

## An Annotated Checklist of the Lasiocampidae of the Caucasus

(Lepidoptera)

by

VADIM V. ZOLOTUHN

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**Summary.** 26 species of Lasiocampidae are listed for the Caucasus, 5 of them being recorded there for the first time. It is accepted that *Chondrostega hyrcanum* STGR is a bona species and not a *pastranum* LED. subspecies and *Phyllodesma joannisi ponticum* DUBAT. a synonym of *Ph. joannisi joannisi* LAJ. All previous indications of the occurrence of *Phyllodesma tremulifolium* HBN. and *Ph. ilicifolium* L. in the Caucasus really refer to *Ph. joannisi* LAJ. and records of *Malacosoma alpicolum* STGR really refer to *M. franconicum* D. & S. We consider the genus *Lasiocampa* SCHRANK to consist of 3 subgenera: monotypical *Lasiocampa* SCHRANK with type and only the species *Lasiocampa* (*Lasiocampa*) *quercus* L., *Pachygastris* HÜBNER with type species *Lasiocampa* (*Pachygastris*) *trifolii* D. & S., for *trifolii* D. & S., *eversmanni* EV. and *piontkovskii* SHELJ., and *Macrocampia* ZOLOTUHN, subgen. nov., with type species *Lasiocampa* (*Macrocampia*) *grandis* RGHFR. The basis of this division is the structural peculiarities within the male genitalia.

The Lasiocampidae, or eggar moths, are one of the most poorly studied groups of the Lepidoptera Heterocera not only in the territory of the Caucasus and the USSR as a whole, but also over the greater part of the Eastern Palearctic. This has resulted in obvious errors in the characteristics of geographical distribution and, more rarely, in the taxonomic status of some species in many works of foreign entomologists. We give LAJONQUIÈRE and DE FREINA & WITT (1987) their due for their famous and beautiful works, which were made to a high degree of excellence and have, in many respects, closed the gaps in the study of the Lasiocampidae; but it should be noted that they contain a number of the inaccuracies mentioned above which are especially inadmissible if these works are used for reference purposes.

Analyses of the funds of the biggest zoological museums of the former USSR and many private collections have made it possible to bring to your attention this checklist of the Caucasian Lasiocampidae. By "Caucasus", we mean the mountainous region which is represented by the system of ranges of the Great & Lesser Caucasus, and characterized by the extreme variety of landscapes from deserts through steppes to the forests and glaciers (4000-5000m). It is most convenient in studying the insect fauna to adhere to such regional divisions into which the Caucasus is divided by its relief (fig. 1). These are: Ciscaucasus ("Outer Caucasus": Daghestan, Southern Stavropol' and south Krasnodar region), Great Caucasus, Talysh and Transcaucasus which is divided into Small Caucasus, Armenian plateau and the Kura depression).



Fig. 1: Geographical division of Caucasus into districts (scheme, with simplifications).  
 1 Ciscaucasus; 2 Large Caucasus; 3 Transcaucasus; 3a Kura depression, 3b Small Caucasus, 3c Armenian plateau; 4 Talysh.

Many works exist on the Lepidoptera of the Caucasus but for the last 50 years only some of them – GEVORKJAN (1986), MILANOVSKIJ (1964), SHELJUZHKO (1943), DIDMANIDZE (1978), SHENGELIA (1941), ZOLOTUHN (1991) – have specially attempted to treat the egg moth species with the result that 21 species of Lasiocampidae have been recorded. Below we give some data on 26 species and partially correct the errors of determination which existed prior to our investigations. Species marked with an asterisk (\*) are recorded in the Caucasus for the first time.

The text is arranged according to the principle suggested by PITTAWAY (1983). We consider it to be the most convenient proposal.

### Chondrosteginae

#### 1. *Chondrostega pastranum* LEDERER, 1865

Range (R) (Map 1). Deserts and semi-deserts of Transcaucasus: Dzhulfa, Dorasham, Mardzavan, Hirkania.

Foodplants (FP) *Malcomnia*, *Carex*, *Artemisia*, *Calligonum*.

Adult (A) IX-X. Eggs hibernate.

Comments (C) differs from *Ch. hyrcanum* STGR in the form of the forewings and the structure of the male genitalia (fig. 2).

### Poecilocampinae

#### 2. *Poecilocampa populi* LINNAEUS, 1758

R (Map 1). Mountain forests of the western part of the Caucasus.

FP *Populus*, *Salix*, *Ulmus*.

A VIII-X. Eggs hibernate.

#### 3. *Trichiura crataegi anatolica* DANIEL, 1956

R (Map 2). In Caucasus everywhere except Talysh.

FP *Populus*, *Salix*, *Alnus*, *Quercus*, *Crataegus*.

A IX-X. Eggs hibernate.

#### 4. \**Trichiura mirzayani mirzayani* EBERT, 1971

R (Map 2). Talysh: Lenkoran and 20 km S Lerik.

FP unknown.

A IX-X.

C Differs from *T. crataegi* in its smaller size and the dark medial zone with a strong silky lustre on the forewings. The main characteristic feature of the male genitalia is the powerful development of the ventral part of the sacculus which projects under the pretext of the angle (fig. 3). Females are only known for the Central Asiatic population.

### Malacosomatinae

#### 5. *Malacosoma neustrium* LINNAEUS, 1758

R (Map 3). In the Caucasus everywhere except deserts and semi-deserts.

FP *Malus*, *Pyrus*, *Prunus*, *Armeniaca*, *Cerasus*, *Crataegus*, *Rosa*, *Quercus*, *Fagus*, *Ulmus*, *Hippophae*, *Eucalyptus*, *Laurus*.

A VI-VII. Formed larvae hibernate within the egg-shell.

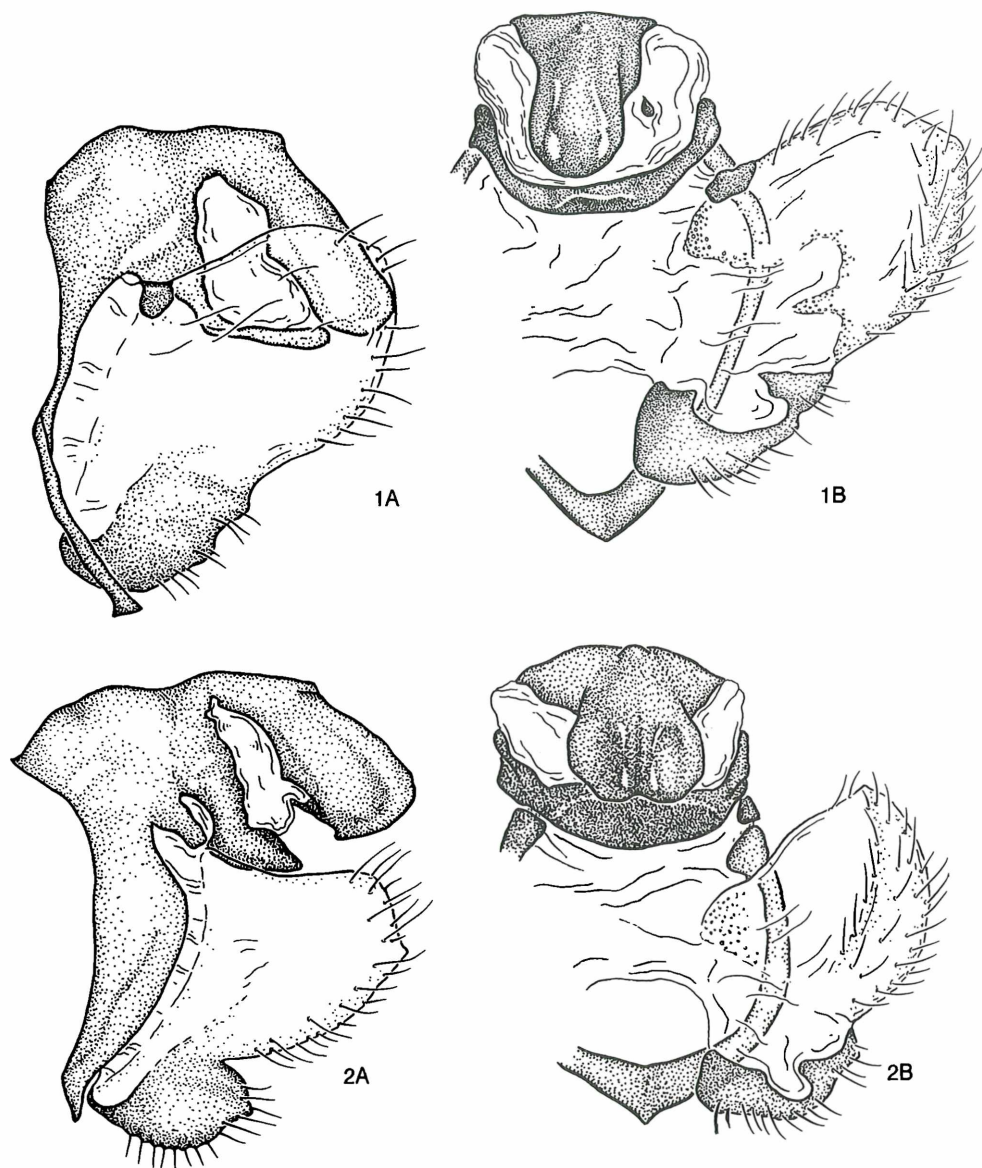
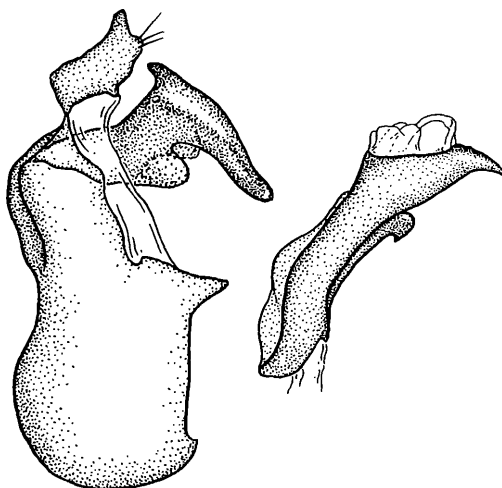


Fig. 2: Male genitalia of *Chondrostega* spp.:

1 *Ch. pastranum* LED. (Armenia, Mardzavan); 2 *Ch. hyrcanum* STGR (Turkmenia, Guli).  
A side view, B ventral view.

Fig. 3: Male genitalia of *Trichiura mirzayani* EBERT (Lenkoran).



6. *Malacosoma parallela* STAUDINGER, 1887

R (Map 4). Transcaucasus. Mountain forests and gardens between 1800 and 3500m.

FP *Malus*, *Pyrus*, *Prunus*, *Armeniaca*, *Crataegus*, *Rosa*, *Ulmus*, *Quercus*, *Fagus*, *Hippophae*.

A VI-VII. Formed larvae hibernate within the egg-shell.

7. *Malacosoma castrensis kirghisicum* STAUDINGER, 1879

R (Map 5). Greater Caucasus and Transcaucasus.

FP *Euphorbia*, *Plantago*, *Medicago*, *Trifolium*, *Onobrychus*, *Geranium*, *Betula*.

A VI-VII. Formed larvae hibernate within the egg-shell.

8. *Malacosoma franconicum* DENIS & SCHIFFERMÜLLER, 1775

R (Map 6). Throughout the Caucasus, but very local.

FP *Artemisia*, *Achillea*, *Plantago*, *Rumex*.

A VI-VII. Formed larvae hibernate within the egg-shell.

C Our special investigations (ZOLOTUHIN, 1992) found that all previous reports of *M. alpicolum* STGR or *M. alpicolum prima* STGR in the Caucasus are incorrect, and really refer to *M. franconicum*. *M. alpicolum* is not native to the USSR and *M. prima* (bona species, nec *alpicolum* subspecies) is an exclusively Central Asiatic mountain species.

Lasiocampinae

9. *Eriogaster neogena* FISCHER DE WALDHEIM, 1824

R (Map 7). Semi-deserts and steppes of Transcaucasus: Vashlovan, Kirovabad, Jelisavetopol (now Gyandzha), Ordubad.

FP *Caragana*, *Acacia*, *Cytisus*, *Salsola*.

A IX-X. Eggs hibernate.

10. *Eriogaster henkei* STAUDINGER, 1879

R (Map 7). Deserts of Ciscaucasus: Grozny region.

FP *Calligonum*.

A IX-X. Eggs hibernate.

11. \**Eriogaster lanestris* LINNAEUS, 1758

R (Map 8). Ciscaucasus: ms. Beshtau and Pjatigorsk.

FP *Betula*, *Salix*.

A IV. Pupae or formed moths hibernate within pupa.

12. *Eriogaster daralagesis* ZOLOTUHIN, 1991

R (Map 8). Transcaucasus: Armenia, Daralagez.

FP unknown.

A IX.

13. *Lasiocampa quercus* LINNAEUS, 1758

R (Map 9). Everywhere in the Caucasus except south-eastern parts.

FP *Quercus*, *Betula*, *Alnus*, *Salix*, *Prunus*, *Rubus*, *Cytisus*.

A VII-VIII. Larvae of various instars hibernate.

C ssp. *vassilini* described by SHELJUZHKO (1943) from Batumi is obviously only the high-mountain form of this very variable species.

14. *Lasiocampa trifolii* DENIS & SCHIFFERMÜLLER, 1775

R (Map 10). Practically everywhere in the Caucasus.

FP *Trifolium*, *Onobrychus*.

A VII-IX.

15. *Lasiocampa eversmanni* EVERSMANN, 1843

R (Map 11). Semi-deserts and steppes of Transcaucasus.

FP *Trifolium*, *Astragalus*, *Caragana*.

A VIII-IX. Eggs hibernate.



Fig. 4: *Lasiocampa grandis* ROGENHOFER – ♂, Armenia, Ararat lowland.

16. *Lasiocampa grandis* ROGENHOFER, 1891 (fig. 4)

R (Map 12). Transcaucasus: Ararat lowland.

FP *Quercus*.

A IX.

17. *Lasiocampa piontkovskii* SHELJUZHKO, 1943

R (Map 12). Transcaucasus Dorasham, Megry, 25 km W Myndzhevan.

FP unknown.

A VIII-IX.

C This interesting species known from Armenia and Azerbaijan is from the *trifolii*-group, as proved by the structure of the male genitalia (fig. 5a, b). Genus *Lasiocampa* SCHRANK, on the whole, is an heterogenous group and is often divided into two genera: *Lasiocampa* with only the species *L. quercus* and *Pachygastris* for another species. The basis for this division is first of all the presence or absence of the strong spine on the top of the foreshin. But the structure of the male genitalia shows that *Lasiocampa* s.l. may be divided into a minimum of 3 independent genera with the following species groups: *quercus*-group, *grandis*-group, *trifolii/evermanni/piontkovskii*-group. However, homogeneous organization of the preimaginal phases of development and external monotony of imago, do not allow division. Moreover, in the last case, we unexpectedly observe the disintegration of the genus *Pachygastris*, separated by the monotony of the genital structure into another 2 groups, again on the basis of the presence or absence of the foreshin spine (fig. 5c, d): *trifolii/evermanni*-group vs. *piontkovskii*-group. Because of this we consider it quite possible to include all the indicated species in the one genus *Lasiocampa*, consisting however of 3 subgenera: monotypical *Lasiocampa* SCHRANK with type and sole species *Lasiocampa* (*Lasiocampa*) *quercus* L.; *Pachygastris* HÜBNER with type species *Lasiocampa* (*Pachygastris*) *trifolii* D. & S. for *trifolii*, *evermanni* and *piontkovskii*; *Macrocampia* ZOLOTUHIN subgen. nov. with species *Lasiocampa* (*Macrocampia*) *grandis* RGHFR. The basis of this division is the structural peculiarities of the male genitalia, but not the peculiarities of the leg structure.

18. *\*Macrothylacia rubi* LINNAEUS, 1758

R (Map 13). Borzhomi.

FP polyphagous on grasses.

A V. The larvae hibernate before pupation.

# Gastropachinae

19. *\*Euthrix potatoria* LINNAEUS, 1758

R (Map 15). Ciscaucasus: Kislovodsk and Pjatigorsk.

FP Poaceae and, occasionally, *Carex*.

A VII. Larvae hibernate in the middle instars.

20. *\*Phyllodesma farahae* LAJONQUIÉRE, 1963

R (Map 13). Talysh: Lenkoran, Aurora and 20 km S Lerik.

FP unknown.

A IV-V and VII-VIII in two generations. Pupae hibernate.

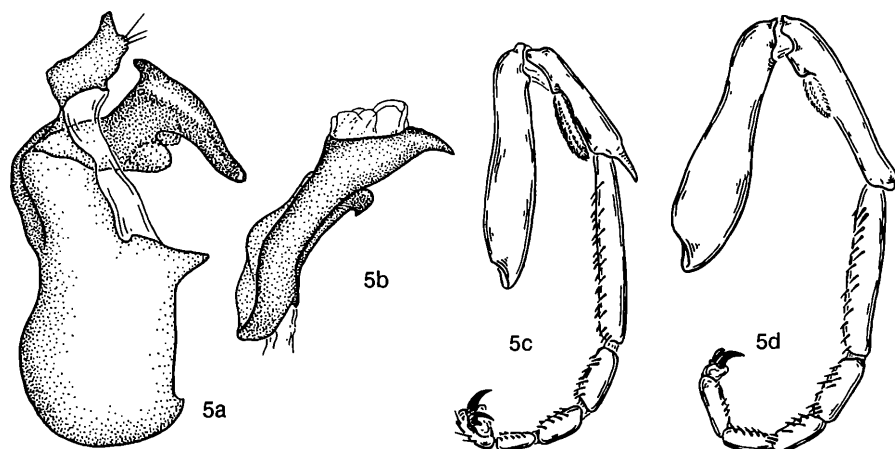


Fig. 5a, b: Male genitalia of *Lasiocampa piontkovskii* SHELJ. (Armenia). a: side view without aedoeagus, b: aedoeagus.

Fig. 5c, d: Forelegs of *Lasiocampa* spp. c: *L. trifolii* D. & S., d: *L. piontkovskii* SHELJ.

# 21. *Phyllodesma joannisi* LAJONQUIÉRE, 1963

R (Map 14). Everywhere in the Caucasus except Talysh.

FP *Populus*, *Salix*, *Betula*, *Alnus*, *Quercus*, *Malus*, *Pyrus*, *Prunus*.

A V-VI and VII-VIII in two generations (lowland) or VI-VII in one generation (mountains).

Pupae hibernate.

C Our special investigations (ZOLOTUHIN, in press) found that all previous indications of the occurrence of *Phyllodesma tremulifolium* HBN. and *Ph. ilicifolium* L. in the Caucasus are faulty and really refer to *Ph. joannisi* LAJ., which was easily proved by analysis of the male genitalia. But we cannot completely refute the possibility of the establishment of *Ph. tremulifolium* in the Transcaucasus because it was noted by DE FREINA (1979) in the Turkish territories adjoining Georgia and Armenia, assuming the determination of the species is correct. Ssp. *ponticum* DUBATOLOV from Sochi (DARICHEVA & DUBATOLOV, 1990) is only the light form of the summer generation.

# 22. *Dendrolimus pini* LINNAEUS, 1758

R (Map 15). Mountain coniferous forests of the Western Caucasus.

FP *Pinus*, occasionally *Abies* and *Picea*.

A VI-VIII. Larvae hibernate.

# 23. *Gastropacha quercifolia* Linnaeus, 1758

R (Map 16). Everywhere in the Caucasus except Talysh.

FP *Malus*, *Pyrus*, *Cerasus*, *Crataegus*, *Prunus*, *Quercus*.

A VI-VIII. Larvae hibernate.



24. *Odonestis pruni* LINNAEUS, 1758

R (Map 17). Greater Caucasus and Transcaucasus.

FP *Quercus*, *Alnus*, *Malus*, *Prunus*.

A VII. Larvae hibernate.

25. *Pachypasa otus* DRURY, 1773

R (Map 18). Local in the valley forests along the rivers in the central part of the Caucasus and Transcaucasus: Belidzhi, Lagodechi, Vashlovan, Megri, along rivers Alazan and Lori. Recorded also from Shiraki and Karsanochi (?).

FP *Pistacia*, *Quercus*, *Juniperus*, *Cypressus*, *Thuja*.

A VII-VIII. Larvae hibernate over two successive winters.

26. *Streblote solitaria* ZOLOTUHIN, 1991

R (Map 18). Transcaucasus: Armenia, Ararat lowland.

FP unknown.

A VIII.

– *Chilena sordida* ERSCHOFF, 1874

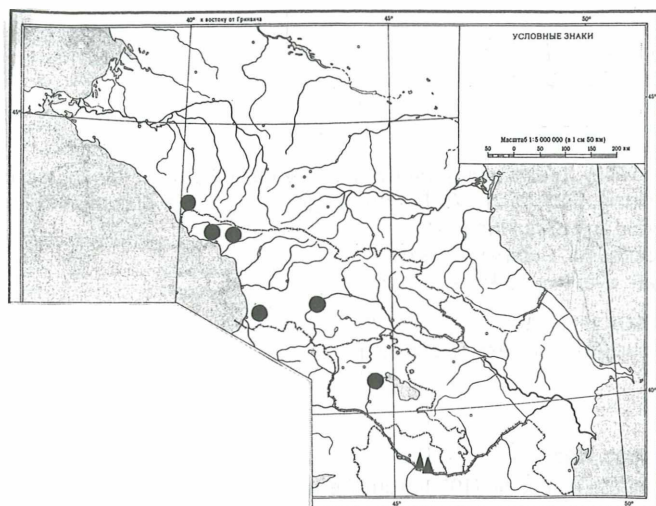
This species was recorded by DE FREINA (1979) from the arid areas of Turkey immediately bordering Armenia. It will probably be found there later.

Acknowledgements

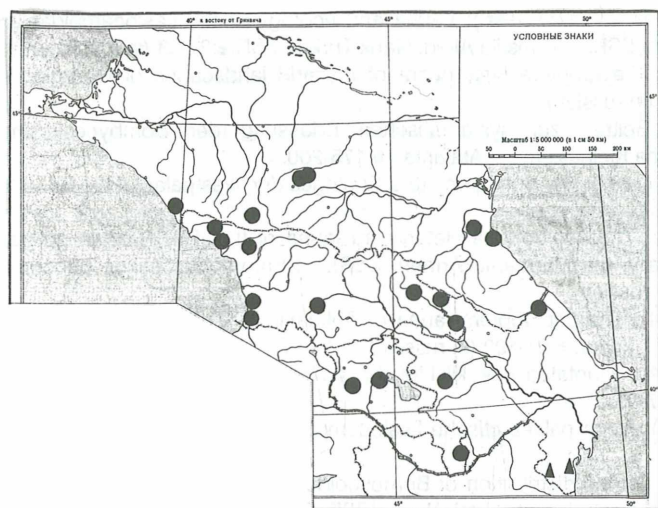
I like to thank Mr. J. F. BURTON (Eppelheim) for text correction.

References

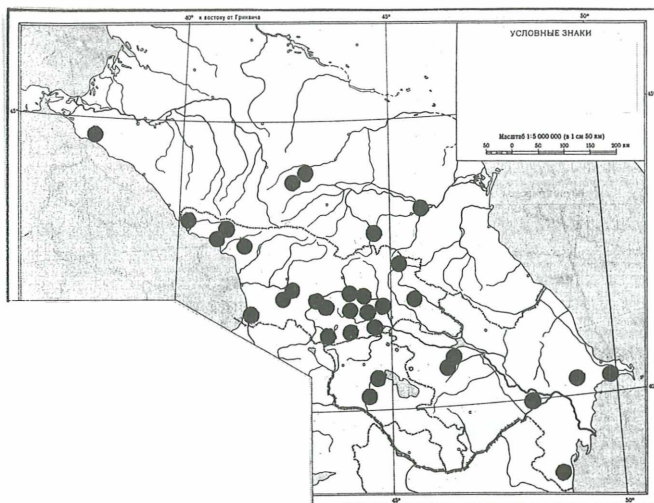
- DARICHEVA, M. A. & V. V. DUBATOLOV (1990): Fauna and ecology of the Lasiocampidae of the Turkmenian SSR. – *Izvestija Akad. Nauk Turkm. SSR* 2:27-33 (in russian).
- DIDMANIDZE, E. A. (1978): Lepidoptera Heterocera of the arid landscapes of Georgia. – Tbilisi, 319 pp (in russian).
- FREINA, J. DE (1979): 1. Beitrag zur systematischen Erfassung der Bombyces- und Sphinges-Fauna Kleinasien. – *Atalanta* 10:175-200.
- FREINA, J. DE & TH. WITT (1987): Die Bombyces und Sphinges der Westpalaearkt. Band 1. – München.
- GEVORKJAN, M. R. (1986): The Lepidoptera Heterocera fauna of the river Razdan gorges and its tributary, the Marmarik (Armen. SSR). – *Entomologičeskoe obozrenie* 65:683-690 (in russian).
- MILJANOVSKIJ, E. S. (1964): The Lepidoptera fauna of Abkhazia. – *Trudy Sukhum. opyt. stat. etnogr. kulturn. 5*:91-190 (in russian).
- PITTAWAY, A. R. (1983): An annotated checklist of the Western Palearctic Sphingidae. – *Ent. Gaz.* 34:67-85.
- SHELJUZHKO, L. A. (1943): Neue palaearktische Lasiocampiden. – *Ztschr. wien. ent. Ges.* 28:245-250.
- SHENGELIA, E. S. (1941): On the distribution of Bombycoidea in Georgia and the adjacent republics. – *Trudy zool. sect. Akad. Nauk SSSR, Gruz. fil.* 3:117-127 (in russian).



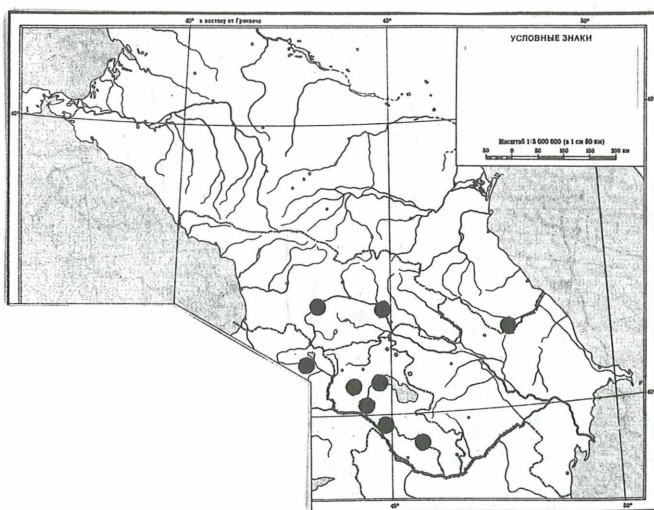
Map 1: *P. populi* (●), *Ch. pastranum* (▲)



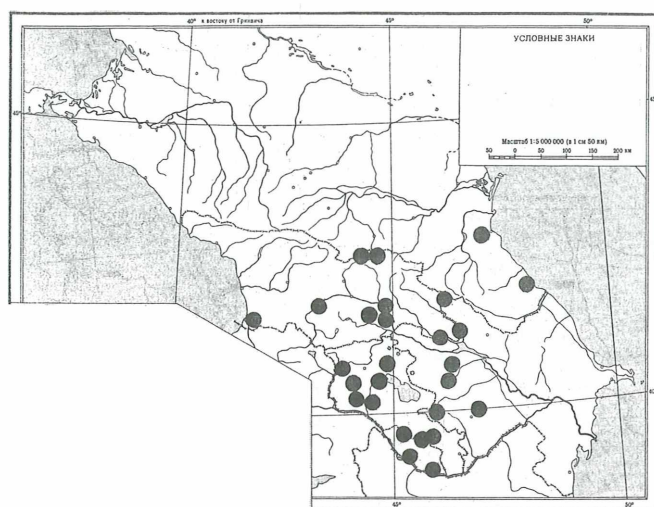
Map 2: *T. crataegi* (●), *T. mirzayani* (▲)



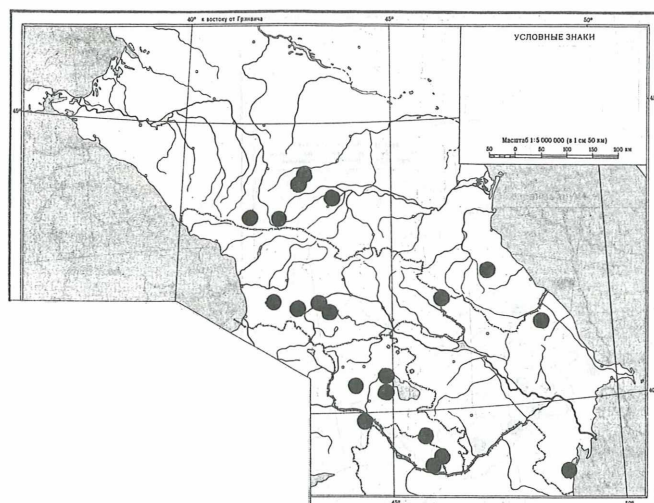
Map 3: *M. neustrium*



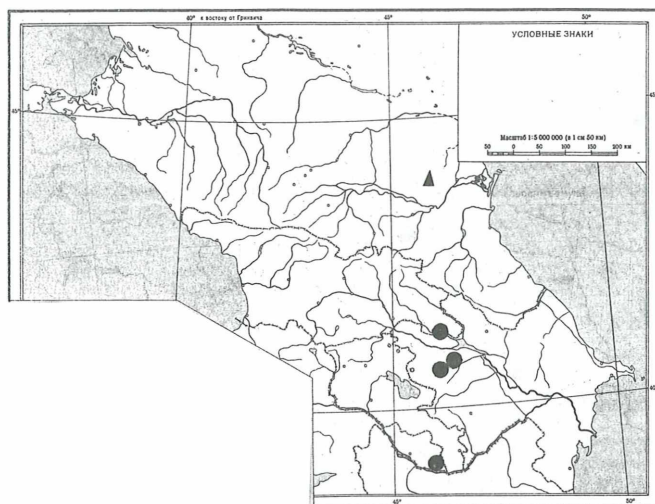
Map 4: *M. parallela*



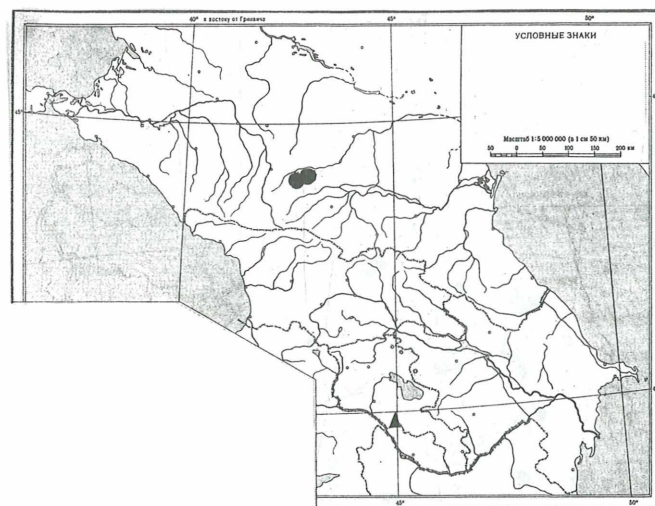
Map 5: *M. castrensis*



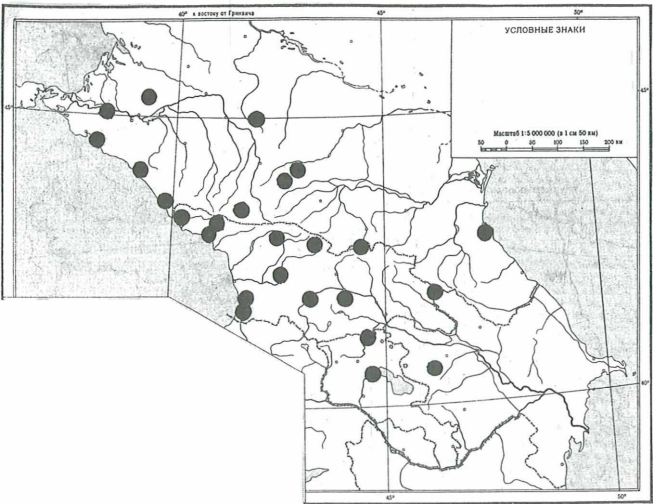
Map 6: *M. franconicum*



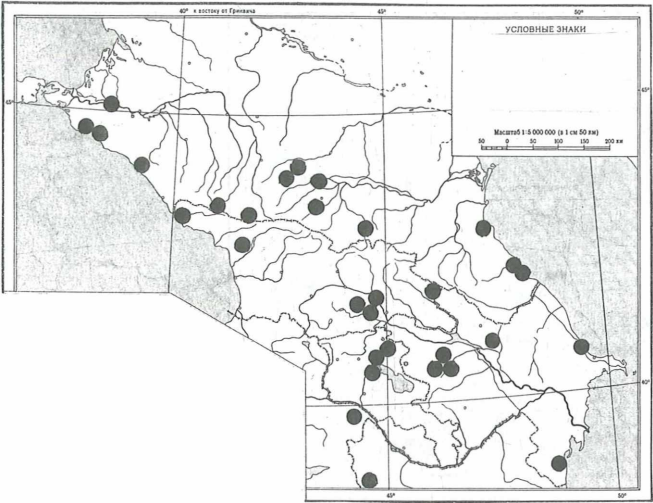
Map 7: *E. neogena* (●), *E. henckeii* (▲)



Map 8: *E. lanestris* (●), *E. daralagesis* (▲)

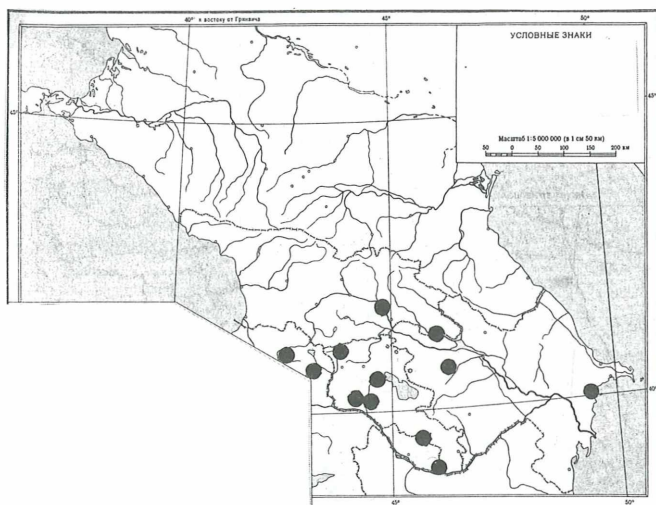


Map 9: *L. quercus*

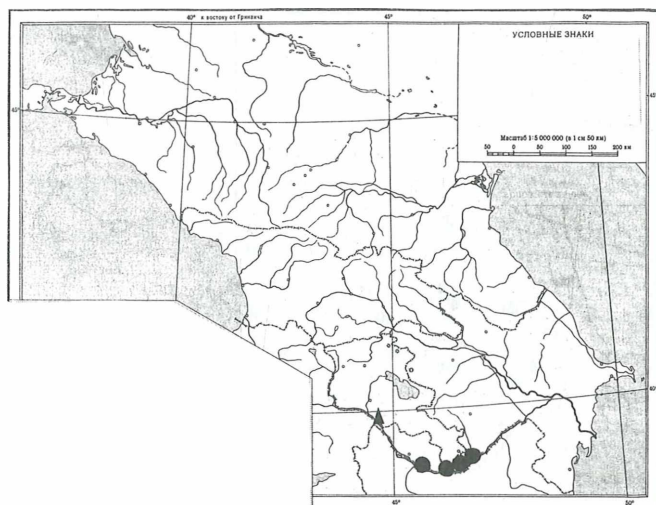


Map 10: *L. trifolii*

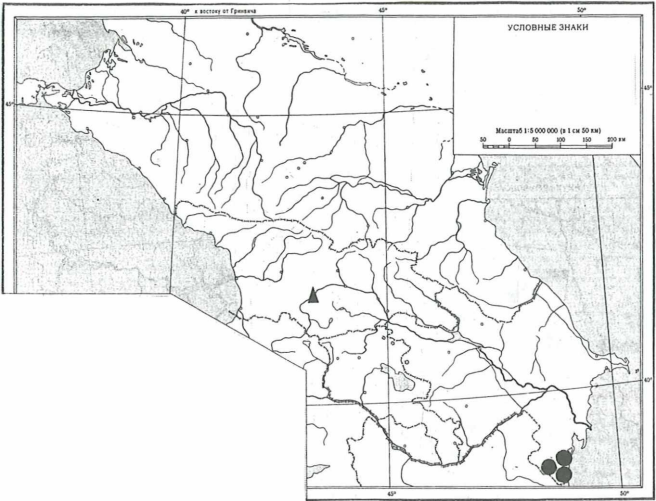




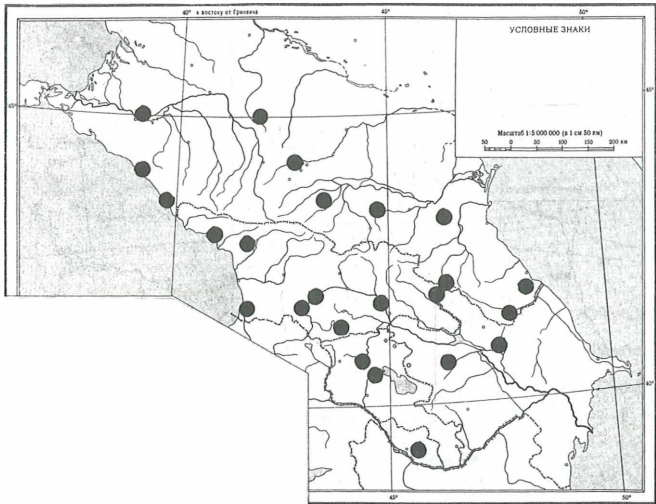
Map 11: *L. eversmanni*



Map 12: *L. piontkovskii* (●), *L. grandis* (▲)

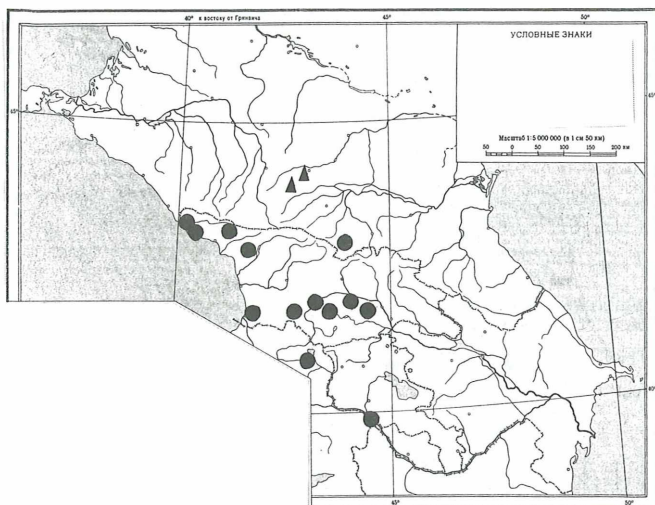


Map 13: *Ph. farahae* (●), *M. rubi* (▲)

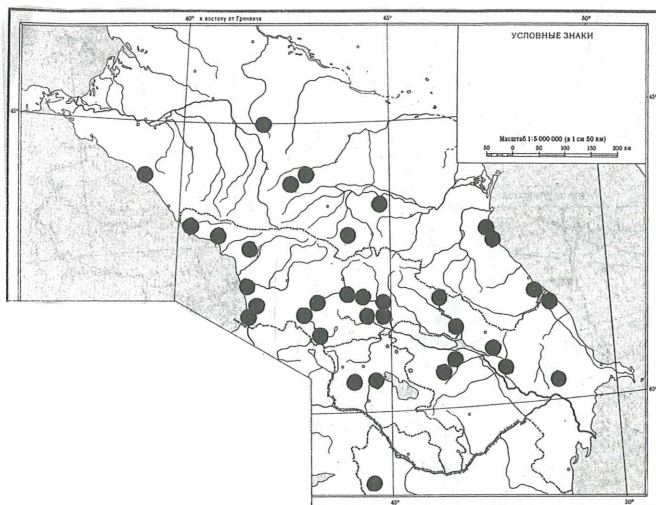


Map 14: *Ph. joannisi*

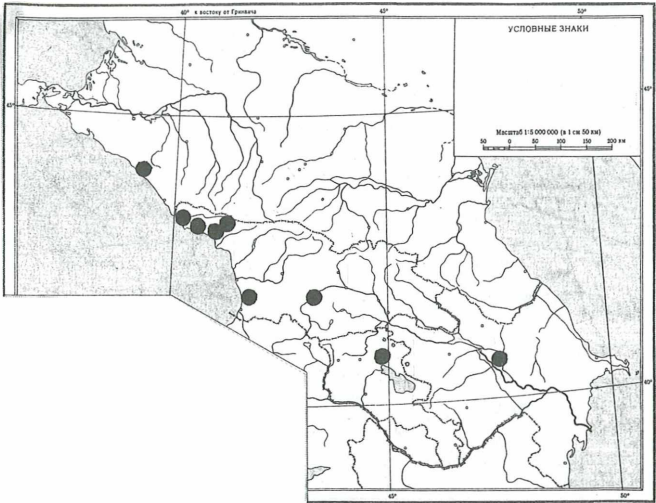




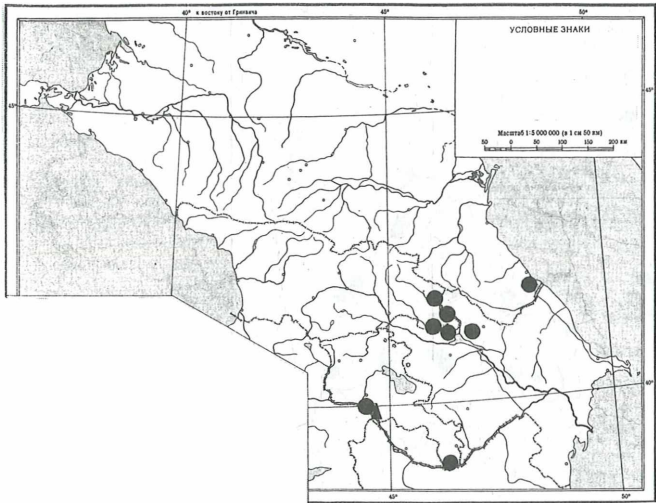
Map 15: *D. pini* (●), *E. potatoria* (▲)



Map 16: *G. quercifolia*



Map 17: *O. pruni*



Map 18: *P. otus* (●), *S. solitaria* (▲).

- ZOLOTUHIN, V. V. (1991): On new and little known Lasiocampidae (Lepidoptera) from Armenia (USSR). – *Atalanta* **22**:117-125.
- ZOLOTUHIN, V. V. (1992): Lasiocampidae of the *franconicum*-group of the fauna of the USSR (*Malacosoma*: Lepidoptera). *Vestnik Leningr. G. Univ.* (in russian).
- ZOLOTUHIN, V. V. (in press): New and little known *Phyllodesma* Hbn. (Lepidoptera, Lasiocampidae) of the fauna of the USSR. *Entomologičeskoe obozrenie* (in russian).

Address of the author

VADIM V. ZOLOTUHIN  
University, Entomology Department  
Universitetskaja 7/9  
SU-199034 St. Petersburg

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