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DATA CONCERNING THE MACROLEPIDOPTERA FAUNA FROM THE EASTERN AND NORTH - EASTERN PART OF THE POIANA RUSCĂ MOUNTAINS (THE WESTERN CARPATHIANS, ROMANIA)

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Rezumat

Date privind fauna de macrolepidoptere din partea estică şi nord-estică a Munţilor Poiana Ruscă (Carpaţii Occidentali, Romania)

Lucrarea prezintă lista sistematică a speciilor de macrolepidoptere identificate până în prezent în ecosisteme naturale din partea estică şi nord-estică a Munţilor Poiana Ruscă, masiv mai puţin cercetat din punct de vedere lepidopterologic. Zonele investigate sunt: Măgurile Devei, Valea Runcului-Govăjdie, Valea Cernei şi împrejurimile localităţii Lunca Cernii, Dealurile Hunedoarei. Lista faunistică elaborată pe baza celor mai recente concepţii privind clasificarea şi nomenclatura ştiinţifică a speciilor de macrolepidoptere este însoţită de date privind staţiunile cercetate, frecvenţa speciilor, distribuţia geografică actuală, exigenţele ecologice şi baza trofică a larvelor. Cumulând datele publicate anterior cu cele obţinute pe baza investigaţiilor personale sunt prezentate 390 specii de macrolepidoptere. Diversitatea specifică variază în funcţie de staţiunile cercetate: 301 specii semnalate în staţiunea Măgurile Devei, 322 specii în regiunea calcaroasă din Valea Govăjdiei, 240 specii pe Valea Cernii şi Lunca Cernii şi 206 specii pe Dealurile Hunedoarei. Rare în zona cercetată sunt speciile: *Meganephria bimaculosa*, *Auchmis detersa*, *Lopinga achine* şi *Lycaena helle*.

INTRODUCTION

The Poiana Ruscă Mountains represent the northern part of the Banat Mountains (Western Carpathians, Romania). They are situated between the parallels $45^0$55' and $45^0$30' parallels Northern latitude and 22^0 and 23^0 meridians Eastern longitude.

The Poiana Ruscă Mountains cover an area of 2640 Km^2, being delimited in the northern part by the Mureş river. In the western part they are bordered by the Caransebeş Depression. The southern and the eastern limits are marked by the Haţeg and Strei Depressions. The difference between the lowest altitude (the Pleşu Hill - 334 m) and the highest one (the Padeş Peak -1374 m) is about 1040 m.

The mountainous zone has two principal geomorphological areas. In the western part, between the Caransebeş Depression and the basins of Bega and Cerna rivers, the landscape is strongly fragmented. The eastern part of the massif is represented by a large plateau with levels of 900-1000 m

on the central area and 400-500 m on the outside. This plateau, known like “The Pădureni County” is very the characteristic for the Poiana Ruscă Mountains landscape. The general aspect of this plateau looks like a large hillocky region.

The geological substratum consists on *metamorphic rocks* (crystalline schists, micaschists, gneisses, etc) that are spread in the most part of the mountainous area; *magmatic rocks*, especially andesite corps in the north-eastern part; *sedimentary rocks* (dolomites, gritstones, etc) in the peripheric zones of the massif.

The annual average temperature diminishes with the altitude: from 9-11^{0}C in the peripheric regions to 2 - 8^{0}C in the mountainous area.

The annual average precipitations increases from 600 -700 mm in the peripheric regions to 1200 - 1400 mm in the central area of the massif (KRAUTNER 1984).

As a result of these edapho-oro-climatic conditions, the vegetation is represented almost exclusively by forests. The mixed forests (As. *Pulmonario rubro-Abieti-Fagetum* (Knapp 42) Soó 64) cover the mountainous area (900 m-1250 m). The inferior and the middle mountain levels (400-900 m) are dominated by the beech forests (As. *Carpino-Fagetum* Paucă 41) alternating with lawns (As. *Festuco rubrae-Agrostetum capillaris* Horv. (51) 52, As. *Medicagini - Festucetum valesiacae* Wagner 1940; As. *Botriochloetum (Andropogonetum) ischaemi* (Krist.1937) I. Pop 1977) and rocky grasslands (As. *Stipetum eriocaulis* Dihoru et al. 1973). In the calcareous area of the Poiana Ruscă Mountains (the Runc Basin and Govăjdie Basin) *Phyllitidi-Fagetum* Vida 63 (DONIȚĂ et al., 1992) is the predominant association.

The Macrolepidoptera fauna of the western part of the Poiana Ruscă Mountains was studied by KÖNIG (1975). Adriano Ostrogovich has collected some few species in the surroundings of the Hunedoara town (POPESCU-GORJ 1964). FOTESCU (1971) published a faunistic list of the Macrolepidoptera species collected in the Basin of Cerna, Govăjdie and the surroundings of Hunedoara town.

MATERIAL AND METHODS

Our studies were carried out between 1988-2000 in the Eastern and North-Eastern part of the Poana Ruscă Mountains.

Using the entomological net and a light trap with a 250 W mercury vapour lamp, 850 specimens were collected.

Cumulating the anterior data published by FOTESCU (1971) with those supplied by “Adriano Ostrogovich” collection hosted by the Museum of Natural History “Grigore Antipa” from Bucharest (POPESCU-GORJ 1964) and our personal results, 390 species of Macrolepidoptera were recorded in the natural ecosystems from the eastern and north-eastern part of the Poiana Ruscă Mountains. The studied sites are:

1. The hills of Deva town; situated in the western part of this locality, in the area of beech and oak forests; the most representative are the natural reserves: The Bejan Forest (420 m), the Cetate Hill (380 m) and Sarheghi (Colțu) Hill (583 m)

2. The Runcu Valley and the calcareous area of Govăjdie locality (600 m)

3. The Cerna Valley and the surroundings of Lunca Cernii locality (600-750 m)

4. The hills of Hunedoara town (The Cărpiniş Hill – 437 m, the Forest of Chizid)

RESULTS AND DISSCUTION

A taxonomical list, based on the latest systematic and taxonomic conceptions is presented (Table 1). The classification is after LERAUT (1980), POPESCU-GORJ (1984, 1987), RÁKOSY (1995,1996). It is also shown the distribution of the species in the studied sites, the frequency of the species, the ecological exigences of the adults, the geographical spreading of the species and the larval host-plants (RÁKOSY 1993,1995, 1996, 1997).

Table l -Taxonomical list of the Macrolepidoptera species collected the Eastern and North-Eastern part of the Poiana Ruscă Mountains (Hunedoara County)

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
HEPIALIDAE											
Triodia sylvina (LINNAEUS, 1761)	-	-	+	+	-	+	+	F	Eua	M	R (P,S)
COSSIDAE											
Zeuzera pyrina (LINNAEUS, 1761)	-	-	+	+	+	-	-	RF	Eua	Mh	Polyphagous (trees) Endophagous (trunk)
Cossus cossus (LINNAEUS, 1758)	-	+	+	+	+	+	+	RF	Eua	Mh	Polyphagous (trees) Endophagous (trunk)
ZYGAENIDAE											
Rhagades pruni (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	RF	Eua	M	S Prunus spinosa, Calluna vulgaris
Adscita statices (LINNAEUS, 1758)	-	-	+	+	+	+	+	RF	Eua	Mxt	P Oligophagous Rumex acetosella, Rumex acetosa
Adscita globulariae (HÜBNER, 1793)	-	-	+	+	+	+	-	F	Wam	Mxt	P Oligophagous: Asteraceae
Zygaena ephialtes pannonica HOLIK, 1972	+	-	+	+	+	+	+	F	Eua	Mxt	P Monophagous Coronilla varia
Zygaena filipendulae (LINNAEUS, 1758)	-	-	+	+	+	+	-	VF	Eua	Mxt	P Oligophagous Fabaceae
Zygaena carniolica onobrychis (DENIS & SCHIFFERMÜLLER, 1775)	-	+	+	+	+	+	-	F	Eua	Mxt	P Oligophagous Fabaceae
Zygaena purpuralis pluto OCHSENHEIMER, 1808	+	+	+	+	+	+	+	VF	Eua	Mxt	P Monophagous Thymus serpyllum

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
LASIOCAMPIDAE											
Malacosoma neustria (LINNAEUS, 1758)	-	-	+	-	+	+	-	RF	Eua	M	D
Macrothylacia rubi (LINNAEUS, 1758)	+	+	+	+	+	+	+	RF	Eua	Mh	P; S
Gastropacha quercifolia (LINNAEUS, 1758)	-	-	+	-	+	-	-	RF	Eua	Mt	D; S
Odonestis pruni (LINNAEUS, 1758)	-	-	+	-	+	-	-	RF	Eua	Mt	D
ATTACIDAE											
Saturnia pyri (DENIS & SCHIFFERMÜLLER, 1775)	-	+	+	+	+	-	-	R	Eua	M	D
Saturnia pavonia (LINNAEUS, 1758)	-	+	-	-	+	+	-	RF	Eua	M	S Oligophagous Rosaceae
Aglia tau (LINNAEUS, 1758)	-	+	-	-	+	-	-	F	Eua	M	D
SPHINGIDAE											
Herse convolvuli (LINNAEUS, 1758)	-	+	+	+	+	-	+	F	Str	Mx	P Monophagous Convolvulus arvensis
Mimas tiliae (LINNAEUS 1758)	-	-	+	-	+	-	-	RF	Eua	Mh	D
Smerinthus ocellatus (LINNAEUS, 1758)	-	-	+	+	+	-	-	RF	Eua	Mh	Oligopgahous: Salicaceae
Macroglossum stellatarum (LINNAEUS, 1758)	-	+	+	+	+	+	+	F	Eua	Mx	P
Hemaris tityus (LINNAEUS, 1758)	-	+	+	-	-	+	+	RF	Hol	Mt	P
Hyles euphorbiae (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Eua	Mx	P
Deilephila elpenor (LINNAEUS, 1758)	-	-	+	+	+	-	-	F	Eua	Mh	P
Deilephila porcellus (LINNAEUS, 1758)	-	-	+	+	+	-	-	F	Eua	M	P
HESPERIIDAE											
Carcharodus alceae (ESPER, 1780)	+	-	+	+	-	-	-	R	Eua	Xt	S Oligophagous Malvaceae
Carcharodus flocciferus (ZELLER, 1847)	-	+	+	+	-	-	-	VR	Pm	Mt	S Oligophagous Labiatae (Stachys, Marrubium)
Erynnis tages (LINNAEUS, 1758)	+	+	+	+	+	+	+	VF	Eua	Mxt	P Oligophagous Fabaceae
Pyrgus malvae (LINNAEUS, 1758)	+	-	+	+	+	+	+	VF	Eua	M	P; S Oligophagous Rosaceae
Pyrgus alveus (HÜBNER, 1803)	-	-	+	-	-	+	-	F	Eua	Mxt	P Monophagous Helianthemum nummularium
Pyrgus fritillarius (PODA, 1761)	+	+	+	-	-	+	+	F	E.Was	Xt	P; S
Carterocephalus palaemon (PALLAS, 1771)	-	-	+	+	+	-	+	RF	Eua	M	G Oligophagous Poaceae
Ochlodes venatus faunus (TURATI, 1905)	-	+	+	+	+	+	+	VF	Eua	Mh	G Oligophagous Poaceae
Thymelicus sylvestris (PODA, 1761)	-	-	+	-	+	-	-	RF	Eua	Mxt	G Oligophagous Poaceae
Thymelicus lineolus (OCHSENHEIMER, 1808)	+	-	+	+	+	+	+	R	Hol	M	G Oligophagous Poaceae

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
Hesperia comma (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Hol	M	G Oligophagous Poaceae
PAPILIONIDAE											
Parnassius mnemosyne distincta BRYK-EISNER, 1930	-	-	+	+	+	+	-	RF	Eua	Mh	P Oligophagous Corydalis sp.
Papilio machaon (LINNAEUS, 1758)	-	+	+	+	+	+	+	RF	Hol	M	P Oligophagous Umbelliferae
Iphiclides podalirius (SCOPOLI, 1763)	+	+	+	+	+	+	+	F	Eua	M	S
PIERIDAE											
Leptidea sinapis sinapis (LINNAEUS, 1758)	+	+	+	+	+	+	+	VF	Eua	M	P Oligophagous Fabaceae
Anthocharis cardamines meridionalis VERITY, 1908	+	+	+	+	+	+	+	VF	Eua	M	P Oligophagous Brassicaceae
Aporia crataegi (LINNAEUS, 1758)	+	+	+	+	-	-	+	RF	Eua	M	S Oligophagous Rosaceae (Prunus, Crataegus)
Pieris brassicae (LINNAEUS, 1758)	+	+	+	+	-	+	+	F	Eua	M	P Oligophagous Brassicaceae
Pieris rapae (LINNAEUS, 1758)	+	+	+	+	+	+	+	VF	Hol	M	P Oligophagous Brassicaceae
Pieris napi meridionalis (HEYNE, 1895)	+	+	+	+	+	+	+	VF	Pm	M	P Oligophagous Brassicaceae
Pontia daplidice (LINNAEUS, 1758)	-	+	+	-	+	+	-	VF	Eua	M	P Oligophagous Brassicaceae
Colias hyale (LINNAEUS, 1758)	-	+	+	+	+	+	+	VF	Eua	M	P Oligophagous Fabaceae
Colias erate (ESPER, 1803)	-	-	+	+	-	-	-	RF	Eua	Mx	P Monophagous Medicago sativa
Colias crocea (GEOFFROY in FOURCROY, 1785)	-	+	+	+	+	+	+	F	Med	M	P Oligophagous Fabaceae
Gonepteryx rhamni meridionalis ROBER, 1909	+	+	+	+	+	+	+	F	Wam	M	S Oligophagous Rhamnaceae
LYCAENIDAE											
Hamearis lucina (LINNAEUS,1758)	+	+	+	+	+	+	+	VF	E	M	P Oligophagous Primula sp.
Lycaena helle (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	-	+	-	-	VR	Eua	Mh	P Monophagous Polygonum bistorta
Lycaena phlaeas (LINNAEUS, 1761)	+	-	+	+	+	-	+	RF	Hol	M	P Oligophagous Polygonaceae
Lycaena dispar rutila (WERNEBURG, 1864)	-	+	+	+	-	-	-	RF	Eua	Tf	P Oligophagous Rumex sp.
Lycaena virgaureae (LINNAEUS, 1758)	+	+	+	+	+	+	+	VF	Eua	Mh	P Solidago virgaurea, Rumex acetosa

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
Lycaena tityrus dorilis (HUFNAGEL, 1766)	-	-	+	+	+	-	-	RF	Eua	M	P Oligophagous Rumex
Thecla betulae (LINNAEUS,1758)	+	-	+	+	+	-	+	R	Eua	M	S Rosaceae Myrmecophil
Neozephyrus quercus (LINNAEUS, 1758)	+	-	+	+	-	-	-	R	E.Was	Mt	Q Quercus Myrmecophil
Callophrys rubi virgatus VERITY, 1913	-	-	+	+	+	+	+	F	Eua	Mt	P;S
Satyrium acaciae nostras (COURVOISIER, 1913)	+	-	+	+	-	-	+	R	Pm	Xt	S Monophagous Prunus spinosa
Satyrium spini (DENIS & SCHIFFERMÜLLER, 1775)	+	-	+	-	+	+	+	RF	Eua	Mt	S (Rhamnus cathartica, Prunus spinosae) Myrmecophil
Satyrium w-album (KNOCH, 1782)	-	-	+	+	+	-	+	RF	Eua	Mh	Rhamnus catharticus, Ulmus glabra, Tilia Myrmecophil
Fixsenia pruni (LINNAEUS, 1758)	-	-	+	+	+	-	-	RF	Eua	M	S Monophagous Prunus spinosa
Cupido minimus (FUESSLY, 1775)	+	-	+	-	+	+	+	F	Eua	M	P;S Fabaceae Myrmecophil
Everes argiades (PALLAS, 1771)	+	-	+	+	+	+	+	VF	Eua	Mh	P Fabaceae Myrmecophil
Celastrina argiolus (LINNAEUS, 1758)	+	+	+	+	+	+	+	VF	Hol	M	P;S Myrmecophil
Scoliantides orion (PALLAS, 1771)	-	+	+	+	+	+	+	RF	Eua	Xt	P Sedum sp. Myrmecophil
Glaucopsyche alexis (PODA, 1761)	+	+	-	-	+	+	+	RF	Eua	Mh	P Fabaceae Myrmecophil
Maculinea arion (LINNAEUS, 1758)	-	-	+	-	+	+	-	R	Eua	M	P Thymus serpillum T. praecox Myrmecophil
Plebejus argus (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Eua	M	P Myrmecophil
Plebejus argyrognomon (BERGSTRASSER, 1779)	-	-	+	-	+	-	-	RF	Eua	Mxt	P Fabaceae Myrmecophil
Cyaniris semiargus (ROTTEMBURG, 1775)	-	-	+	+	+	+	+	F	Eua	Mxt	P Fabaceae Myrmecophil
Polyommatus daphnis (DENIS & SCHIFFERMÜLLER, 1775)	+	-	+	-	+	+	-	RF	Wam	Xt	P Fabaceae Myrmecophil
Polyommatus coridon (PODA, 1761)	-	+	+	-	+	-	-	RF	E	Mxt	P Fabaceae Myrmecophil
NYMPHALIDAE											
Argynnis paphia (LINNAEUS, 1758)	+	+	+	+	+	+	+	VF	Eua	M	P Oligophagous Violaceae
Argynnis aglaja (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Pal	M	Oligophagous Violaceae

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
Argynnis adippe (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	VF	Pal	M	P Oligophagous Violaceae
Argynnis niobe LINNAEUS, 1758)	-	-	+	+	+	+	-	VF	Eua	M	P Oligophagous Violaceae
Issoria lathonia (LINNAEUS, 1758)	+	+	+	+	+	+	+	VF	Pal	M	P Oligophagous Viola sp.
Brenthis daphne (DENIS & SCHIFFERMÜLLER, 1775)	-	+	+	-	+	+	-	R	Eua	Mxt	P Oligophagous Rubus fruticosus, Rubus idaeus
Brenthis hecate (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	+	+	-	+	R	Eua	M	P Monophagous Filipendula ulmaria
Clossiana selene (DENIS & SCHIFFERMÜLLER 1775)	-	+	+	+	+	+	+	VF	Hol	M	P Oligophagous Viola sp.
Clossiana euphrosyne euphrosyne (LINNAEUS, 1758)	-	+	+	+	+	+	+	VF	Eua	M	P Oligophagous Viola sp.
Clossiana dia (LINNAEUS, 1767)	+	+	+	+	+	+	+	VF	Eua	M	P Oligophagous Viola sp.
Vanessa atalanta (LINNAEUS, 1758)	+	+	+	+	+	+	+	F	Cosm	M	P
Vanessa cardui (LINNAEUS, 1758)	-	+	+	+	+	+	+	VF	Cosm	Mg	P
Inachis io (LINNAEUS, 1758)	-	+	+	+	+	+	+	F	Eua	M	P Oligophagous Urtica sp.
Aglais urticae (LINNAEUS, 1758)	-	+	+	+	+	+	+	VF	Eua	M	P Oligophagous Urtica sp.
Polygonia c-album (LINNAEUS, 1758)	+	+	+	+	+	+	+	F	Eua	M	P;S;D
Araschnia levana (LINNAEUS, 1758)	-	+	+	+	+	+	+	VF	Eua	Mh	P Oligophagous Urtica sp.
Nymphalis polychloros (LINNAEUS, 1758)	-	+	-	+	-	+	+	R	Eua	M	D
Nymphalis xanthomelas (DENIS & SCHIFFERMÜLLER, 1775)	+	+	-	-	-	-	+	VR	Eua	M	D Oligophagous Salicaceae
Nymphalis antiopa (LINNAEUS, 1758)	-	+	+	+	+	+	-	RF	Hol	M	D Oligophagous Salicaceae
Melitaea cinxia (LINNAEUS, 1758)	-	+	+	+	+	+	+	VF	Eua	M	P
Melitaea phoebe (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	+	+	+	+	VF	Eua	M	P
Melitaea trivia (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	+	-	+	-	R	Am	Mt	P Oligophagous Verbascum sp.
Melitatea didyma (ESPER, 1779)	+	+	+	+	+	+	+	VF	Eua	M	P
Melitaea aurelia NICKERL, 1850	+	+	+	-	+	-	+	RF	E	Mh	P
Melitaea britomartis ASSMANN, 1847	-	-	+	+	-	-	-	R	Eua	Mt	P

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
Melitaea athalia (ROTTEMBURG, 1775)	+	+	+	+	+	+	+	VF	Eua	M	P
Limenitis camilla (LINNAEUS, 1764)	-	+	+	-	+	+	-	R	Eua	M	P (Lonicera sp.)
Neptis rivularis (SCOPOLI, 1763)	-	+	+	-	+	+	-	RF	Eua	M	P;S
Neptis rivularis ludmilla NORDMANN, 1851	-	-	+	+	-	-	+	RF	Eua	M	P;S
Neptis sappho aceris (LEPECHIN, 1770)	+	+	+	+	+	+	+	VF	E	M	Monophagous Lathyrus vernus
Apatura iris (LINNAEUS, 1758)	-	+	+	+	+	-	-	RF	Eua	Mh	D Oligophagous Salicaceae (Salix sp.)
Pararge aegeria tircis (BUTLER, 1867)	+	+	+	+	+	+	+	VF	E	M	G Oligophagous Poaceae
Lasiommata megera (LINNAEUS, 1767)	+	+	+	+	+	+	+	VF	Eua	M	G Oligophagous Poaceae
Lasiommata maera (LINNAEUS, 1758)	-	+	+	+	+	+	+	VF	Pal	M	G Oligophagous Poaceae
Lopinga achine achine (SCOPOLI, 1763)	-	-	+	-	+	-	-	VR	Eua	Xt	G Oligophagous Poaceae
Coenonympha arcania (LINNAEUS, 1761)	+	+	+	+	+	+	+	VF	E.Was	Mh	G Oligophagous Poaceae
Coenonympha glycerion (BORKHAUSEN, 1788)	-	+	+	+	-	+	+	F	Eua	Hg	G Oligophagous Poaceae
Coenonympha pamphilus (LINNAEUS, 1758)	+	+	+	+	+	+	+	VF	Eua	M	G Oligophagous Poaceae
Pyronia tithonus (LINNAEUS, 1771)	-	+	+	+	+	-	-	RF	E.Was	Mt, Xt	G Oligophagous Poaceae
Aphatopus hyperantus (LINNAEUS, 1758)	-	+	+	+	+	+	+	VF	Eua	M	G Oligophagous Poaceae
Maniola jurtina (LINNAEUS, 1758)	-	+	+	+	+	+	+	VF	Eua	M	G Oligophagous Poaceae
Erebia ligea carthusianorum FRUHSTORFER, 1909	-	-	+	+	+	-	-	VF	Eua	M	G
Erebia aethiops aethiops (ESPER, 1777)	-	-	+	+	+	+	-	VF	Eua	M	G Oligophagous Poaceae
Melanargia galathea scolis FRUHSTORFER, 1917	+	+	+	+	+	+	+	VF	E.Wam	M	G Oligophagous Poaceae
Minois dryas drymeia FRUHSTORFER, 1903	-	+	+	-	+	-	-	RF	Eua	M	G Monophagous Molinia caerulea
Hipparchia fagi (SCOPOLI, 1763)	-	+	+	+	-	-	+	RF	Pm	M	G Oligophagous Poaceae
Hipparchia semele (LINNAEUS, 1758)	+	+	+	+	+	-	+	RF	E.Was	Mxt	G Oligophagous Poaceae
DREPANIDAE											
Thyatira batis (LINNAEUS, 1758)	-	-	+	-	+	+	-	VF	Eua	Mh	S Oligophagous Rubus
Habrosyne pyritoides (HUFNAGEL, 1766)	-	-	+	+	+	+	-	VF	Eua	Mh	S Oligophagous Rubus
Tethea or (GOEZE, 1781)	-	-	+	+	+	-	-	F	Eua	Mh	D Oligophagous Salicaceae
Ochropacha duplaris (LINNAEUS, 1761)	-	-	+	+	+	-	-	RF	Eua	M	D
Drepana falcataria (LINNAEUS, 1758)	-	-	+	+	+	-	-	RF	Eua	Mh	D

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
Sabra harpagula (ESPER, 1786)	-	-	+	-	+	-	-	RF	Eua	Mht	D
Cilix glaucatus (SCOPOLI, 1763)	-	-	+	+	+	-	-	F	Eua	Mt	S: Prunus, Crataegus
GEOMETRIDAE											
Archiearis notha (HÜBNER, 1803)	-	-	+	+	-	-	-	VR	Eua	Mh	D
Alsophila aescularia (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	-	-	RF	Eua	M	D
Alsophila quadripunctaria (ESPER, 1800)	-	-	+	+	+	-	-	RF	Eua	M	D
Aplasta ononaria (FUESSLY, 1783)	-	-	+	-	+	-	-	R	Wam	Xt	P
Pseudoterpna pruinata (HUFNAGEL, 1767)	-	-	+	-	+	-	-	RF	Eua	Mh	P Oligophagous Fabaceae: Genista
Geometra papilionaria (LINNAEUS, 1758)	-	-	+	+	+	-	-	RF	Eua	M	D
Euchloris smaragdaria (FABRICIUS, 1787)	-	-	+	+	+	-	-	RF	Eua	Xt	P
Hemithea aestivaria (HÜBNER, 1799)	-	-	+	-	+	+	-	RF	Eua	M	P
Chlorissa viridata (LINNAEUS, 1758)	-	-	+	+	+	-	-	RF	Eua	Mt	S
Thalera fimbrialis (SCOPOLI, 1763)	-	-	+	+	+	+	-	RF	Eua	Mxt	P
Jodis lactearia (LINNAEUS, 1758)	-	-	+	+	+	+	-	RF	Eua	M	D
Cyclophora annulata (SCHULZE, 1775)	-	+	+	-	+	-	-	F	Eua	Mt	D
Cyclophora punctaria LINNAEUS, 1758)	-	-	+	+	+	+	-	F	E.Was	Mt	Q Oligophagous Quercus
Cyclophora linearia (HÜBNER, 1799)	-	-	+	+	+	+	-	VF	Eua	M	Dq
Timandra griseata W. PETERSEN, 1902	-	+	+	+	+	+	-	VF	Eua	Mt	P Oligophagous Polygonaceae
Scopula immorata (LINNAEUS, 1758)	+	-	+	+	+	+	+	VF	Eua	Mxt	P
Scopula nigropunctata (HUFNAGEL, 1767)	-	-	+	-	+	-	-	F	Eua	Mxt	P
Scopula ornata (SCOPOLI, 1763)	-	-	+	-	+	+	-	F	Eua	Mt	P
Scopula rubiginata (HUFNAGEL, 1767)	-	-	+	-	+	+	-	F	Eua	Mxt	P
Scopula marginepunctata (GOEZE, 1781)	-	-	+	-	+	+	-	RF	Eua	Mxt	P
Scopula decorata (DENIS & SCHIFFERMÜLLER, 1775)	-	+	-	-	-	+	-	R	Eua	Mxt	P
Idaea ochrata (SCOPOLI, 1763)	-	-	+	-	+	+	-	F	Eua	Xt	G
Idaea aureolaria (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	-	-	+	-	R	Eua	Mxt	P
Idaea dimidiata (HUFNAGEL, 1767)	+	-	+	-	-	+	+	RF	Eua	Mt	P
Idaea rufaria (HÜBNER, 1799)	+	-	-	-	-	-	+	R	Eua	Xt	P

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
Idaea aversata (LINNAEUS, 1758)	+	-	+	-	+	+	+	VF	Eua	M	X
Idaea seriata (SCHRANK, 1802)	-	-	+	+	-	-	-	R	Pm	Xt	P; L
Idaea degeneraria (HÜBNER, 1799)	-	-	+	-	+	-	+	R	Eua	Mt	P
Rhodostrophia vibicaria (CLERCK, 1759)	-	+	+	+	+	+	+	VF	Eua	Xt	P: Genista
Lythria purpurata (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Eua	Mt	P
Lythria purpuraria (LINNAEUS, 1758)	-	-	+	+	-	-	-	R	Wam	Mxt	P
Scotopteryx moeniata (SCOPOLI, 1763)	-	+	+	-	+	-	-	RF	Wam	Mxt	P Oligophagous Fabaceae: Genista
Scotopteryx chenopodiata (LINNAEUS, 1758)	-	+	+	+	+	+	+	RF	Wam	Mt	P Oligophagous Fabaceae
Xanthorhoe designata (HUFNAGEL, 1767)	-	-	+	-	+	+	+	RF	Hol	Mh	P Oligophagous Brassicaceae
Xanthorhoe ferrugata (CLERCK, 1759)	-	-	+	+	+	+	+	F	Eua	M	P
Xanthorhoe montanata (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	-	-	-	-	F	Eua	M	P
Xanthorhoe fluctuata (LINNAEUS, 1758)	+	-	+	-	+	-	+	RF	Eua	M	P
Epirrhoe alternata (O. F. MÜLLER, 1764)	+	-	+	-	-	+	+	RF	Eua	Mh	P Oligophagous Rubiaceae
Camptogramma bilineatum (LINNAEUS 1758)	-	-	+	+	+	+	+	VF	Eua	M	P
Mesoleuca albicillata (LINNAEUS, 1758)	-	+	+	-	+	+	+	VF	Eua	Mh	S Oligophagous Rosaceae
Cosmorhoe ocellata (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Eua	M	P Oligophagous Rubiaceae: Galium
Eulithis pyraliata (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	-	+	-	RF	Eua	Mh	P Oligophagous Rubiaceae
Ecliptopera silaceata (DENIS & SCHIFFERMÜLLER, 1775)	-	+	+	+	+	+	+	RF	Eua	Mh	P
Ecliptopera capitata (HERRICH-SCHAFFER, 1839)	-	-	+	+	-	+	-	RF	Eua	Mh	Monophagous Impatiens noli-tangere
Chloroclysta siterata (HUFNAGEL, 1767)	-	-	+	+	-	-	-	R	Eua	M	D
Plemyria rubiginata (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	-	+	+	-	RF	Eua	Mht	P
Thera variata (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	-	+	-	RF	Eua	M	Dc Oligophagous Pinaceae
Eustroma reticulatum (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	RF	Eua	Mh	P Monophagous Impatiens noli-tangere
Colostygia pectinataria (KNOCH, 1784)	+	-	-	-	-	-	+	VR	Eua	M	P
Horisme vitalbata (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	-	+	+	RF	Eua	M	S Monophagous Clematis vitalba

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
Horisme tersata (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	-	-	+	+	RF	Eua	M	Monophagous Clematis vitalba
Triphosa sabaudiata (DUPONCHEL, 1830)	-	+	+	-	+	+	-	R	Eua	Xt	S Oligophagous Rhamnus
Triphosa dubitata (LINNAEUS, 1758)	-	+	+	+	+	+	-	RF	Eua	Mt	S Oligophagous Rhamnus
Philereme transversata (HUFNAGEL, 1767)	-	+	+	+	-	-	-	RF	Wam	M	P
Operophtera brumata (LINNAEUS, 1758)	-	+	+	+	+	+	+	VF	Eua	M	D
Perizoma alchemillatum (LINNAEUS, 1758)	-	-	+	+	+	-	-	RF	Eua	Mx	P
Perizoma albulatum (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	-	+	-	-	RF	Eua	M	P Oligophagous Rhinanthus
Eupithecia centaureata (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	VF	Eua	M	P
Aplocera plagiata (LINNAEUS, 1758)	+	-	+	+	+	+	+	RF	Eua	Mx	P Monophagous Hypericum perforatum
Aplocera praeformata (HÜBNER, 1826)	-	-	+	+	+	+	+	RF	Eua	M	P Monophagous Hypericum perforatum
Lobophora halterata (HUFNAGEL, 1767)	+	-	+	+	+	-	-	RF	Eua	Mh	D
Trichopteryx carpinata (BORKHAUSEN, 1794)	-	-	+	-	+	+	-	R	Eua	M	D
Abraxas grossulariata (LINNAEUS, 1758)	-	-	+	+	+	+	+	RF	Eua	M	S Oligophagous Ribes
Calospilos sylvatus (SCOPOLI, 1763)	-	-	+	+	+	+	+	RF	Eua	M	D
Lomaspilis marginata (LINNAEUS, 1758)	-	-	+	+	+	+	+	RF	Eua	M	D
Ligdia adustata (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	RF	Eua	M	S Monophagous Euonymus verrucosus
Semiothisa alternaria (HÜBNER, 1809)	-	+	+	+	+	+	+	RF	Eua	M	D
Semiothisa clathrata (LINNAEUS, 1758)	+	-	+	+	+	+	+	F	Eua	M	P Oligophagous Fabaceae
Semiothisa glarearia (BRAHM, 1791)	+	-	+	+	+	+	+	RF	Wam	Xt	P Oligophagous Fabaceae
Tephrina arenacearia (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	-	+	-	-	R	Eua	Xt	P Oligophagous Fabaceae
Petrophora chlorosata (SCOPOLI, 1763)	-	-	+	-	+	-	-	VR	Eua	Mh	F Monophagous Pteridium aquilinium
Opistograptis luteolata (LINNAEUS, 1758)	-	-	+	+	+	-	-	RF	Eua	M	D
Epione paralellaria (DENIS & SCHIFFERMÜLLER, 1775)	+	-	-	-	-	-	+	VR	Eua	M	D
Pseudopanthera macularia (LINNAEUS, 1758)	+	+	+	+	+	+	+	VF	Eua	M	P
Ennomos autumnarius WERNEBURG, 1859	-	-	+	+	-	-	-	RF	Eua	M	D
Ennomos fuscantarius (STEPHENS, 1809)	-	-	+	+	-	-	-	RF	Eua	M	D

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
Selenia dentaria (FABRICIUS, 1775)	-	-	+	+	+	+	+	RF	Eua	M	D
Selenia tetralunaria (HUFNAGEL, 1767)	-	-	+	+	+	+	+	VF	Eua	M	Dq
Crocalis elinguaria (LINNAEUS, 1758)	-	-	+	+	+	+	+	F	Eua	M	D
Ourapteryx sambucaria (LINNAEUS, 1758)	-	-	+	+	+	+	+	F	Eua	M	S
Colotois pennaria (LINNAEUS, 1761)	-	+	+	+	+	+	+	F	Eua	M	D
Angerona prunaria (LINNAEUS, 1758)	+	+	+	+	+	+	+	F	Eua	M	D
Lycia hirtaria (CLERCK, 1759)	+	-	+	-	+	+	+	RF	Eua	M	D
Biston betularius (LINNAEUS, 1758)	-	-	+	+	+	-	-	RF	Eua	M	D
Agriopis aurantiaria (HÜBNER, 1799)	-	-	+	+	-	-	-	RF	E.Was	Mt	Dq
Erannis defoliaria (CLERCK, 1759)	-	-	+	+	-	-	+	VF	E.Was	M	D
Peribatodes rhomboidarius (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	-	-	RF	Eua	M	D; P
Cleora cinctaria (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	VF	Eua	M	D
Alcis repandatus (LINNAEUS, 1758)	-	+	+	+	+	+	+	VF	Eua	M	D
Boarmia roboraria (DENIS & SCHIFFERMÜLLER, 1775)	+	-	+	-	+	-	+	VR	Eua	Mt	Dq
Serraca punctinalis (SCOPOLI, 1763)	-	-	+	+	+	-	-	FF	Eua	M	P
Ascotis selenaria (DENIS & SCHIFFERMÜLLER, 1775)	-	+	+	+	+	-	-	F	Eua	M	P; D
Ectropis crepuscularia (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	VF	Eua	M	P; D
Ematurga atomaria (LINNAEUS, 1758)	+	+	+	+	+	+	+	VF	Eua	M	P
Cabera pusaria (LINNAEUS, 1758)	-	-	+	+	-	+	-	RF	Eua	M	D
Campaea margaritata (LINNAEUS, 1767)	-	-	+	-	+	+	-	RF	Eua	M	D
Gnophos furvatus (DENIS & SCHIFFERMÜLLER, 1775)	-	+	-	-	+	-	-	VR	Eua	Xt	P
Siona lineata (SCOPOLI, 1763)	-	+	+	+	+	+	-	VF	Eua	M	P
Perconia strigillaria (HÜBNER, 1787)	-	-	+	-	+	+	-	F	Eua	Mt	P
NOTODONTIDAE											
Phalera bucephala (LINNAEUS, 1819)	-	-	+	+	+	-	-	RF	Eua	M	D
Cerura vinula (LINNAEUS, 1758)	-	-	+	+	-	-	+	RF	Eua	Mh	D Oligophagous Salicaceae
Furcula furcula forficula (FISCHER V. WALDHEIM, 1820)	-	+	+	+	+	+	+	F	Hol	Mh	D: Salicaceae

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
Stauropus fagi (LINNAEUS, 1758)	-	+	+	+	+	+	+	VF	Eua	M	D
Peridea anceps (GOEZE, 1781)	-	-	+	-	+	+	-	RF	Eua	Mt	Dq
Spatalia argentina (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	-	-	F	Eua	Mt	Dq
Notodonta dromedarius (LINNAEUS, 1767)	-	-	+	+	+	+	+	VF	Eua	M	D
Drymonia dodonaea (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	-	VF	Eua	M	Dq
Pheosia gnoma (FABRICIUS, 1777)	-	-	+	+	+	+	-	RF	Eua	M	D
Ptilophora plumigera (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	-	RF	Eua	M	D
Pterostoma palpinum (CLERCK, 1759)	-	-	+	+	+	+	-	VF	Eua	Mh	D
Ptilodon capucina (LINNAEUS, 1758)	-	-	+	+	+	-	-	RF	Eua	M	D
Eligmodonta ziczac (LINNAEUS, 1758)	-	-	+	+	+	-	-	RF	Eua	Mh	D
Clostera curtula (LINNAEUS, 1758)	-	-	+	+	+	-	-	F	Eua	Mh	D Oligophagous Salicaceae
Clostera pigra (HUFNAGEL, 1766)	-	-	+	+	-	-	-	RF	Eua	Mh	D Oligophagous Salicaceae
NOCTUIDAE											
Idia calvaria (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	-	-	-	RF	Wam	Mh	X
Treitschkendia tarsipennalis (TREITSCHKE, 1835)	-	-	+	+	+	-	-	RF	Eua	Mh	X
Polypogon tentacularia (LINNAEUS, 1758)	-	-	+	+	+	-	-	F	Eua	Mh	G; P
Rivula sericealis (SCOPOLI, 1763)	-	-	+	+	+	+	-	F	Eua	Mh	G
Hypena proboscidalis LINNAEUS, 1758)	+	+	+	+	-	+	+	VF	Eua	Mh	P: Urtica, Stachys, Aegopodium
Hypena rostralis (LINNAEUS, 1758)	+	-	+	+	+	+	+	F	Eua	M	P: Urtica, Humulus, Rubus
Scolyopteryx libatrix (LINNAEUS, 1758)	-	-	+	+	+	+	-	VF	Hol	M	D Oligophagous Salicaceae
Catocala nupta (LINNAEUS, 1767)	-	-	+	+	+	+	-	RF	Eua	Mh	D Oligophagous Salicaceae
Catocala elocata (ESPER, 1787)	-	-	+	+	-	-	-	R	Wam	Mth	D Oligophagous Salicaceae
Catocala fraxini (LINNAEUS, 1758)	-	+	-	-	+	-	-	R	Eua	M	D
Catocala fulminea (SCOPOLI, 1763)	-	-	+	+	+	-	-	F	Eua	Mt	S
Lygephila pastinum (TREITSCHKE, 1826)	-	-	+	-	+	-	-	RF	Eua	T	P Oligophagous Fabaceace
Aedia funesta (ESPER, 1766)	-	-	+	+	+	+	+	F	Wam	Mt	P

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
Tyta luctuosa (DENIS & SCHIFFERMÜLLER, 1775)	-	+	+	+	-	-	+	F	Eua	Xt	P
Callistege mi (CLERCK, 1759)	-	-	+	+	+	+	-	F	Eua	Xt	P
Euclidia glyphica (LINNAEUS, 1758)	-	+	+	+	+	+	+	VF	Eua	Mxt	P
Laspeyria flexula (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	-	RF	Eua	M	L
Colocasia coryli (LINNAEUS, 1758)	-	-	+	+	+	+	+	F	Eua	M	D
Acronicta tridens (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	-	-	RF	Eua	M	D
Acronicta leporina (LINNAEUS, 1758)	-	-	+	+	+	+	+	F	Hol	Mh	D
Acronicta megacephala (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	-	+	+	-	RF	Eua	Mh	D Oligophagous Salicaceae
Acronicta strigosa (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	-	+	-	-	R	Eua	Mh	S
Acronicta rumicis (LINNAEUS, 1758)	-	-	+	-	+	-	-	F	Eua	M	S; D
Craniophora ligustri (DENIS & SCHIFFERMÜLLER, 1775)	-	+	+	+	+	+	+	VF	Eua	Mh	S Oligophagous Oleaceae
Emmelia trabealis (DENIS & SCHIFFERMÜLLER, 1775)	-	+	+	+	+	+	+	VF	Eua	Mt	P
Euchalcia modestoides (POOLE, 1989)	-	-	+	+	+	-	-	RF	Eua	M	P
Diachrysia chrysitis (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Eua	M	P
Macdounnoughia confusa (STEPHENS, 1850)	+	-	+	+	+	+	+	VF	Eua	M	P
Autographa gamma (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Eua	M	P
Autographa pulchrina (HAWORTH, 1809)	-	-	+	+	+	-	-	RF	Eua	Mh	P
Abrostola triplasia (LINNAEUS, 1758)	-	-	+	+	+	+	+	F	Eua	M	P Oligophagous Urtica
Abrostola trigemina (WERNEBURG, 1864)	+	-	+	+	+	+	+	F	Eua	M	P Oligophagous Urtica
Cucullia umbratica (LINNAEUS, 1758)	-	+	+	+	+	+	+	F	Eua	M	P Oligophagous Asteraceae
Shargacucullia verbasci (LINNAEUS, 1758)	-	+	+	+	+	+	+	R	Eua	Mt	P Oligophagous Verbascum
Asteroscopus sphinx (HUFNAGEL, 1766)	-	-	+	+	-	-	-	R	Eua	M	D
Pyramidcampa pyramidea (LINNAEUS, 1758)	-	+	+	+	+	-	+	RF	Eua	M	D
Pyramidcampa perflua (FABRICIUS, 1787)	-	-	+	+	+	-	-	R	Wam	M	D
Amphipyra tragopoginis (CLERCK, 1759)	-	-	+	-	+	.-	-	RF	Hol	M	P
Adamphipyra livida (DENIS & SCHIFFERMÜLLER, 1775)	-	+	-	-	+	+	+	R	Eua	Mt	P

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
Heliothis viriplaca (HUFNAGEL, 1766)	-	+	+	+	+	+	+	F	Eua	T	P
Helicoverpa armigera (HÜBNER, 1808)	-	-	+	+	-	-	-	R	Tr-Str.	T	P
Elaphria venustula (HÜBNER, 1790)	-	-	+	+	+	-	-	RF	Eua	Mt	P
Panemeria tenebrata (SCOPOLI, 1763)	-	-	+	+	+	-	-	RF	Wam	Mt	P
Caradrina morpheus (HUFNAGEL, 1766)	-	-	+	+	+	-	-	RF	Eua	Mh	P
Paradrina clavipalpis (SCOPOLI, 1763)	-	-	+	+	+	+	+	VF	Eua	Mt	P
Hoplodrina octogenaria (GOEZE, 1781)	+	-	+	+	+	-	+	RF	Eua	M	P
Hoplodrina blanda (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	F	Eua	M	P
Rusina ferruginea (ESPER, 1785)	-	-	+	+	+	-	-	RF	Eua	M	P
Mormo maura (LINNAEUS, 1758)	-	-	+	+	-	-	-	VR	Wam	Mh	P
Thalpophila matura (HUFNAGEL, 1766)	-	-	+	+	+	-	-	F	Wam	M	G
Trachea atriplicis (LINNAEUS, 1758)	-	+	+	+	+	-	-	RF	Eua	M	P
Euplexia lucipara (LINNAEUS, 1758)	+	-	+	+	+	-	+	R	Eua	Mh	P
Phlogophora meticulosa (LINNAEUS, 1758)	-	-	+	+	+	-	-	RF	Wam	M	P
Phlogophora scita (HÜBNER, 1790)	-	-	+	+	-	-	-	VR	Wam	M	P
Actinotia polyodon (CLERCK, 1759)	-	-	+	+	+	-	-	RF	Eua	Mt	P
Eucarta amethystina (HÜBNER, 1803)	-	-	+	-	+	-	-	R	Eua	T-Hg	P Oligophagous Umbelliferae
Mesogona acetosellae (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	-	-	-	RF	Eua	Xt	D
Cosmia pyralina (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	F	Eua	Mh	D
Cosmia trapezina (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Wam	M	D
Xanthia aurago (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	F	Eua	M	D
Xanthia gilvago (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	-	-	RF	Eua	Mh	D
Xanthia ocellaris (BORKHAUSEN, 1792)	-	-	+	+	+	+	+	VF	Wam	Mh	D Oligophagous Salicaceae
Agrochola circellaris (HUFNAGEL, 1766)	-	-	+	+	+	+	-	RF	Eua	M	D; S
Agrochola nitida (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	-	RF	Wam	M	S; P
Eupsilia transversa (HUFNAGEL, 1766)	-	-	+	+	+	+	+	VF	Eua	M	D

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
Conistra rubiginosa (SCOPOLI, 1763)	-	-	+	+	+	-	-	F	Wam	Mt	D; S
Conistra erythrocephala (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	F	Wam	Mt	Dq
Conistra rubiginea (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	F	Wam	Mt	Dq
Litophane ornitopus (HUFNAGEL, 1766)	-	-	+	+	+	+	+	VF	Eua	M	Dq
Meganephria bimaculosa (LINNAEUS, 1767)	-	-	+	+	-	-	-	VR	Wam	T-Mh	D
Allophyes oxyacanthae (LINNAEUS, 1758)	-	-	+	+	+	-	-	RF	Wam	Mxt	S: Rosaceae
Dichonia convergens (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	-	-	RF	Wam	Xt	Q Oligophagous Quercus
Dichonia aeruginea (HÜBNER, 1808)	-	-	+	+	-	-	-	R	Wam	Xt	Q Oligophagous Quercus
Blepharita satura (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	-	-	-	RF	Eua	M	P
Apamea monoglypha (HUFNAGEL, 1766)	-	-	+	+	+	-	-	F	Eua	M	R (Poaceae)
Apamea anceps (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	F	Eua	M	G Olighagous Poaceae
Oligia strigilis (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Eua	M	G Oligophagous Poaceae
Oligia latruncula (DENIS & SCHIFFERMÜLLER, 1775)	+	-	+	-	+	-	+	RF	Eua	Mh	G Oligophagous Poaceae
Mesapamea secalis (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Eua	M	G Oligophagous Poaceae
Gortyna flavago (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	-	+	-	-	VR	Eua	Mh	P
Charanycha trigrammica (HUFNAGEL, 1766)	-	-	+	+	+	+	+	VF	Wam	M	P; G
Discestra trifolii (HUFNAGEL, 1766)	-	-	+	+	+	+	+	VF	Hol	M	P
Lacanobia w-latinum (HUFNAGEL, 1766)	+	-	+	+	-	-	+	RF	Eua	M	P
Lacanobia oleracea (LINNAEUS, 1758)	+	-	+	+	+	+	+	VF	Eua	M	P
Lacanobia contigua (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	VF	Eua	M	P
Hadena albimacula (BORKHAUSEN, 1792)	-	-	+	-	+	+	+	R	Eua	Mxt	P Oligophagous Caryophyllaceae
Hadena luteago (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	-	-	-	R	Wam	Mxt	P Oligophagous Caryophyllaceae
Aneda rivularis (FABRICIUS, 1775)	-	-	+	+	-	-	-	RF	Eua	M	P Oligophagous Caryophyllaceae
Heliophobus reticulata (GOEZE, 1781)	-	-	+	+	+	-	-	RF	Eua	Mx	P Oligophagous Caryophyllaceae

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
Melanchra persicariae (LINNAEUS, 1761)	-	-	+	+	+	+	+	VF	Eua	M	P
Mamestra brassicaceae (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Eua	M	P
Polia nebulosa (HUFNAGEL, 1766)	-	-	+	+	+	-	-	RF	Eua	M	D
Mythimna turca (LINNAEUS, 1761)	-	-	+	+	+	-	-	RF	Eua	Mh	G
Mythimna conigera (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	RF	Eua	M	P; G
Mythimna vitellina (HÜBNER, 1808)	-	-	+	+	+	+	+	RF	Wam	Xt	P
Mythimna l-album (LINNAEUS, 1767)	-	-	+	+	+	+	+	RF	Eua	M	G: Poaceae
Orthosia incerta (HUFNAGEL, 1766)	+	-	+	+	+	+	+	VF	Eua	M	D
Orthosia gothica (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Eua	M	Dq
Orthosia miniosa (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	-	+	-	RF	Eua	Mt	Dq
Orthosia munda (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	-	+	F	Eua	M	P
Egira conspicillaris (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Wam	M	P
Cerapteryx gramminis (LINNAEUS, 1758)	-	-	+	+	+	+	-	F	Hol	Mh	R (Poaceae)
Neuronia decimalis (PODA 1761)	+	+	+	+	-	-	+	RF	Eua	M	R (Poaceae)
Axylia putris (LINNAEUS, 1761)	+	-	+	+	+	+	+	RF	Eua	M	P; G
Ochropleura plecta (LINNAEUS, 1761)	-	-	+	+	+	+	+	VF	Hol	M	P
Noctua pronuba (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Eua	M	P; G
Noctua fimbriata (SCHREBER, 1759)	-	-	+	+	+	+	+	VF	Wam	M	P; D
Noctua orbona (HUFNAGEL, 1766)	-	-	+	+	-	-	-	RF	Med-As	M	P
Xestia c-nigrum (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Cosm	M	P
Xestia triangulum (HUFNAGEL, 1766)	-	-	+	+	+	-	-	RF	Eua	M	P
Cerastis rubricosa (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	RF	Eua	M	P
Anaplectoides prasina (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	-	RF	Hol	M	P
Euxoa aquilina (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	-	-	RF	Eua	Mxt	R
Agrotis exclamationis (LINNAEUS, 1758)	+	-	+	+	+	+	+	WF	Pal	Eu	R (P,G)
Agrotis ipsilon (HUFNAGEL, 1766)	-	-	+	+	+	+	+	VF	Cosm	Eu	R (P,G)
Agrotis segetum (DENIS & SCHIFFERMÜLLER, 1775)	-	-	+	+	+	+	+	VF	Eua	M	R (P,G)

Taxon	O	F	B	1	2	3	4	F	GS	EE	LF
Agrotis crassa (HÜBNER, 1803)	-	-	+	-	-	-	-	R	Med-As	Xt	R (P,G)
LYMANTRIIDAE											
Calliteara pudibunda (LINNAEUS, 1758)	-	+	+	+	+	+	+	RF	Eua	M	D
Euproctis chrysorrhoea (LINNAEUS, 1758)	-	-	+	-	+	+	+	RF	Eua	M	D
Leucoma salicis (LINNAEUS, 1758)	-	+	+	+	+	+	+	F	Eua	Mh	D Oligophagous Salicaceae
Arctornis l-nigrum (O.F.MÜLLER, 1764)	-	+	+	+	+	+	+	F	Eua	M	D
Lymantria dispar (LINNAEUS, 1758)	-	+	+	+	+	-	-	F	Hol	M	Dq: Quercus, Fagus, Carpinus
Penthophera morio (LINNAEUS, 1758)	-	-	+	+	-	-	-	RF	Eua	M	P
NOLIDAE											
Nycteola revayana (SCOPOLI, 1772)	-	-	+	-	+	+	-	RF	Wam	Mt	Dq
Earias clorana (LINNAEUS, 1761)	-	-	+	-	+	+	-	RF	Eua	Mh	D Oligophagous Salicaceae
Bena prasinana (LINNAEUS, 1758)	-	-	+	+	+	-	+	RF	Wam	Mt	Dq: Quercus, Fagus
Pseudoips fagana (FABRICIUS, 1781)	-	-	+	+	+	+	+	RF	Eua	M	D: Fagaceae
ARCTIIDAE											
Miltochrista miniata (FORSTER, 1771)	+	-	+	+	+	+	+	VF	Eua	M	L
Atolmis rubricollis (LINNAEUS, 1758)	-	-	+	+	+	-	-	F	Eua	M	L
Eilema sororculum (HUFNAGEL, 1766)	-	-	+	+	+	+	-	RF	Eua	Mh	L
Eilema lurideolum (ZINCKEN, 1817)	-	-	+	+	+	+	+	VF	Eua	Mt	L
Arctia caja (LINNAEUS, 1758)	-	-	+	+	+	+	-	RF	Eua	M	P
Arctia villica (LINNAEUS, 1758)	-	-	+	+	+	+	+	RF	E.Was	M	P
Diacrisia sannio (LINNAEUS, 1758)	-	+	+	+	+	+	+	F	Eua	Mh	P
Spilosoma lubricipeda (LINNAEUS, 1758)	+	+	+	+	+	+	+	VF	Eua	M	D
Spilosoma luteum (HUFNAGEL, 1766)	+	+	+	+	+	+	+	VF	Eua	M	D
Diaphora mendica (CLERCK, 1759)	+	-	+	+	+	+	+	F	Eua	M	P
Syntomis phegea danieli OBRATZOV, 1966	+	+	+	+	+	+	+	VF	Eua	M	P
Dysauxes ancilla (LINNAEUS, 1767)	-	-	+	+	+	+	-	F	Pm	Xt	L, Ms
Phragmatobia fuliginosa (LINNAEUS, 1758)	-	-	+	+	+	+	+	VF	Eua	M	P
Phragmatobia caesarea (GOEZE, 1781)	-	-	+	+	+	+	+	R	Eua	M	P
Euplagia quadripunctaria (PODA, 1761)	-	+	+	+	+	+	+	VF	Eua	M	P
Callimorpha dominula (LINNAEUS, 1758)	-	-	+	+	+	+	-	F	Wam	Mh	P; D

Abbreviation: O= Adriano OSTROGOVICH Collection; F= after FOTESCU (1972); B= after BURNAZ SILVIA (1993); **1-4**: sites: 1. The hills of Deva town; 2. The Runcu Valley and the calcareous area of Govăjdie; 3. The Cerna Valley and the surroundings of Lunca Cernii locality; 4. The hills of Hunedoara town; **Fr**=**Frequency** (after RÁKOSY & VIEHMANN 1991): RF= Relative frequent species (7-5 specimens/day); F= Frequent species (5-15 specimens /day); VF=Very frequent species (>15 specimens/day); R= Rare species (5-10 specimens/generation); VR=Very rare species (1-4 specimens/generation); **GS**=**Geographical spreading** (after RÁKOSY 1995, 1996, 1997): Eua= Euroasiatic; E.Wam= Eurowestasiatic-Mediterranean; Wam= Westasiatic-mediterranean; Med=Mediterranean; Am=Atlanto-Mediterranean; Pm=Ponto-Mediterranean; E.Was=Euro-Westasiatic; Hol=Holarctic; Pal=Palearctic; Cosm=Cosmopolite; **EE**=**Ecological Exigences** (after RÁKOSY 1995, 1996, 1997): M = Mesophylous; Mh = Mesohigrophylous; Mht=Mezohigrothermophylous; Mth=Mezothermohigrophylous; Mxt=Mezoxerothermophylous; Mx= Mezoxerophylous; Mt=Mezothermophylous; Xt=Xerothermophylous; Hg= Hygrophylous; T=Thermophylous; T-Hg=Thermo-Hygrophylous; T-Mh=Thermo-Mezohygrophylous; **LF**= Larval Food (after RÁKOSY 1995, 1996, 1997): D=Defoliators of deciduous trees; Q=Defoliators of Quercus sp.; Dq=Defoliators of deciduous trees, especially of Quercus sp. P = Herbaceous plants (Dycotyledonatae); G = Gramineous plants (Monocotyledonatae); S=Shrubs; R=Root consummers; X=Xylophagous species; L: Lichenophagous species.

A number of 390 Macrolepidoptera species have been recorded from the Eastern and North-Eastern part of the Poiana Ruscă Mountains. The species diversity varies among the sites: 301 species were recorded from the hills of Deva town, 322 species from the Runcu Valley and the calcareous area of Govăjdie, 240 species from the Cerna Valley and the surroundings of Lunca Cernii locality and 206 species from the hills of Hunedoara town (Fig. 1).

The structure of the Macrolepidoptera families points out the predominance of Noctuidae (121 species) and Geometridae (99 species), followed by Rhopalocera, especially Lycaenidae (25 species), Nymphalidae (31 species) and Satyridae (16 species) (Table 2).

Table 2 - The structure of the Macrolepidoptera families according to the number of the species

FAMILIES	SPECIES NUMBER
HEPIALIDAE	1
COSSIDAE	2
ZYGAENIDAE	7
LASIOCAMPIDAE	4
ATTACIDAE	3
DREPANIDAE	6
THYATIRIDAE	4
GEOMETRIDAE	99
SPHINGIDAE	8
NOTODONTIDAE	15
LYMANTRIIDAE	6
ARCTIIDAE	16
NOCTUIDAE	121
HESPERIIDAE	11
RIODINIDAE	1
LYCAENIDAE	25
SATYRIDAE	16
NYMPHALIDAE	31
PAPILIONIDAE	3
PIERIDAE	11
Total	390 species

The majority of species is represented by the relative frequent species (1-5 specimens/day), like: *Zeuzera pyrina*, *Cossus cossus*, *Malacosoma neustria*, *Macrothylacia rubi*, *Odonestis pruni*, *Eudia pavonia*, *Drepana falcataria*, *Falcaria lacertinaria*, *Sabra harpagula*, *Alsophila aescularia*,

Pseudoterpna pruinata, Hemithea aestivaria, Thalera fimbrialis, Scotopteryx chenopodiata, Xanthorhoe fluctuata, Ecliptopera capitata, Eustroma reticulatum, Horisme vitalbata, Aplocera praeformata, Ligdia adustata, Lycia hirtaria, Agriopis aurantiaria, Peribatodes rhomboidarius, Smerinthus ocellatus, Cerura vinula, Peridea anceps, Ptilophora plumigera, Calliteara pudibunda, Arctia caja, Arctia villica, Catocala nupta, Nycteola revayana, Earias clorana, Euchalcia modestoides, Amphipyra tragopoginis, Rusina ferruginea, Trachea atriplicis, Phlogophora meticulosa, Dichonia convergens, Blepharita satura, Lacanobia w-latinum, Mythimna conigera, Mythimna l-album, Anaplectoides prasina, Euxoa aquilina, Carterocephalus palaemon, Lycaena dispar rutila, Meleageria coridon coridon, Meleageria bellargus bellargus, Minois dryas drymeia, Apatura iris iris, Melitaea aurelia aurelia, Aporia crataegi crataegi, Papilio machaon machaon, Parnassius mnemosyne distincta, etc.

The most frequent species (6-15 specimens/day) are: *Zygaena purpuralis pluto, Zygaena filipendulae, Thyatira batis, Cyclophora linearia, Timandra griseata, Rhodostrophia vibicaria, Lythria purpurata, Camptogramma bilineatum, Operophtera brummata, Pseudopanthera macularia, Erannis defoliaria, Ematurga atomaria, Miltochrista minitata, Spilosoma lubricipeda, Hypena proboscidalis, Euclidia glyphica, Craniophora ligustri, Emmelia trabealis, Paradrina clavipalpis, Oligia strigilis, Mesapamea secalis, Discestra trifolii, Orthosia incerta, Agrotis exclamationis, Agrotis segetum, Hesperia comma comma, Ochlodes venatus faunus, Pyrgus malvae malvae, Lycaena virgaureae virgaureae, Maniola jurtina jurtina, Aphantopus hyperantus hyperanthus, Coenonympha pamphilus pamphilus, Pararge aegeria tircis, Clossiana selene selene, Clossiana euphrosyne euphrosyne, Argynnis paphia paphia, Issoria lathonia lathonia, Argynnis aglaja aglaja, Araschnia levana levana, Melitaea athalia athalia, Melitaea didyma didyma, Pieris rapae rapae, Pieris napi meridionalis*, etc.

Rare species (5-10 specimens/generation) and very rare species (1-4 specimens/generation) in the studied area are *Saturnia pyri, Aplasta ononaria, Scopula decorata, Idaea aureolaria, Idaea rufaria, Chroloclysta siterata, Triphosa sabaudiata, Tricopteryx carpinata, Tephrina arenacearia, Catocala elocata, Catocala fraxini, Shargacucullia verbasci, Asteroscopus sphinx, Heliothis armigera, Hadena albimacula, Hadena luteago, Agrotis crassa, Carcharodus alceae alceae, Carcharodus flocciferus flocciferus, Thecla betulae betulae, Neozephyrus quercus quercus, Maculinea arion arion, Melitatea trivia trivia, Brenthis daphne daphne, Brenthis hecate hecate*.

The following species identified in this area are rare for the Romanian fauna:

Lycaena helle (DENIS & SCHIFFERMÜLLER, 1775): 2♂♂ Cerna Valley (Lunca Cernii de Jos), 22. 07. 2000

Geographical distribution: Euroasiatic species, in Northern, Central and Easter Europe, Siberia and Amur Basin. In Romania it is a very rare species, recorded from Satu-Mare, Bãile Herculane, Cerna Valley (Mehedinți Mountains) (BALINT & SZÁBO 1981; SZÁBO 1982; 1990; RÁKOSY & NEUMANN 1997).

Habitat: Mesohygrophylous grasslands, wet meadows.

Voltinism: Bivoltine species, in Mai and July-August.

Larval host: *Polygonum bistorta*

Adult food: We observed the adults of *Lycaena helle* visiting *Mentha longifolia*, *Eupatorium cannabinum*, *Telekia speciosa*.

Pararge achine SCOPOLI, 1763: 1 ♂ Cerna Valley (Lunca Cernii de Jos), 20. 07. 2000

Geographical Distribution: Euroasiatic. In Romania it is a rare and localized species, in the hillocky zone of the Carpathian Mountains.

Habitat: In open deciduous forests (oak forests, beech forests), shrubs.

Voltinism: Monovoltine, in Juin-July.

Larval host: Oligophagous species in Poaceae, especially *Poa annua*, *Dactylis glomerata*, *Deschampsia cespitosa*, *Carex* sp., *Lolium* sp.

Adult food: The adults nectar at *Telekia speciosa*.

Auchmis detersa ESPER, 1791: 1 ♂ Govăjdie Valley, in the limestone area, 26.06.1988

Geographical Distribution: Westasiatic- Mediterranean. In Romania, sporadically in the hillocky limestone zone of the Carpathian Mountains (RÁKOSY 1996).

Habitat: Open deciduous forests, Shrubs.

Larval host: Monophagous on *Berberis vulgaris*.

Meganephria bimaculosa (LINNAEUS, 1767): 1♂ Deva (The Bejan Forest) 3.10.1997

Geographical Distribution: Westasiatic-Mediterranean. In Romania is a very rare species, recorded from Cluj, Hunedoara, Sighişoara, Timişoara, Herneacova, Bazoş, Ianova, Ardeoani - Bacău, Focşani, Iaşi, Tecuci, Rarău Mountains (RÁKOSY 1996).

Habitat: meadow forests.

Voltinism: Monovoltine, septembre-octobre

Larval Host: Oligophagous species on *Ulmus* sp.

Zoogeographical analysis indicates the predominance of the species whith an Euroasiatic distribution (78%) followed by Westasiatic-mediterranean (9%) and Holarctic species (5%). Other species (8%) are represented by European, Mediterranean-Asiatic, Euro-Westasiatic, Atlanto-Mediterranean, Tropical-subtropical elements (Fig. 2).

The Poiana Ruscă Mountains area is characterized by the predominance of the mesophylous (55%) and mesohigrophylous species (16%), followed by mesothermophylous (10%) and mesoxerothermophylous species (8%).

The presence of the xerothermophylous species (6%) is due to the limestone habitats from Govăjdie area and xerophytic rocky grasslands from Deva hills (Fig. 3).

The global trophic analysis points out the predominance of the herbaceous plant consumers (Dycotyledonatae) (52%), followed by the defoliators of the deciduous trees (23%), gramineous plant

consumers (8%) and shrub consumers (7%). The defoliators of Quercus species represent 5% from all the identified species, connected to the oack forests from Deva and Lunca Cernii hills (Fig. 4).

The analysis of the larval food also points out the predominance of the polyphagous species (64.62%), followed by oligophagous (32,05%) and monophagous species (3,33%).

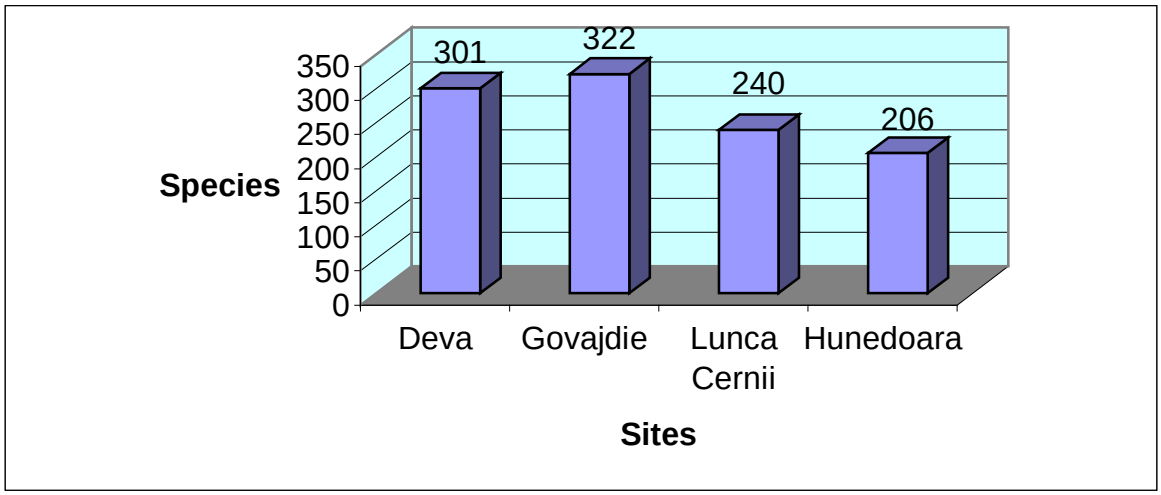

Fig. 1- The species diversity among the sites

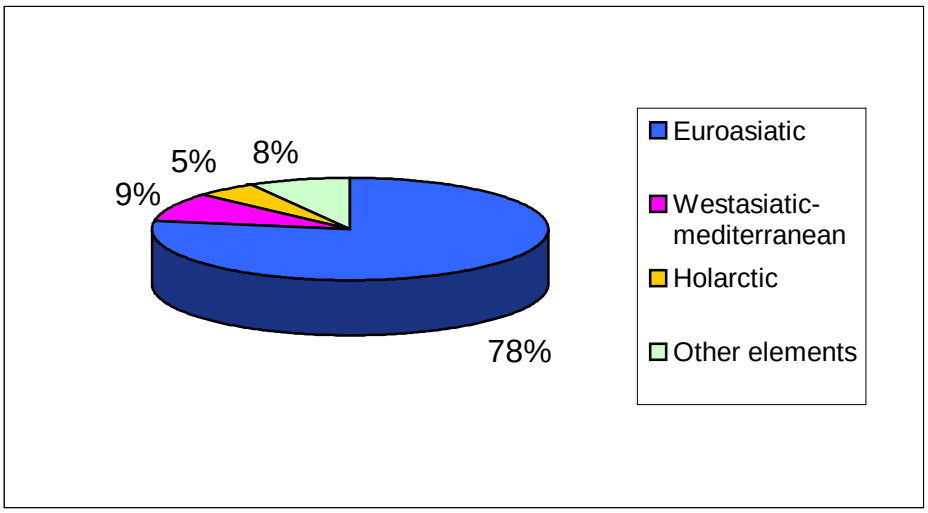

Fig. 2.- Zoogeographical structure of the Lepidoptera species from the Poiana Ruscă Mountains

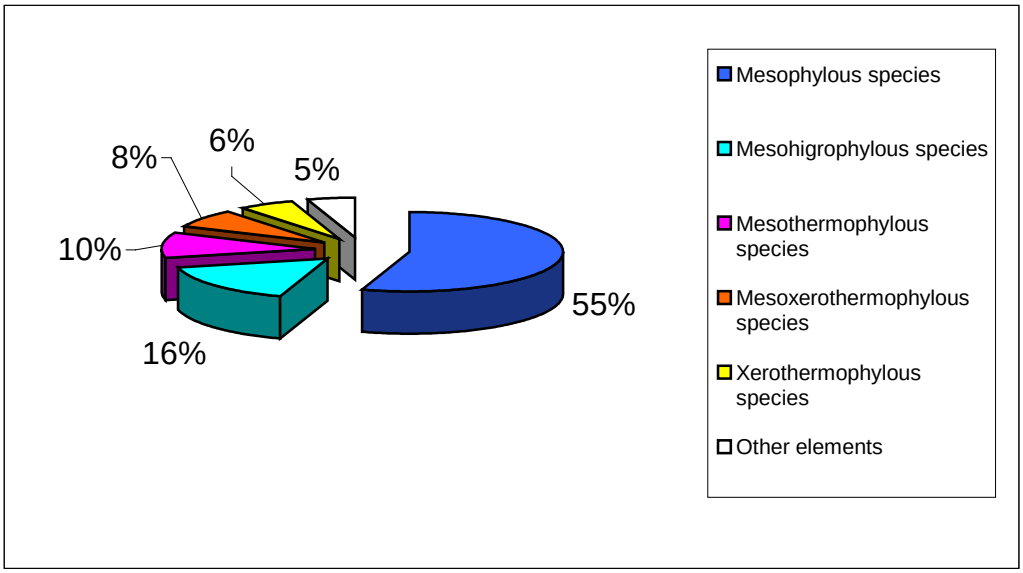

Fig. 3.- Ecological exigences of the Macrolepidoptera species from the Poiana Ruscă Mountains

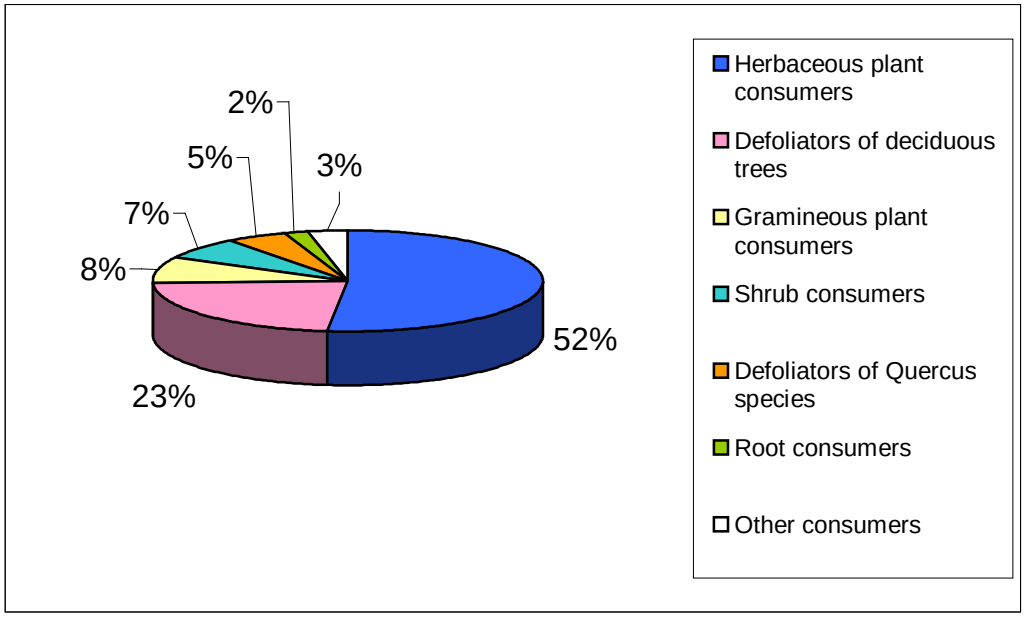

Fig. 4.- Global trophic structure of the Macrolepidoptera species from the Poiana Ruscă Mountains

CONCLUSIONS

390 species of Macrolepidoptera have been recorded from the natural ecosystems of the Poiana Ruscă Mountains. Most of them are very common species, characteristic for grasslands, beech and oak forests, meadow forests and xerophytic rocky grasslands. The presence of some rare species in Romanian fauna like: *Lycaena helle*, *Meganephria bimaculosa*, *Auchmis detersa*, *Mormo maura*, justifies the protection of their habitats.

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