.

**R a n g e :** Northern Iran (West Azerbaijan, East Azerbaijan, Ardebil, Qazvin, Guilan, Mazandaran, Golestan, Kordestan, Hamedan, Esfahan and Kerman - ssp. *farahae* de LAJONQUIERE); Transcaucasus, south-eastern Azerbaijan (Talysh - ssp. *abadonna* ZOLOTUHIN, 1994).

**C o m m e n t s :** The biology of this species is unknown from the whole range. In Iran, it is known from the altitudes of 100 to 4000 m and is on the wing from late April to August; develops two generations per year. Supposedly food plants and biology are similar to the other congeners. Pupa is the hibernating stage.

**M a t e r i a l :** 3♂♂, 1♀, Azerbaijan, Lenkoran, Station of subtropic plants, 2.V 1970 (ZMMU); 3♂♂, Azerbaijan, 20 km O Lerik, by a road on the light, 5.VII 1964, A. ZAGULAJEV leg. (ZISP); 1♂, Azerbaijan, Talysh, Hirkan forest, 9.VII 1964, A. ZAGULAJEV leg. (ZISP); 1♂, Azerbaijan, Talysh, Hirkan forest, 31.VIII 1964, A. ZAGULAJEV leg. (ZISP); 3♂♂, Transcaucasus, Azerbaijan, Talysh, Lenkoran, 30.V 1980 (MWM).

***Phyllodesma glasunovi* (GRUM-GRZHIMAILO, 1895)**

*Lasiocampa* (*Epicnaptera*) *Glasunovi* GRUM-GRZHIMAILO, 1895 - Horae ent. Ross. **29**: 293. Locus typicus: «In Persia septent. prope Teheran» [Iran, Demavend, log. Schah]. Holotype: male (ZISP).

*Phyllodesma glasunovi* Auct. – misspelling.

R e f e r e n c e s : ZOLOTUHIN & ZAHIRI, 2008.

R a n g e : Transcaucasus (Armenia); Iran (Tehran, Qazvin, Ardebid, West Azerbaijan, Mazandaran, Golestan, Guilan, Kordestan, Markazi, Lorestan, Esfahan, Fars, Bushehr, Kohkiluyeh va Boyerahmad, Hamedan, Zanjan, Gilan and Kordestan); eastern Turkey (Bingöl, Elazığ, Hakkari); Jordania. Here, the species is reliably recorded from Armenia for the first time.

C o m m e n t s : The biology of this species in Armenia is unknown. In Iran, the species occurs from 500 to 2300 m and is on the wing from April to mid August. Develops 2 generations, strongly differing in wing markings and coloration. Modarres AWAL (1994, 1997) lists poplar and willow as host plants in Iran. Pupa is the hibernating stage.

M a t e r i a l : 2♂♂, Armenia, Khosrowskiy State Reserve, 12.VII 1989, 1400 m, O. GORBUNOV leg. (MWM); 1♂, Armenia, Khosrov res., 2100 m, 21-26.VI 1996, DANTCHENKO leg (MWM); 1♂, Armenia, David-Bek water res., 39 20'N, 46 25'E, 25-26.VI 2003, 1300 m, M. DANILEVSKY leg. (MWM).

***Streblote* HÜBNER [1820] 1816**

Verz. bekannt. Schmetter.: 193. Type-species: *Streblote panda* HÜBNER [1820], ibidem: 193, by subsequent designation by TAMS, 1928 - Ann. Mag. nat. Hist (10) **1**: 628. *S. panda* was established as the objective replacement name for *Bombyx repanda* HÜBNER, [1819] 1796, Samml. eur. Schmett. 3: pl. 65, figs 274, 175, a juniour primary homonym of *Bombyx repanda* FABRICIUS, 1793, Ent. Syst. 3 (1): 462 - Lepidoptera, Noctuoidea.

***Streblote solitaria* ZOLOTUHIN, 1991**

*Streblote solitaria* ZOLOTUHIN, 1991 - Atalanta **22** (2/4): 120, figs 2c, 4a-e. Locus typicus: Armenia, Ararat lowland. Holotype: male (ZISP).

R e f e r e n c e s : DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1991, 1992; ZOLOTUHIN & ZAHIRI, 2008.

R a n g e : Transcaucasus (Armenia), Iran (provinces Kordestan, Kohkiluyeh va Boyerahmad, Fars, Kerman).

C o m m e n t s : The species is only known in a very few specimens. Biology is poorly known. In Iran, it is observed in altitudes from 1500 m to 2350 m and is on the wings in late March and August, develops two generations per year. Food plants are unknown.

M a t e r i a l : 1♂, holotype of *solitaria*, Armenia, Ararat lowland, 3.VIII 1955, Ch. ARATUNIAN leg. (ZISP).

### ***Pachypasa* WALKER, 1855**

List Specimens lepid. Insects Colln Br. Mus. 6: 1387 (key), 1422. Type-species: *Sphinx otus* DRURY, 1773 - Illustr. nat. Hist. exot. Insects 2: index to 1, by subsequent designation by KIRBY, 1892, Synonymic Cat. Lep. Heterocera 1: 817.

### ***Pachypasa otus* (DRURY, 1773)**

### **Map 14**

*Sphinx otus* DRURY, 1773 - Illustr. nat. Hist. exot. Insects 2: index to 1. Locus typicus: [Turkey, Izmir] Smyrna.

References: ROMANOFF, 1885; RADDE, 1899; SHENGELIA 1941, 1964; DIDMANIDZE, 1971, 1978, 1981a, 1981b; KHODZHEVANISHVILI, PITZHELAURI, 1974; MIRZOJAN, 1977; DUBATOLOV & ZOLOTUHIN, 1992; ZOLOTUHIN, 1992; ZOLOTUHIN & ZAHIRI, 2008.

Range: southern Europe, Transcaucasus, Turkey, Syria, Israel, Lebanon, Iraq and Iran (provinces Kohkiluyeh va Boyerahmad, Kermanshah, Ilam).

Comments: The species is known from the mountain forests and is on the wing from late June to August. In Georgia (Vashlovan Reserve) the species inhabits arid sparse forests with dominant oak and *Juniperus* trees. Caterpillars are polyphagous but mostly they are recorded from *Juniperus* spp. (*J. excelsa*, *J. foetidissima*, *J. polycarpus*) and *Pistacia mutica* (SHENGELIA, 1964; KHODZHEVANISHVILI, PITZHELAURI, 1974); also known from *Cypressus* spp., *Quercus* spp. and *Pinus* spp. The species develops one generation, sometimes needs 2 years for development and hibernates in mid instars; caterpillars are nocturnal and, during the day, they hide in hollows.

Material: 3 ♀♀, Dagestan, stat. Belidzhi prope Derbent, ex p. 20.VII 1939, 20.VII 1939, 19.VII 1939 (ZMKU); 1 ♂, 1 ♀, Lagodekhi (ZISP); 1 ♀, Kachetia, Karsanokhi, VII 1886, F. FUNK leg. (ZISP); 3 ♂♂, Eshmak-Tzkali, 20-30.VII 1887 (ZISP); 1 ♀, Dagestan, Belidzhi, 29.VII 1933, M. RJABOV leg. (ZISP); 1 ♂, Dagestan, near Belidzhi, oak forest, 23.VII 1933, M. RJABOV leg. (ZISP); 2 ♂♂, 1 ♀, Shiraki, 6.VIII 1973, MILJANOVSKIJ leg. (ZISP); 1 ♂, Armenia, Megri, 4.VII 1965, MILJANOVSKIJ leg. (ZISP); 3 ♂♂, 3 ♀♀, Georgia, Vashlovan reserve, 25.VII 1973, KHODZHEVANISHVILI leg. (ZMMU); 1 ♂, 1 ♀, Lagodekhi, 30.VII 1987, DIDMANIDZE leg. (GNMT); 2 ♂♂, Vashlovani Reserve, 15.VII 1976, DIDMANIDZE leg. (GNMT).

### ***Dendrolimus* GERMAR, 1812**

Diss. sistens Bombycum Species (2): 48. Type-species: *Phalaena Bombyx pini* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) 1: 498, by monotypy.

### ***Dendrolimus pini* (LINNAEUS, 1758)**

### **Map 15**

*Phalaena Bombyx pini* LINNAEUS, 1758 - Syst. Nat. (Ed.10) 1: 498. Locus typicus: not stated [Europa].

*Dendrolimus pini* f. *montana* STAUDINGER, 1871 - Cat. Schmett. Eur., Aufl. 2: 70. Locus typicus: "Alp." [Europa, Alps, higher altitudes].

*Dendrolimus pini witti* de FREINA, 1979 - Atalanta 10: 198, fig. 6. Locus typicus: [Turkey] Kars, Sarikamiş, 2000-2300 m. Holotype: male (MWM).

References: ROMANOFF, 1885; RADDE, 1899; SHENGELIA, 1941, 1964, 1966; MILJANOVSKIY, 1941, 1964; DIDMANIDZE, 1975; DUBATOLOV & ZOLOTUHIN, 1993;

ZOLOTUHIN, 1992.

**R a n g e :** northern Africa, Europe, eastern Turkey, Caucasus, western Siberia, northern Kazakhstan.

**C o m m e n t s :** The biology of this species in the Caucasus is poorly known. It is known from mid altitudes and is on the wing from late June to August. MILJANOVSKY (1964) recorded "caterpillars on pine trees, especially on *Pinus pityusa* STEVEN and in mountains on *Pinus uncinata* RAMOND ex DC. In mountain regions without pine trees, develops probably on *Abies*". The species develops one generation per year and hibernates as caterpillar in mid instars.

This very variable species produces a darker coloured spotted form similar to *montana* STAUDINGER, 1871 in mountains everywhere in its whole range. However, 3 names may be used for the designation of the population of eastern Turkey and south-western Georgia – *cederensis* DANIEL, 1939, with locus typicus: Turkey, S. Amanus, Dül-Dül Dagħ, *witti* de FREINA, 1979, with locus typicus: Turkey, Kars, Sarikamis, and *colchis* de FREINA, 1982, with locus typicus: Turkei, Rize, Soganli-Daglari. Their status needs to be specially confirmed; phenotypically the Georgian forms resemble *D. pini witti* de FREINA, 1979 and are considered so far as this subspecies. High montanous moths are distinctly darkened as other mountain forms of the species (f. *montana* STAUDINGER).

**M a t e r i a l :** 3♂♂, Caucasus, Ossetia, Sadomskij rudnik (ZMKU); 11♂♂, 1♀, Transcaucasus s. oc., Abas-tuman, Gub. Tiflis (ZMKU); 1♂, slopes of Great Ararat, 1.VII 1908, A. MOLCHANOV leg. (ZISP); 3♂♂, 1♀, Borjom, 14-27.V 1899, coll. ROMANOV (GNMT); 7♂♂, Borjom, 4-29.VI 1899, coll. ROMANOV (GNMT); 15♂♂, Borjom, 7-30.VII 1899, coll. ROMANOV (GNMT); 1♂, Borjom, 3.VIII 1899, coll. ROMANOV (GNMT); 1♂, Borjom, 3.VIII 1900, coll. ROMANOV (GNMT); 1♂, Borjom, 23.V 1901, coll. ROMANOV (GNMT); 1♂, Borjom, V 1902, coll. ROMANOV (GNMT); 2♂♂, Geok-Tapa, Aresch, 08.VII 1915, SCHELKOVNIKOV (GNMT); 5♂♂, Licani, Borjom, 6-11.VII 1914 (GNMT); 2♂♂, Abastumany, distr. Achalcyche, 19-21.VI 1964, DIDMANIDZE leg. (GNMT); 1♂, Chkhutuneti, Adjara, 6.VI 1969, DIDMANIDZE leg. (GNMT); 5♂♂, 2♀♀, Khashuri, PRK-4, 27-29.VII 1978, DIDMANIDZE leg. (GNMT); 2♂♂, Picunda Reserve, Abkhazia, 27.VII 1980, DIDMANIDZE leg. (GNMT); 1♂, Khashuri, 7.VIII 1982, DIDMANIDZE leg. (GNMT).

### ***Odonestis* GERMAR, 1812**

Diss. sistens bombycum Species (2): 49. Type-species: *Phalaena Bombyx pruni* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) 1: 498, by monotypy.

### ***Odonestis pruni* (LINNAEUS, 1758)**

### **Map 16**

*Phalaena Bombyx pruni* LINNAEUS, 1758 - Syst. Nat. (Ed. 10) 1: 498. Locus typicus: "Habitat in Germaniae".

**R e f e r e n c e s :** ROMANOFF, 1885; SHENGELIA, 1941, 1966; MILJANOVSKY, 1941, 1964; DIDMANIDZE, 1971, 1973; DUBATOLOV & ZOLOTUHIN, 1993; ZOLOTUHIN, 1992.

**R a n g e :** the species is widely distributed in the Palaearctic to southern China, northern Vietnam and Nepal.

**C o m m e n t s :** The biology of this species in the Caucasus is poorly known. MILJANOVSKY (1964) recorded 2 generations for Abkhasian populations with flight

period in May to June and late July to October. *Alnus*, *Malus*, *Quercus* and *Prunus cerasifolia* EHRH. are known hostplants.

**M a t e r i a l :** 1♂, Alazan (ZISP); 1♂, Nord Kaukasus, KELER leg. (ZISP); 1♂, Delizhan, 19.VIII 1903, BALKLEJSKI leg. (ZISP); 1♂, Kaukasus, Suchumi, 18.X 1963, ALBERTI leg. (ZSSM); 1♂, Borjom, 16.VII 1900, coll. ROMANOV (GNMT); 1♀, Borjom, 16.VII 1907 (GNMT); 1♂, Kobuleti, 6.VI 1911, SATUNIN (GNMT); 1♂, Borjom, 29.VII 1911, WINOGRADOFF-NIKITIN leg. (GNMT); 1♀, Lagodekhi Reserve, 27.VI 1957, DIDMANIDZE leg. (GNMT); 1♂, Gegetskory, distr. Salchino, 25.VI 1962, DIDMANIDZE leg. (GNMT); 1♂, Tzkhawsi, distr. Tzalenjicha, 24.VI 1968, DIDMANIDZE leg. (GNMT).

Thus, 17 species of Lasiocampidae are indicated here from the territory of Georgia, and totally 28 species are known from Caucasus and Transcaucasus. *Phyllodesma glasanowi* (GRUM-GRZHIMAILO, 1895) is for the first time recorded from Transcaucasus (Armenia).

### Acknowledgements

We would like to express our sincere thanks for help in our work to Dr. Andrei KANDAUROV (Tbilisi, Georgia) and Dr. Roman YAKOVLEV (Novosibirsk, Russia). Valery STCHUROV (Krasnodar), Valentin TIKHONOV (Pjatigorsk) and Igor KOSTJUK (Kiev) kindly supplied us with some rare literature sources and new faunistic datas on the species of the family. Tamar CHUNASHVILI (Tbilisi) and Alexander GURKOVICH (Uljanovsk) helped us technically.

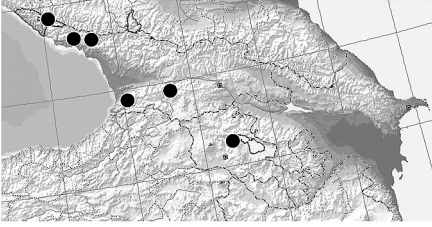
### References

- DANIEL, F. (1959): Die Südformen von *Dendrolimus pini* L. (Lasiocampidae). — Fragmenta Balcanica Musei Macedonici scientiarum naturalium **2**: 97-105.
- DIDMANIDZE, E.A. & R.V. YAKOVLEV (2007): Cossidae (Lepidoptera) of Georgia. — Entomofauna **28**(1): 1-16.
- DIDMANIDZE, E. A. (1969): To a knowledge of fauna of Macrolepidoptera of Lagodekhi Reserve (new and poorly known species of fauna of Georgia). — Moambe of S. JANASHIA Museum, Georgian National Museum, Tbilisi **22-23-A**: 177-199 (in Georgian).
- DIDMANIDZE, E.A. (1971): Results of studying of the Macrolepidoptera in The Lagodekhi Reserve. — Zoological Journal, Moscow. **50**: 515-519 (in Russian).
- DIDMANIDZE, E.A. (1973): Moambe of S. JANASHIA Museum. — Georgian National Museum, Tbilisi, **24-25-A**: 92-120 (in Georgian).
- DIDMANIDZE, E.A. (1975): Materials on fauna of Macrolepidoptera of Lesser Caucasus (Meskhet-Dzhabakheti, Southern Georgia). — Moambe of S. JANASHIA Museum, Georgian National Museum Tbilisi **28-A**: 293-336 (in Russian).
- DIDMANIDZE, E.A. (1976): To a knowledge of Macrolepidoptera of Lesser Caucasus (Tzalka-Dmanisi District). — Moambe of S. JANASHIA Museum, Georgian National Museum, Tbilisi **29-A**: 154-184 (in Russian).
- DIDMANIDZE, E.A. (1978): Moths (Lepidoptera, Heterocera) of arid lanscapes of Georgia. — Tbilisi: Metzniereba. 318 p. (in Russian).
- DIDMANIDZE, E.A. (1980): Materials on Macrolepidoptera of Tusheti. — Moambe of S. JANASHIA Museum, Georgian National Museum, Tbilisi **30-A**: 126-167 (in Russian).

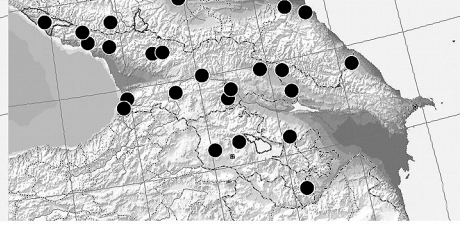
- DIDMANIDZE, E.A. (1981a): Materials on Lepidoptera Heterocera of arid landscapes of Georgia (without Geometridae and Noctuidae) Part 2. — Moambe of S. JANASHIA Museum, Georgian National Museum, Tbilisi **31-A**: 124-181 (in Russian).
- DIDMANIDZE, E.A. (1981b): Materials to a study of Macrolepidoptera of Vashlovan Reserve. — Zapovedniki Gruzii. Tbilisi: Sabchota Sakartvelo: 75-119 (in Russian).
- DIDMANIDZE, E.A. & Z.N. SIKHARULIDZE (1974): The Macrolepidoptera of Saguramo Nature Reserve. — Nature Reserves of Georgia **3**: 213-226 (in Georgian).
- DUBATOLOV, V.V. & V.V. ZOLOTUHN (1992): A list of the Lasiocampidae (Lepidoptera) from the territory of the former USSR. — Atalanta, Würzburg **23** (3/4): 531-548.
- FREINA, J. de (1979): Beitrag zur systematischen Erfassung der Bombyces und Sphinges Fauna Kleinasien. — Atalanta, Würzburg **10** (3): 175-224.
- FREINA, J. de (1982): 4. Beitrag zur systematischen Erfassung der Bombyces- und Sphinges-Fauna Kleinasien. Neue Kenntnisse über Artenspektrum, Systematik und Nomenklatur sowie Beschreibung neuer Taxa (Lepidoptera). — Mitteilungen der Münchner entomologischen Gesellschaft **72**: 57-127.
- GEVORKJAN, M.R. (1986): Fauna of Heterocera (Lepidoptera) of gorges of the Razdan river and its tributary Marmarik (Armenian SSR). — Entomologicheskoe Obozrenie **65**: 683-691 (in Russian).
- KHODZHEVANISHVILI, I.A. & V.P. PITZHELARI (1974): Peculiarities of development of *Pachypasa otus* Drury in Eastern Georgia. — Materials of VII Congress of All-Union entomological Society. Leningrad: 250 (in Russian).
- KOSTJUK, I.Yu. & V.V. TIKHONOV (2007): *Lasiocampa evsmanni* and *Ocnogyna loewi dagestana* – two poorly known moths for Daghestan fauna. — Biodiversity of the Caucasus. IX Internat. Conference, 5-6. Nov. 2007, Makhachkala. P. 191-192 (in Russian).
- MILJANOVSKY, E.S. (1941): Fauna of Lepidoptera of the Black Sea Coast of Abkhasia. — Trudy Zoologicheskogo Instituta Akademii Nauk Gruzinskoj SSR **4**: 135-151 (in Russian).
- MILJANOVSKY, E.S. (1964): Fauna of Lepidoptera of Abkhasia. — Trudy Sukhum opytnoj stantzii efirnomaslichnykh kultur. Sukhum **5**: 1-91 (in Russian).
- MIRZOJAN, S.A. (1977): Dendrophilous Insects of forest and parks of Armenia. — Erevan. 452 p. (in Russian).
- Modarres AWAL, M. (1994): List of Agricultural Pests and their Natural Enemies in Iran. — Mashhad: Ferdowsi University Press, 364 pp.
- Modarres AWAL, M. (1997): List of Agricultural Pests and their Natural Enemies in Iran. 2nd Edition. — Mashhad: Ferdowsi University Press, 429 pp.
- RADDE, G. (1899): Lepidoptera Caucasica. Museum Caucasicus. — **1**. P. 419-422 (in Russian).
- RAJABI, Gh. (1986): Insects attacking rosaceous fruit trees in Iran. **2**, Lepidoptera. — Plant Pests & Diseases Research Institute, Ministry of Agriculture, pp. 164-169.
- ROMANOFF, N.M. (1885): Les Lépidoptères de la Transcaucasie. Deuxième partie. — Mémoires sur les Lépidoptères **2**: 1-118.
- SERGEEV, A.I. & V.V. ZOLOTUHN (2008): On taxonomic scope of *Lasiocampa quercus* (LINNAEUS, 1758) (Lepidoptera: Lasiocampidae). — Eversmannia **13-14**: 5-17 (in Russian).

- SHELJUZHKO, L. (1935): Lepidopterologische Ergebnisse meiner Reise nach dem Teberda-Gebiet. — Folia zoologicae et hydrobiologicae, Riga **8**: 117-140.
- SHENGELIA, E.S. (1964): A fauna of Lasiocampidae, Lymantriidae and Lemoniidae of the Great Caucasus of Georgia. Higher Mountains of Great Caucasus of Georgia. — Tbilisi, Metznerieba. Pp. 125-143 (in Russian).
- SHENGELIA, E.S. (1966): The Family Lasiocampidae. Invertebrate Fauna of the Trialet Gorge. — Tbilisi, Metznerieba. P. 147-148 (in Russian).
- SHENGELIA, E.S. (1964): On distribution of Bombyces in Georgia and neighboring republics. — Trudy zool. Sektora Acad. Sci. SSSR, Georgian Filiale **3**: 117-127 (in Russian).
- WOJTUSIAK, R.J. & W. NIESIOŁOWSKI (1946): Lepidoptera of the Central Caucasus, collected during the Polish Alpine Expedition in 1935, with ecological and zoogeographical remarks. — Acta Musei Historiae Naturalis (Prace Muzeum Przyrodniczego, Kraków) **6**: 1-75, pl. 11-13.
- ZOLOTUHIN, V.V. (1991): On new and little-known Lasiocampidae (Lepidoptera) from Armenia, USSR. — Atalanta, Würzburg **22** (2/4): 117-123.
- ZOLOTUHIN, V.V. (1992a): An annotated checklist of the Lasiocampidae (Lepidoptera) of Caucasus. — Atalanta, Würzburg, **23** (1/2): 225-243.
- ZOLOTUHIN, V.V. (1992b): Lasiocampids of a *franconicum*-group (*Malacosoma*; Lasiocampidae, Lepidoptera) of the fauna of the USSR. Part 1. — Vestnik St. Petersburg State University **3** (1): 25-33 (in Russian).
- ZOLOTUHIN, V.V. (1994): New and little-known species of lasiocampids of the genus *Phyllodesma* HBN. (Lepidoptera, Lasiocampidae). — Entomologicheskoe Obozrenie **73**(1): 136-143 (in Russian).
- ZOLOTUHIN, V.V. & R. ZAHIRI (2008): The Lasiocampidae of Iran (Lepidoptera). — Zootaxa **1791**: 1-52.

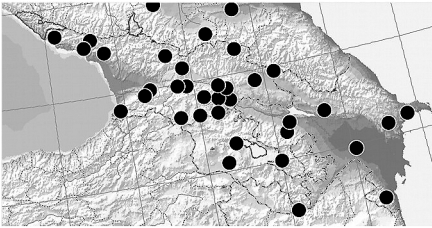




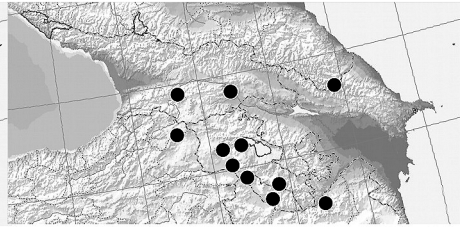
Map 1. *Poecilocampa populi* L., 1758



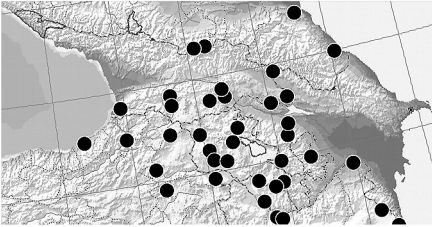
Map 2. *Trichiura crataegi* L.



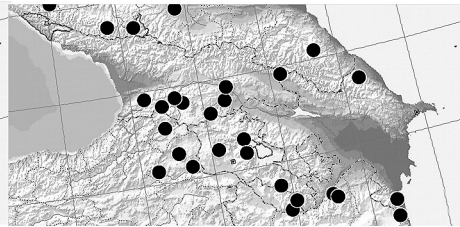
Map 3. *Malacosoma neustrium* L.



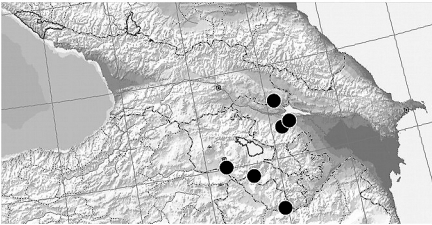
Map 4. *Malacosoma parallela* Stgr.



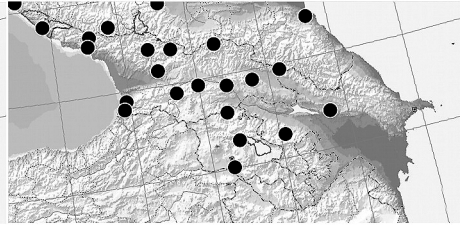
Map 5. *Malacosoma castrense* L.



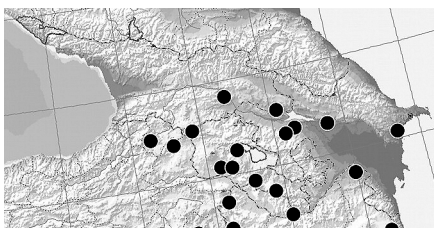
Map 6. *Malacosoma franconicum* Den. & Schiff.



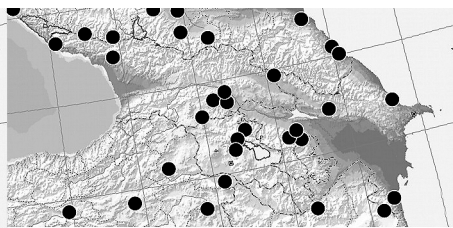
Map 7. *Eriogaster neogena* F. de Wald.



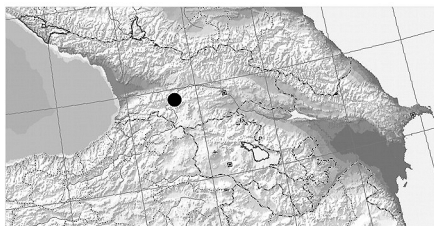
Map 8. *Lasiocampa quercus* L.



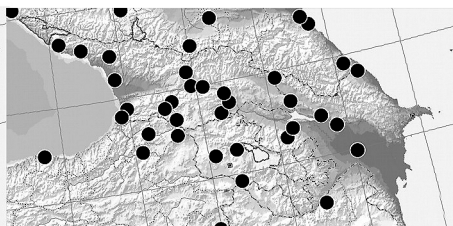
Map 9. *Lasiocampa eversmanni* Kindermann



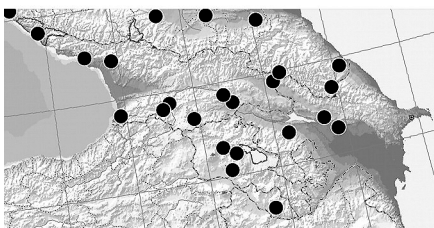
Map 10. *Lasiocampa trifolii* Den & Schiff



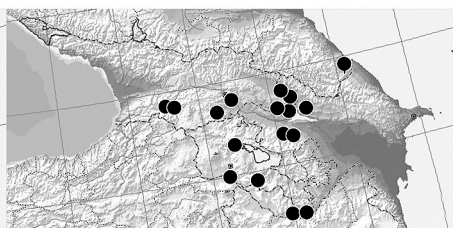
Map 11. *Macrothylacia rubi* L.



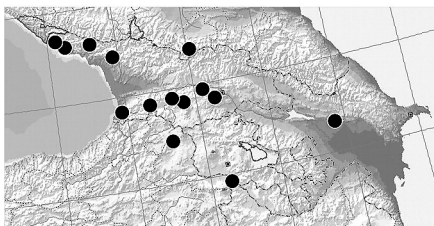
Map 12. *Gastropacha quercifolia* L.



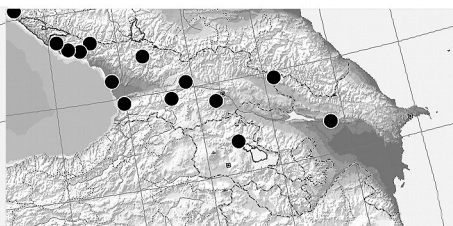
Map 13. *Phyllodesma joannisi* de Laj.



Map 14. *Pachypasa otus* Drury



Map 15. *Dendrolimus pini* L.



Map 16. *Odonestis pruni* L.

Addresses of authors:

Vadim V. ZOLOTUHN

Department of Zoology

State Pedagogical University of Uljanovsk

pl. 100-letiya Lenina, 4

RUS-432700 Uljanovsk, Russia

E-mail: [v.zolot@mail.ru](mailto:v.zolot@mail.ru)

Eteri A. DIDMANIDZE

Department of Zoology

Simon JANASHIA Museum

Georgian national Museum

Purtseladze str. 3

Tbilisi, 0105, Georgia

E-mail: [e\\_didmanidze@yahoo.com](mailto:e_didmanidze@yahoo.com)

---

Druck, Eigentümer, Herausgeber, Verleger und für den Inhalt verantwortlich:  
Maximilian SCHWARZ, Konsulent f. Wissenschaft der Oberösterreichischen Landesregierung, Eibenweg 6,  
A-4052 Ansfelden, E-Mail: [maximilian.schwarz@liwest.at](mailto:maximilian.schwarz@liwest.at).

Redaktion: Erich DILLER, ZSM, Münchhausenstraße 21, D-81247 München;  
Fritz GUSENLEITNER, Lungitzerstr. 51, A-4222 St. Georgen/Gusen;  
Wolfgang SCHACHT, Scherrerstraße 8, D-82296 Schöngeising;  
Wolfgang SPEIDEL, MWM, Tengstraße 33, D-80796 München;  
Thomas WITT, Tengstraße 33, D-80796 München.

Adresse: Entomofauna, Redaktion und Schriftentausch c/o Museum Witt, Tengstr. 33, 80796 München,  
Deutschland, E-Mail: [thomas@witt-thomas.com](mailto:thomas@witt-thomas.com); Entomofauna, Redaktion c/o Fritz Gusenleitner,  
Lungitzerstr. 51, 4222 St. Georgen/Gusen, Austria, E-Mail: [f.gusenleitner@landesmuseum.at](mailto:f.gusenleitner@landesmuseum.at)

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Entomofauna](#)

Jahr/Year: 2009

Band/Volume: [0030](#)

Autor(en)/Author(s): Zolotuhin Vadim V., Didmanidze Eteri A.

Artikel/Article: [The Lasiocampidae \(Lepidoptera\) of Georgia and neighbouring countries. 301-328](#)