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GELECHIIDAE (INSECTA, LEPIDOPTERA)

IZVOD - U radu je prikazano 21 vrsta familije *Gelechiidae* utvrđenih na području Nacionalnog Parka Durmitor. Među njima dve vrste su nove za Jugoslaviju: *Chionodes fumatella* (DOUGLAS, 1850) i *Caryocolum confluens* Huemer, 1988. Vrsta *Teleiopsis albifemorella* (HOFMANN, 1867) je po prvi put registrovana izvan Alpa.

ABSTRACT - Huemer, P., Jakšić, P. THE FAUNA OF DURMITOR, 5, Gelechiidae (Insecta, Lepidoptera). Crnogorska akademija nauka i umjetnosti, Posebno izdanje, knj. 32, Odjeljenje prirodnih nauka, knj. 18, Podgorica, 1996.

21 species of Gelechiidae have been recorded from the area of the Durmitor National Park (Montenegro, Yugoslavia). Two species are recorded for Yugoslavia for the first time: *Chionodes fumatella* (Douglas, 1850) and *Caryocolum confluens* Huemer, 1988. *Teleiopsis albifemorella* (Hofmann, 1867) was firstly found outside the Alps. Furthermore an unidentified species of *Syncopacma* is reported.

Lepidoptera, Gelechiidae, Durmitor, Yugoslavia.

CONTENTS:

1. INTRODUCTION
2. LIST OF LOCALITIES
3. SYSTEMATIC PART
4. ZOOGEOGRAPHY
5. ALPHABETICAL INDEX OF TAXA
6. LITERATURE

1. INTRODUCTION

During the last decade Mr. Predrag JAKŠIĆ had the opportunity to collect Lepidoptera in the area of the Durmitor National Park (Montenegro). Based on this material several papers are now on the stage of preparation or have already been published in the series FAUNA DURMITORA. Although the junior author did not particularly work on microlpidoptera, he tried to gain as much material as possible including about 80 specimen of Gelechiidae belonging to 21 species. Although many more species are expected (probably about 100), it is worth publishing the recent records, particularly as they include some very interesting species.

Until recently very little had been published on the lepidopterous fauna of Durmitor. Microlepidoptera were mainly collected by Arnold PENTHER in 1904 and the results

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published by REBEL (1913). In the latter paper, only 4 species of Gelechiidae are mentioned for Durmitor, 2 of them could not be found again: *Caryocolum vicinella* (Douglas, 1851) (identification uncertain according to Rebel, 1913) and *Megacraspedus dolosellus* Zeller, 1839.

The systematic part of this paper gives detailed information on collecting data of the material as well as on distribution and as far as it is known on the biology of the treated species. All the examined specimens have been collected by Mr. P. JAKŠIĆ.

2. LIST OF LOCALITIES

Čeline (Crno Jezero), 1500 m CN 47	Sušica, 1100 m CN 38
Đurđevića Tara, 720 m CN 67	Sušičko jezero, 1150 m CN 38
Komarnica - Kliještina, 1400 m CN 37	Tara - Premčani, 620 m CN 67
Komarnica - Nevidio, 1100 m CN 35 - CN 46	Tara - Tepca, 800-1000 m CN 48
Kučajevica, Pašino polje, 1510 m CN 57	Tara - Vrelo, 700 m CN 67
Omar (Mala Crna Gora), 1410 m CN 38	Velika Kalica, 1900-2100 m CN 47
Sedlo (Crna Gora), 1900 m CN 47	Vrelo Bukovice, 1300 m CN 47 - CN 46

3. SYSTEMATIC PART

Family Gelechiidae

1. *Aristotelia decurtella* (Hübner, [1813])

Material examined: 1 ♂, 1 ♀, Sušičko jezero, 1150 m, 28.VII 1985; 1 ♂, Đurđevića Tara, 720 m, 22.VI 1985.

Distribution: From Iran to the Alps (PISKUNOV, 1989), mainly in Southern regions. Also recorded from Macedonia, Albania (KLIMESCH, 1968) and from Bosnia (SCHAWERDA, 1908).

Biology. Host plants: *Eryngium campestre* L. (Compositae), *Rosa* L., *Sanguisorba officinalis* L. (Rosaceae) (PISKUNOV, 1989).

2. *Teleiopsis bagriotella* (Duponchel, [1840]) (= *elatella* Herrich-Schäffer, 1854).

Material examined: 1 ♂, Komarnica - Kliještina, 1400 m, 24.VII 1985; 1 ♂, Velika Kalica, 2100 m, 5.VIII 1983; 1 ♂, same locality but 1900 m, 26.VII 1985.

Distribution: Montane species which has been recorded from numerous European countries (except Northern and Northwestern Europe) including Macedonia (PITKIN, 1988).

Biology. Host plant: *Oxyria digyna* (L.) Hill. (Polygonaceae). In the Alps larvae were found in early July living in tubes which are spun on the plants (BURMANN, 1977).

3. *Teleiopsis albifemorella* (Hofmann, 1867)

Material examined: 2 ♂♂ Velika Kalica, 1900 m, 26. VII 1985.

Distribution: The record of this species from Durmitor is of high faunistic value, proofing the close relationship of this area to Central European mountains. *T. albifemorella* was hitherto known from the Alps exclusively (PITKIN, 1988).

Biology. Host plant: *Rumex scutatus* L. (Polygonaceae). The larvae live in long tubes near the root of the plant. They hibernate and are mature in May and June, although occasionally as late as August (BURMANN, 1977; pers. observation P.H.). Moths are on the wing from May to September, depending on the elevation and microclimate of the habitat. *T. albifemorella* is a characteristic species of calcareous scree.

4. *Bryotropha terrella* ([Denis and Schiffermüller], 1775)

Material examined: 1 ♂, Vrelo Bukovice, 1300 m, 3. VII 1986.

Distribution: Widespread species occurring in Europe, Northern Africa, Asia minor, Trans-Polar region (PISKUNOV, 1989). Recorded from various localities in Montenegro and Macedonia (REBEL und ZERNY, 1932; KLIMESCH, 1968). Also in Slavonia and Croatia (ABAFI-AIGNER, 1910) and Bosnia and Hercegovina: Plana (SCHAWERDA, 1908).

Biology. Host plant: Various species of Poaceae, but also recorded from moss (PISKUNOV, 1989). The larva feeds in April and May. Moths are on the wing during summer probably within a single generation.

5. *Chionodes nebulosella* (Heinemann, 1870)

Material examined: 1 ♂, Velika Kalica, 1900 m, 26.VII 1985; 1 ♂, Sedlo, 1900 m, 25.VII 1984.

Distribution: According to BURMANN (1977) an endemic species of the Alps. However, P.H. has also examined specimen which were collected in Bosnia and Hercegovina (Bjelašnica and Prenj) (see also REBEL, 1904).

Biology. Host plant: Unknown. BURMANN (1977) suspects that the larvae might feed on lichens. The species prefers alpine calcareous scree.

6. *Chionodes fumatella* (Douglas, 1850)

Material examined: 1 ♂, Tara - Premčani, 620 m, 22.VI 1985; 1 ♀, Čeline (Crno Jezero), 1500 m, 24.VII 1984.

Distribution: Transpalearctic (from Western Europe to Mongolia). First record for Yugoslavia.

Biology. Host plant: Mosses. A species which prefers sandy ground (e.g. near rivers). The moth occurs univoltine in summer (late June to September).

7. *Chionodes distinctella* (Zeller, 1839)

Material examined: 1 ♂, 1 ♀, Tara - Tepca, 1000 m, 26.VI 1985; 8 ♂♂, 8 ♀♀, Tara-Tepca, 1000 m, 21.VII 1985; 1 ♀, Tara-Tepca, 800 m, 12.VIII 1986; 1 ♂, 1 ♀, Komarnica - Nevidio, 1100 m, 6.VII 1986; 1 ♂, Velika Kalica, 1900 m, 26.VII 1985; 1 ♂, Sedlo, 1900 m, 25.VII 1984; 1 ♀, Sušičko jezero, 1150 m, 28. VII 1985; 4 ♂♂, Omar (Mala Crna Gora), 1410 m, 8.VIII 1984; 1 ♂, Tara-Premčani, 620 m, 22.VII 1985.

Distribution: Transpalearctic (from Western Europe to Mongolia). Recorded from various localities in Montenegro, Macedonia (REBEL und ZERNY, 1932; KLIMESCH, 1968) and Bosnia: Trebević (SCHAWERDA, 1908).

Biology. Host plants: *Rumex* L. (Polygonaceae), *Thymus serpyllum* L. (Labiatae) and *Artemisia campestris* L. (Compositae) (PISKUNOV, 1989).

8. *Mirificarma maculatella* (Hübner, 1796)

Material examined: 1 ♂, Tara-Tepca, 1000 m, 21.VII 1985; 1 ♀, Tara-Tepca, 12.VIII 1986.

Distribution: Southern part of Europe (from France to Ukraine), Turkey and Syria (Pitkin, 1984). Also recorded from Macedonia (KLIMESCH, 1968) and Albania (REBEL und ZERNY, 1932).

Biology. Host plants: *Coronilla varia* L. and *C. emerus* L. (Fabaceae) (PITKIN, 1984). The larva lives in May and June, feeding between two spun leaves of the host plant. Moths were recorded from June to August (PITKIN, 1984).

9. *Mirificarma eburnella* ([Denis und Schiffermüller], 1775)

Material examined: 1 ♂, Đurđevića Tara, 720 m, 22.VI 1985.

Distribution: Europe South of 50°N, North Africa, The Middle East, Armeniya (PITKIN, 1984). Recorded for Bosnia and Herzegovina (PITKIN, 1984).

Biology. Host plants: Various species of Fabaceae: *Medicago* sp., *Trifolium* sp., *Vicia americana* Muhlenberg, *Hippocrepis comosa* L. (Pitkin, 1984). The larvae feed in April and May between spun leaves of the host plant. Moths have been collected from March to August referring to bivoltinism.

10. *Gelechia scotinella* Herrich-Schäffer, 1854

Material examined: 1 ♀, Tara-Tepca, 1000 m, 21.VII 1985; 1 ♀, Kučajevica - Pašino Polje, 1510 m, 14.VIII 1988.

Distribution: Western and Southern part of Europe. Reported from Bulgaria and Greece (Macedonia) (KLIMESCH, 1968).

Biology. Larvae on different various species of *Prunus* L. (Rosaceae). The larvae feed in spring (April-May) between spun flowers and/or in young shoots of the host plant.

11. *Sattleria basistrigella triglavica* Povolnž, 1987

Material examined: 5 ♂♂, Velika Kalica, 1900 m, 26.VII 1985.

Distribution: *S. basistrigella* (MÜLLER-RUTZ, 1934) is known from the Southern parts of the Alps (France, Switzerland, Italy). The subspecies *basistrigella triglavica* was described from Slovenija (Triglav) and also reported from Durmitor and Korab (Albania).

Biology. Host plant of the nominate subspecies: *Silene acaulis* (L.) Jacqu. (Caryophyllaceae) (PITKIN and SATTLER, 1991). The host plant of ssp. *triglavica* is unknown. An alpine species with brachypterous female, occurring in altitudes from about 2400 to above 3000 m in the Alps.

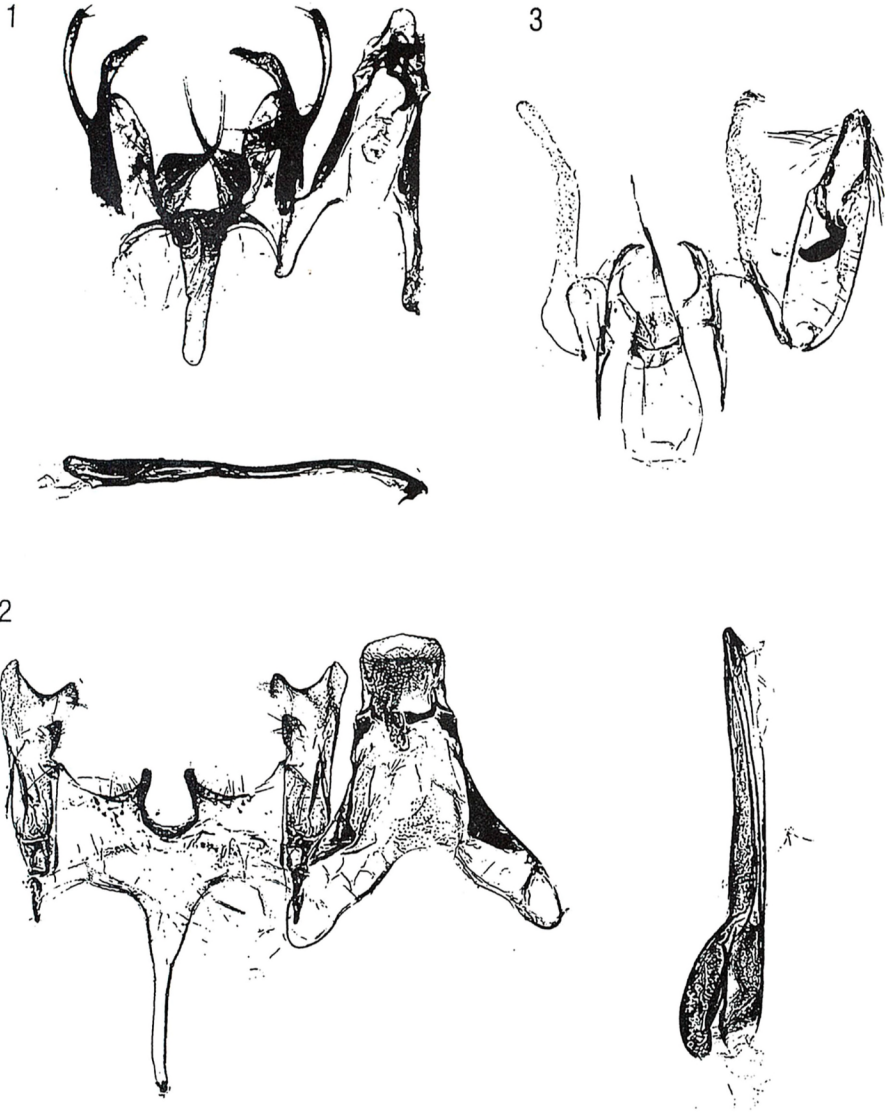
Remarks. The male genitalia (Fig. 1) prove that the population from Durmitor belongs to ssp. *triglavica* (See PITKIN and SATTLER, 1991). The female of this subspecies still remains unknown.

**12. *Caryocolum peregrinella* (Herrich-Schäffer, 1854)
(=*melantypella* Mann, 1877)**

Material examined: 2 ♂♂, Sedlo, 1900 m, 25.VII 1984; 1 ♀, Tara-Vrelo, 700 m, 19.VII 1984; 5 ♂♂, 2 ♀♀, Velika Kalica, 1900 m, 26.VII 1985.

Distribution: France, Italy, Yugoslavia, Greece (HUEMER, 1988). Also reported for Macedonia and Bosnia (REBEL, 1904; KLIMESCH, 1968).

Biology. Host plant: *Silene* L. (Caryophyllaceae). The species is characteristic for calcareous rocks from the Subalpine to the Alpine zone.



Figs 1-3, male genitalia: (1) *Sattleria basistrigella triglavica* Povolný, Velika Kalica (GEL 323 P. Huemer); (2) *Caryocolum confluens* Huemer, Sedlo (GU 92/329 P. Huemer); (3) *Syncopacma* sp., Komarnica-Kliještina (GU 92/343 P. Huemer).

13. *Caryocolum confluens* Huemer, 1988

Material examined: 1 ♂, Sedlo, 1900 m, 25.VII 1984.

Distribution: recently described from Greece (Lakonia: Mt. Taygetos; Achaia: Mt. Chelmos). First record for Yugoslavia.

Biology. Host plant: Unknown. Most probably the larvae feed on Caryophyllaceae, possibly on *Stellaria* L., *Cerastium* L. or another species of the subfamily Alsinoideae (similar to the related species).

Remarks. A most interesting record which shows that the species might have a wide distribution in mountainous areas of South Eastern Europe. The identity of the population from Durmitor needs some clarification as the shape of the valva and the sacculus shows some small differences to the type-material from Greece (Fig. 2). However, it seems unsatisfactory to describe a new taxon on a single specimen.

14. *Nothris verbascella* ([Denis und Schiffermüller], 1775)

Material examined: 1 ♀, Tara-Tepca, 800 m, 12.VIII 1986.

Distribution: widely distributed in Europa, Asia Minor, Trans-Caucasus, South West Siberia, North West Asia (PISKUNOV, 1989). Also recorded from Serbia and Macedonia (KLIMESCH, 1986), Dalmatia (KLIMESCH, 1942) and Bosnia: Bočac (SCHAWERDA, 1908).

Biology. Host plant: *Verbascum* L. (Scrophulariaceae). The larvae live in spun leaves and sometimes feed into the stem. *N. verbascella* is a bivoltine species which is on the wing in May and from about July-September.

15. *Sophronia semicostella* (Hübner, [1813])

Material examined: 1 ♂, 1 ♀, Komarnica-Nevidio, 1100 m, 6.VII 1986.

Distribution: Widely distributed from Western Europe to Kazakstan and to Trans - Polar region (PISKUNOV, 1989). REBEL und ZERNY (1932) report this species from Albania and A. AIGNER LAJOS (1910) from Lika: Raduč.

Biology. Host plants: *Anthoxanthum odoratum* L. (Gramineae), *Dianthus* L. (Caryophyllaceae). The larva lives in tubes of spun leaves.

16. *Syncopacma cinctella* (Clerck, 1759)

Material examined: 1 ♂, Čeline, 1500 m, 24.VII 1984; 12 ♂♂, Đurđevića Tara, 720 m, 22. VI 1985.

Distribution: Widely distributed from North Africa, through to Europe, Asia Minor, West Siberia and the Trans-Polar region (PISKUNOV, 1989). Also recorded from Serbia and Macedonia (KLIMESCH, 1968).

Biology. Host plant: *Genista tinctoria* L. (Fabaceae). The larva feeds between spun leaves.

17. *Syncopacma taeniolella* (Zeller, 1839)

Material examined: 1 ♂, Đurđevića Tara, 720 m, 22.VI 1985.

Distribution: Widely distributed in Europe, Near East and in Asia Minor (WOLFF, 1958; PISKUNOV, 1989). According to KLIMESCH (1968) *taeniolella* was also collected in Macedonia.

Biology. Host plants: *Lotus corniculatus* L., *Trifolium* L., *Medicago* L. (Fabaceae). Larvae live between spun shoots and leaves (Bradford, 1979).

18. *Syncopacma* sp. (close to *incognitana* Gozmany, 1957)

Material examined: 2 ♂♂, Komarnica - Klijestina, 1400 m, 24.VII 1985.

Distribution: Until now, only known from the Durmitor National Park.

Biology. Unknown.

Remarks. Possibly an undescribed species which differs from the closely related and externally indistinguishable *incognitana* by the smaller, unserrated sacculus (sensu Wolff, 1958) and the tip of the aedeagus which has no thorn (Fig. 3). The genitalia are very similar to those of *wormiella* (Wolff, 1958) but differ in structures like the medial process of the vinculum and the uncus-shape.

19. *Acompsia cinerella* (Clerck, 1759)

Material examined: 1 ♂, Komarnica-Klijestina, 1400 m, 24.VII 1985.

Distribution: Western Europe, Asia Minor, Kazakhstan (PISKUNOV, 1989). Reported from various localities in Montenegro, Macedonia (REBEL und ZERNY, 1932; KLIMESCH, 1968) and Bosnia: Jajce (SCHAWERDA, 1908).

Biology. Host plant: moss (BRADFORD, 1979).

20. *Acompsia tripunctella* ([Denis und Schiffermüller], 1775)

Material examined: 5 ♂♂, Komarnica-Klijestina, 1400 m, 24.VII 1985; 1 ♂, Čeline, 1500 m, 2.VII 1983; 1 ♂, same locality but 8.VII 1987; 1 ♂, Sušica, 1100 m, 13.VII 1986.

Distribution: Central and Southern parts of Europe, Western parts of GUS and Caucasus (PISKUNOV, 1989). Mainly distributed in mountainous areas. The species was already published from Durmitor by REBEL (1913). A. AIGNER LAJOS (1910) also report this species for Fiume (=Rijeka) and SCHAWERDA (1908) for Vučja Bara in Hercegovina.

Biology. Host plant: *Plantago* L. and probably other plants.

Remarks. Specimen from the southeastern part of the Alps (Slovenija) and from the Durmitor National Park are poorly marked, compared to those from other Alpine areas. In the former only the discal spot at about 2/3 of the fore wing is usually well developed. However, no genitalia differences could be observed.

21. *Dichomeris juniperella* (Linnaeus, 1761)

Material examined: 1 ♂, Komarnica-Klijestina, 1400 m, 24.VII 1985.

Distribution: Western Europe to Russia, North Africa, Asia Minor. According to Klimesch (1968) also occurring in Macedonia.

Biology. Host plant: Various species of *Juniperus* L. (Cupressaceae). The larva feeds in spring between spun needles of the host plant. Moths have been observed from July to August.

4. ZOOGEOGRAPHY

A zoogeographically analysis of the gelechiid moths of Durmitor National Park remains unsatisfactory due to lack of material available. The 21 species collectively recorded from this area, give incomplete information about the consistency of the fauna. About 55% of the known species (11 spp.) belong to the Eurosiberian type of distribution, 20% (4 spp.) are Mediterranean (Holo- and Pontomediterranean) and 24% (5 spp.) Siberian (Alpine) species. The latter, are of particular interest in proving a close relationship of Durmitor to other mountainous regions of Europe, particularly to the Alps. Endemic species could also be expected in this area particularly in high regions: e.g. the single specimen of *C. confluens* may belong to a separate species as it shows some differences compared to the holotype from Greece. Probably the percentage of Mediterranean species is much higher than known at present, whereas the proportion of Alpine species is lower in reality (see also REBEL und ZERNY, 1932). The unidentified *Syncopacma* and the two additional species recognized by REBEL 91913) were not taken in consideration for the zoogeographical analysis.

5. ALPHABETICAL INDEX OF CITED TAXA

<i>Acompsia</i>	19. - 20.	<i>juniperella</i>	21.
<i>albifemorella</i>	3.	<i>maculatella</i>	8.
<i>Aristotelia</i>	1.	<i>Mirificarma</i>	8. - 9.
<i>bagriotella</i>	2.	<i>nebulosella</i>	5.
<i>basistrigella triglavica</i>	11.	<i>Nothris</i>	14.
<i>Bryotropha</i>	4.	<i>peregrinella</i>	12.
<i>Caryocolum</i>	12. - 13.	<i>Sattleria</i>	11.
<i>Chionodes</i>	5. - 7.	<i>scotinella</i>	10.
<i>cinctella</i>	16.	<i>semicostella</i>	15.
<i>cinerella</i>	19.	<i>Sophronia</i>	15.
<i>confluens</i>	13.	<i>species</i>	18.
<i>decurtella</i>	1.	<i>Syncopacma</i>	16. - 18.
<i>Dichomeris</i>	21.	<i>taeniolella</i>	17.
<i>distincella</i>	7.	<i>Teleiopsis</i>	2. - 3.
<i>eburnella</i>	9.	<i>terrella</i>	4.
<i>fumatella</i>	6.	<i>tripunctella</i>	20.
<i>Gelechia</i>	10.	<i>verbascella</i>	14.

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