

Macrolepidoptera species of the Crăciunești gorges and the neighbourhood of the localities Lunca and Băița (Metaliferi Mountains, Western Carpathians, Romania)

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Rezumat

Macrolepidoptere din Cheile Crăciunești și împrejurimile localităților Lunca și Băița (Munții Metaliferi, Carpații Occidentali, România)

Fauna de macrolepidoptere ale Cheilor Crăciunești precum și a habitatelor naturale din împrejurimile localităților Lunca și Băița, situate în aval și în amonte de chei a fost cercetată între anii 1992-2005. Cele mai multe colectări s-au efectuat între anii 2003-2005 în Cheile Crăciunești situate în partea sudică a Munților Metaliferi, o zonă calcaroasă cu o mare diversitate floristică și faunistic. Din ansamblul măgurilor care formează cheile doar Măgura Crăciunești a fost inclusă în rețeaua rezervațiilor naturale ale județului Hunedoara, celelalte măguri fiind afectate de exploatarea calcarului.

Rezultatul investigațiilor noastre s-a soldat cu înregistrarea a 273 de specii în habitatele din împrejurimile localității Lunca, 232 specii la Băița și 297 specii în rezervația naturală Cheile Crăciunești. În total, în cele trei stațiuni au fost colectate 307 de specii.

Lista sistematică a speciilor identificate este însoțită de date privind frecvența speciilor și sursa trofică a larvelor.

Specii rare colectate în cele trei stațiuni cercetate sunt: *Neozephyrus quercus*, *Satyrium spini*, *Euphydryas maturna partiensis*, *Maculinea alcon*, *Zerynthia polyxena*, *Phragmatobia luctifera*, *Acrionicta alni*. *Euphydryas aurinia aurinia* prezintă o frecvență destul de ridicată în Cheile Crăciunești, față de alte zone calcaroase ale județului Hunedoara.

Key words: Macrolepidoptera, Crăciunești Gorges, Lunca, Băița, Metaliferi Mountains.

Introduction

Macrolepidoptera fauna of the Crăciunești Gorges and the neighbourhood of the localities Lunca and Băița (Hunedoara County, Romania) were studied between 1992-2005. Most attention was given to the Crăciunești Gorges, researched between 2003-2005, an important calcareous zone situated in the southern part of the Metaliferi Mountains.

The hilly zone of Crăciunești Gorges is crossed by the river of Căianu, tributary to Mureș River.

In 1985, it was protected only a small part of the area, represented by Măgura Crăciunești (The Hill of Crăciunești – 550 m) which is not affected by the exploitation of the calcaire.

Many rare and protected species in Romania, plant and animals, especially insects and reptiles, were identified in this area. Between the vascular plants we mentioned: *Fritillaria montana*, *Centaurea atropurpurea* var. *crassifolia* f. *integrifolia* *Stipa pennata* ssp. *eriocaulis*. Reptiles are represented by *Vipera ammodytes ammodytes*. The rare insects, especially lepidoptera species, are represented by *Zerynthia polyxena polyxena* and *Euphydryas maturna partiensis*.

The purpose of this study is to list the recorded species of the sites, rich in limestone and volcanic formations.

Data about the local frequency and the larval food of the Macrolepidoptera species are given.

From the geological point of view the sites are characterised by the presence of the limestone formations in Lunca locality and Crăciunești Gorges.

Neozoic volcanic formations are situated in the neighbourhood of Băița locality (Sfredel Hill – 873 m; Săliște Hill – 614 m) (IANOVICI et al. 1976)

In the limestone zone, especially at the Crăciunești Gorges, some phytocenological formations that characterise the principal habitats of the area, were studied:

- forests of deciduous trees: As. *Lathyro hallersteinii-Carpinetum-queretosum cerris* COLDEA 1975; As. *Quercetum pubescentis-cerris* SOÓ ap. POP & HODIȘAN 1958.

- mezoxerophytic grasslands: As. *Thymetum comosi* POP et HODIȘAN 1963 subass. *Teucrietosum montani* (Csüros 1958), COLDEA 1991);

- mesophytic grasslands (As. *Festuco rubrae-Agrostietum capillaris* Horv. (51) 52.

- wet meadows: As. *Epilobio palustri-Juncetum effusi* OBEND. 1953, 1957; As. *Agrostetum stoloniferae* (Ujv. 1941) BURDUJA et al. 1956; As. *Festucetum pratensis* Soó (1938), 1955, 1966; As. *Ranunculetum repentis* KNAPP. 1946 em. OBERD. 1957 (BALAZS 1999, 2002).

Preliminary data about the Macrolepidoptera species from the limestone zones of the Metaliferi Mountains, including the Crăciunești Gorges, surrounding of Băița and Lunca localities, was published by us (BURNAZ SILVIA 1992).

Material and methods

The species of S.ord. Heterocera were collected, in all the sites, using a light trap (250 watt). Butterflies (S. ord. Rhopalocera) were captured using an entomological net.

SPULER (1909-1911), NICULESCU (1963, 1965, 1966), RÁKOSY (1994, 1996), CHINERY (1996), STILL (1996), STĂNESCU (1997), FELTWELL (2001), were used in the diagnosis of the species.

The systematic of Lepidoptera, according to POPESCU-GORJ (1987), RÁKOSY (1996, 2000), SZÉKELY (1999) was followed.

The frequency of the species was calculated according to RÁKOSY classification (1991, 2001).

Results and discussion

As the result of our investigations 307 Macrolepidoptera species were found in the neighbourhood of the settlements Lunca, Băița and in the natural reserve of the Crăciunești Gorges. The checklist of the recorded Macrolepidoptera species is presented (Tab. 2).

The most representative families of the Macrolepidoptera species recorded from these area are: Geometridae (63 species), Noctuidae (99 species), Nymphalidae (39 species) and Lycaenidae (26 species) (Tab. 1).

Table 1
Families of the Macrolepidoptera species and the number of species/family

FAMILIES	NUMBER OF SPECIES
LASIOCAMPIDAE	7
SATURNIIDAE	2
SPHINGIDAE	11
HESPERIIDAE	8
PAPILIONIDAE	4
PIERIDAE	10
LYCAENIDAE	26
NYMPHALIDAE	39
DREPANIDAE	9
GEOMETRIDAE	63
NOTODONTIDAE	10
NOCTUIDAE	99
LYMANTRIIDAE	3
NOLIDAE	1
ARCTIIDAE	16
TOTAL	308

Table 2
The check list of the Macrolepidoptera species recorded from Crăciunești Gorges, Lunca and Băița settlements (Metaliferi Mts., Romania)

Taxa	L	CC	B	LF	F
LASIOCAMPIDAE					
<i>Poecilocampa populi</i> (LINNAEUS, 1758)	+	+	+	Salicaceae	F
<i>Trichiura crataegi</i> (LINNAEUS, 1758)	-	+	-	Prunus spinosa, Crataegus monogyna, Betula pendula, Quercus sp., Corylus avellana, Alnus glutinosa, Populus tremula, Salix caprea	R
<i>Malacosoma neustrium</i> (LINNAEUS, 1758)	+	+	+	Quercus cerris, Carpinus betulus, Salix caprea, Alnus glutinosa	F
<i>Lasiocampa quercus</i> (LINNAEUS, 1758)	-	+	-	Salix caprea, Quercus cerris, Rubus idaeus, Rubus fruticosus	R
<i>Macrothylacia rubi</i> (LINNAEUS, 1758)	+	+	-	Herbaceous plants and shrubs: Rubus idaeus, Rubus fruticosus	R
<i>Gastropacha quercifolia quercifolia</i> (Linnaeus, 1758)	-	+	-	Deciduous trees and shrubs: Salix caprea, Prunus spinosa, Corylus avellana	R
<i>Odonestis pruni</i> (LINNAEUS, 1758)	+	+	-	Deciduous trees and shrubs: Prunus spinosa, Alnus glutinosa, Quercus sp., Tilia cordata, Salix caprea, Corylus avellana	RF
SATURNIIDAE					
<i>Saturnia pyri</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	-	-	Pirus communis, Prunus domestica	RF
<i>Saturnia pavonia</i> (LINNAEUS, 1758)	+	+	-	Salix caprea, Prunus spinosa, Rhamnus frangula, Rubus idaeus, Rubus fruticosus	RF

Taxa	L	CC	B	LF	F
SPHINGIDAE					
Mimas tiliæ tiliæ (LINNÆUS, 1758)	+	+	+	Tilia cordata, Betula sp., Ulmus glabra, Alnus glutinosa	F
Smerinthus ocellatus ocellatus (LINNÆUS, 1758)	+	+	+	Salicaceae	RF
Laothoe populi (LINNÆUS, 1758)	+	+	+	Salicaceae	F
Sphinx ligustri ligustri (LINNÆUS, 1758)	-	+	-	Ligustrum vulgare, Syringa vulgaris, Viburnum opulus, Fraxinus ornus	R
Agrius convolvuli (LINNÆUS, 1758)	+	+	+	Convolvulaceae	F
Hemaris tityus tityus (LINNÆUS, 1758)	-	+	-	Galium verum, Scabiosa columbaria, Lonicera xylosteum	R
Macroglossum stellatarum (LINNÆUS, 1758)	+	+	+	Stellaria sp., Galium verum, Galium mollugo	F
Hyles euphorbiae (LINNÆUS, 1758)	+	+	+	Euphorbia cypparissias	F
Hyles lineata livornica (ESPER, 1779)	-	+	-	Rubiaceae	R
Deilephila elpenor (LINNÆUS, 1758)	+	+	+	Epilobium hirsutum, Galium verum, Impatiens noli-tangere, Lythrum salicaria	F
Deilephila porcellus (LINNÆUS, 1758)	+	+	+	Epilobium hirsutum, Galium verum	F
HESPERIIDAE					
Erynnis tages (LINNÆUS, 1758)	+	+	+	Fabaceae	VF
Carcharodus alceae (ESPER, 1780)	-	+	-	Malvaceae	R
Pyrgus malvae malvae (LINNÆUS, 1758)	+	+	+	Rosaceae	VF
Pyrgus carthami (HÜBNER, 1813)	+	+	+	Rosaceae (Potentilla sp.), Malvaceae	F
Carterocephalus palaemon (PALLAS, 1771)	+	+	+	Poaceae	F

Taxa	L	CC	B	LF	F
<i>Thymelicus sylvestris</i> (Poda, 1761)	+	+	+	Poaceae	F
<i>Hesperia comma</i> (LINNAEUS, 1758)	+	+	+	Poaceae	VF
<i>Ochlodes venatus</i> faunus TURATI, 1905	+	+	+	Poaceae	VF
PAPILIONIDAE					
<i>Zerynthia polyxena</i> (DENIS & SCHIFFERMÜLLER, 1775)	-	+	-	Aristolochia pallida	R
<i>Parnassius mnemosyne distincta</i> BRYK-EISNER, 1930	-	+	+	Papaveraceae: Corydalis sp.	RF
<i>Iphiclydes podalirius</i> (SCOPOLI, 1763)	+	+	+	Rosaceae	RF
<i>Papilio machaon</i> (LINNAEUS, 1758)	+	+	+	Umbelliferae	RF
PIERIDAE					
<i>Leptidea sinapis</i> (LINNAEUS, 1758)	+	+	+	Fabaceae	VF
<i>Aporia crataegi</i> (LINNAEUS, 1758)	+	+	+	Rosaceae	RF
<i>Anthocharis cardamines meridionalis</i> VERITY, 1908	+	+	+	Brassicaceae	VF
<i>Pieris brassicae</i> (LINNAEUS, 1758)	+	+	+	Brassicaceae	RF
<i>Pieris rapae</i> (LINNAEUS, 1758)	+	+	+	Brassicaceae	VF
<i>Pieris napi meridionalis</i> (HEYNE, 1895)	+	+	+	Brassicaceae	VF
<i>Pontia edusa</i> (FABRICIUS, 1777)	+	+	+	Brassicaceae	F
<i>Colias hyale</i> (LINNAEUS, 1758)	+	+	+	Fabaceae	VF
<i>Colias croceus</i> (FOURCROY, 1785)	+	+	+	Fabaceae	F
<i>Gonepteryx rhamni meridionalis</i> ROBER, 1909	+	+	+	Rhamnaceae	RF
LYCAENIDAE					
<i>Hamearis lucina</i> (LINNAEUS, 1758)	+	+	+	Primulaceae	VF

Taxa	L	CC	B	LF	F
<i>Lycaena phlaeas</i> (LINNAEUS, 1761)	+	+	+	Polygonaceae	VF
<i>Lycaena virgaureae</i> (LINNAEUS, 1758)	+	+	+	Polygonaceae	F
<i>Lycaena dispar rutila</i> (WERNEBURG, 1864)	+	+	+	Polygonaceae	F
<i>Lycaena alciphron</i> (ROTTEMBERG, 1775)	+	+	+	Polygonaceae	RF
<i>Lycaena tityrus doris</i> (HUFNAGEL, 1766)	+	+	-	Polygonaceae	R
<i>Thecla betulae</i> (LINNAEUS, 1758)	-	+	+	Rosaceae Myrmecophil	R
<i>Neozephyrus quereus quereus</i> (Linnaeus, 1758)	-	+	-	Fagaceae: Quercus sp.	VR
<i>Callophrys rubi virgatus</i> VERITY, 1913	+	+	+	Fabaceae, Cistaceae Rhamnaceae	RF
<i>Satyrium spini</i> (DENIS & SCHIFFERMÜLLER, 1775)	-	+	-	Rhamnus catharticus Myrmecophil	R
<i>Satyrium pruni</i> (LINNAEUS, 1758)	+	+	+	Rosaceae	R
<i>Cupido minimus</i> (FUESSELY, 1775)	+	+	+	Fabaceae Myrmecophil	F
<i>Cupido argiades</i> (PALLAS, 1771)	+	+	+	Fabaceae Myrmecophil	F
<i>Celastrina argiolus</i> (LINNAEUS, 1758)	+	+	+	Fabaceae Myrmecophil	F
<i>Scoliantides orion lariana</i> (FRUHSTORFER, 1910)	+	+	-	Sedum hispanicum, Sedum telephium Myrmecophil	VF
<i>Glaucopteryx alexis</i> (PODA, 1761)	+	+	+	Fabaceae, Myrmecophil	F

Taxa	L	CC	B	LF	F
<i>Maculinea alcon</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	-	<i>Gentiana pneumonanthe</i> Myrmecophil	RF
<i>Maculinea arion</i> (LINNAEUS, 1758)	+	+	-	Labiatae: <i>Thymus serpyllum</i> Myrmecophil	F
<i>Plebejus argus</i> (LINNAEUS, 1758)	+	+	+	Fabaceae, Myrmecophil	VF
<i>Plebejus argyrognomon</i> (BERGSTRASSER, 1779)	-	+	-	Fabaceae Myrmecophil	RF
<i>Aricia agestis</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	<i>Geranium pratense</i> , <i>Helianthemum nummularium</i> Myrmecophil	F
<i>Polyommatus semiargus</i> (ROTTEMBURG, 1775)	+	+	+	Fabaceae Myrmecophil	F
<i>Polyommatus icarus</i> (ROTTEMBURG, 1775)	+	+	+	Fabaceae Myrmecophil	VF
<i>Polyommatus daphnis</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	-	Fabaceae Myrmecophil	F
<i>Polyommatus bellargus</i> (ROTTEMBURG, 1775)	+	+	+	Fabaceae Myrmecophil	RF
<i>Polyommatus coridon</i> (PODA, 1761)	+	+	-	Fabaceae Myrmecophil	F
NYMPHALIDAE					
<i>Argynnis paphia</i> (LINNAEUS, 1758)	+	+	+	Violaceae	VF
<i>Argynnis aglaja</i> (LINNAEUS, 1758)	+	+	+	Violaceae	VF

Taxa	L	CC	B	LF	F
Argynnis adippe (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Violaceae	VF
Argynnis niobe (LINNAEUS, 1758)	+	+	+	Violaceae	VF
Issoria lathonia (LINNAEUS, 1758)	+	+	+	Violaceae	VF
Brenthis daphne (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Rosaceae	RF
Brenthis hecate (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Filipendula ulmaria, Dorycnium	RF
Clossiana selene (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Violaceae	VF
Clossiana euphrosyne (LINNAEUS, 1758)	+	+	+	Violaceae	F
Clossiana dia (LINNAEUS, 1767)	+	+	+	Violaceae	VF
Vanessa atalanta (LINNAEUS, 1758)	+	+	+	Urticaceae	RF
Cynthia cardui (LINNAEUS, 1758)	+	+	-	Urticaceae	F
Inachis io (LINNAEUS, 1758)	+	+	+	Urticaceae	RF
Polygonia c-album (LINNAEUS, 1758)	+	+	+	Ribes sp., Ulmus sp., herbaceous plants	RF
Aglais urticae (LINNAEUS, 1758)	+	+	+	Urticaceae	F
Araschnia levana (LINNAEUS, 1758)	+	+	+	Urticaceae	F
Nymphalis antiopa (LINNAEUS, 1758)	+	+	+	Salicaceae	RF
Euphydryas maturna partiensis VARGA, 1973	-	+	-	Herbaceous plants, Plantago lanceolata, Succisa pratensis, Veronica chamaedrys and Fraxinus excelsior	R

Taxa	L	CC	B	LF	F
<i>Euphydryas aurinia</i> (ROTTEMBURG, 1775)	+	+	-	Succisa pratensis, Scabiosa columbaria, Knautia arvensis, Digitalis sp., Plantago lanceolata	VF
<i>Melitaea cinxia</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants: Plantago lanceolata, Plantago media, Plantago media, Hieracium pilosella, Centaurea, Viola sp.	VF
<i>Melitaea phoebe</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Herbaceous plants: Scabiosa columbaria, Cirsium arvense, Cirsium vulgare, Plantago media	VF
<i>Melitaea didyma</i> (ESPER, 1779)	+	+	+	Herbaceous plants: Primula veris, Plantago lanceolata, Plantago media, Veronica chamaedrys, Digitalis grandiflora, Centaurea scabiosa, Linaria sp., Stachys sp.	VF
<i>Melitaea athalia</i> (ROTTEMBURG, 1775)	+	+	+	Plantago lanceolata, Veronica officinalis, Melampyrum sp.	VF
<i>Neptis hylas</i> (LINNAEUS, 1758)	+	+	+	Fabaceae: Lathyrus vernus	RF
<i>Apatura iris</i> (LINNAEUS, 1758)	-	+	-	Salicaceae	RF
<i>Pararge aegeria tircis</i> (BUTLER, 1867)	+	+	+	Poaceae	VF
<i>Lasiommata megera</i> (LINNAEUS, 1767)	+	+	+	Poaceae	F
<i>Lasiommata maera</i> (LINNAEUS, 1758)	+	+	+	Poaceae	F
<i>Coenonympha arcania</i> (LINNAEUS, 1761)	+	+	+	Poaceae	VF
<i>Coenonympha glycerion</i> (BORKHAUSEN, 1788)	+	+	+	Poaceae	F
<i>Coenonympha pamphilus</i> (LINNAEUS, 1758)	+	+	+	Poaceae	VF
<i>Pyronia tithonus tithonus</i> (LINNAEUS, 1767)	+	+	+	Poaceae	F
<i>Aphantopus hyperanthus</i> (LINNAEUS, 1758)	+	+	+	Poaceae	VF
<i>Maniola jurtina</i> (LINNAEUS, 1758)	+	+	+	Poaceae	VF

Taxa	L	CC	B	LF	F
<i>Erebia aethiops mesorubria</i> (ESPER, 1777)	-	+	+	Poaceae	RF
<i>Melanargia galathea scolis</i> (FRUHSTORFER, 1917)	+	+	+	Poaceae	VF
<i>Hipparchia fagi fagi</i> (Scopoli, 1763)	+	+	+	Poaceae	F
<i>Minois dryas dymeia</i> FRUHSTORFER, 1903	+	+	+	Poaceae	R
<i>Brintesia circe pannonica</i> FRUHSTORFER, 1911	-	+	-	Poaceae	RF
DREPANIDAE					
<i>Drepana falcataria</i> (LINNAEUS, 1758)	+	+	+	Deciduous trees: Betula pendula, Alnus glutinosa	F
<i>Falcaria lacertinaria</i> (LINNAEUS, 1758)	+	+	+	Deciduous trees: Betula pendula, Alnus glutinosa	RF
<i>Sabra harpagula</i> (ESPER, 1786)	+	+	+	Deciduous trees: Tilia tomentosa, Betula pendula, Quercus cerris, Q. petraea, Alnus glutinosa	RF
<i>Watsonalla binaria</i> (HUFNAGEL, 1767)	+	+	+	Deciduous trees: Quercus petraea, Q. cerris, Fagus sylvatica	RF
<i>Thyatira batis</i> (LINNAEUS, 1758)	+	+	+	Rubus idaeus, R. caesius	RF
<i>Habrosyne pyritoides</i> (HUFNAGEL, 1766)	+	+	+	Rubus idaeus, R. caesius	RF
<i>Tethea or</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	-	Salicaceae	RF
<i>Tethea ocularis</i> (LINNAEUS, 1767)	+	+	+	Salicaceae	RF
<i>Ochropacha duplaris</i> (Linnaeus, 1761)	+	+	+	Deciduous trees: Alnus glutinosa, Betula pendula, Populus tremula	RF
<i>Cilix glaucatus</i> (SCOPOLI, 1763)	+	+	+	Rosaceae	RF

Taxa	L	CC	B	LF	F
GEOMETRIDAE					
<i>Abraxas grossulariata</i> (LINNAEUS, 1758)	+	+	+	Rosaceae	RF
<i>Ligdia adustata</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Euonymus verrucosus	RF
<i>Heliomata glarearia</i> (BRAHM, 1791)	+	+	-	Fabaceae	R
<i>Macaria alternata</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Deciduous trees: <i>Salix caprea</i> , <i>Alnus glutinosa</i> , <i>Quercus cerris</i> , <i>Q. petraea</i>	RF
<i>Chiasmia clathrata</i> (LINNAEUS, 1758)	+	+	+	Fabaceae	F
<i>Pseudopanthera macularia</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants	VF
<i>Epione repandaria</i> (HUFNAGEL, 1767)	+	+	+	Deciduous trees: <i>Populus tremula</i> , <i>Salix caprea</i> , <i>Alnus glutinosa</i> , <i>Prunus spinosa</i> .	RF
<i>Ennomos autumnaria</i> (WERNEBURG, 1859)	+	+	+	Deciduous trees (<i>Quercus petraea</i> , <i>Q. cerris</i> , <i>Alnus glutinosa</i> , <i>Betula pendula</i>)	RF
<i>Selenia dentaria</i> (FABRICIUS, 1775)	+	+	+	Deciduous trees: <i>Quercus sp.</i> , <i>Alnus glutinosa</i> , <i>Ulmus sp.</i> , <i>Fagus sylvatica</i> , <i>Betula pendula</i> ,	RF
<i>Selenia lunularia</i> (HÜBNER, 1788)	+	+	+	Deciduous trees: <i>Quercus petraea</i> , <i>Q. cerris</i> , <i>Tilia cordata</i>	RF
<i>Selenia tetralunaria</i> (HUFNAGEL, 1767)	+	+	+	Deciduous trees: <i>Quercus petraea</i> , <i>Q. cerris</i> , <i>Alnus glutinosa</i> , <i>Salix caprea</i>	RF
<i>Crocallis elinguaris</i> (LINNAEUS, 1758)	+	+	+	<i>Quercus sp.</i> , <i>Corylus avellana</i> , <i>Populus tremula</i> , <i>Salix caprea</i>	RF
<i>Ourapteryx sambucaria</i> (LINNAEUS, 1758)	+	+	+	<i>Sambucus nigra</i> , <i>Lonicera sp.</i>	RF
<i>Angerona prunaria</i> (LINNAEUS, 1758)	+	+	+	<i>Crataegus monogyna</i> , <i>Corylus avellana</i> , <i>Fagus sylvatica</i>	RF

Taxa	L	CC	B	LF	F
Biston betularia (LINNAEUS, 1758)	+	+	+	Deciduous trees: Betula pendula, Salix caprea, Populus tremula, Quercus sp., Sorbus sp., Fraxinus ornus, Robinia pseudacacia, Rubus caesius	RF
B. betularia f. carbonaria (LINNAEUS, 1758)	+	+	-	Deciduous trees: Betula pendula, Salix caprea, Fraxinus ornus., Robinia pseudacacia	RF
Agriopsis bajaria (DENIS & SCHIFFERMÜLLER, 1775)	+	+	-	Crataegus monogyna, Ligustrum vulgare, Prunus spinosa	R
Agriopsis aurantiaria (HÜBNER, 1799)	+	+	-	Deciduous trees: Quercus cerris, Betula pendula, Fagus sylvatica	R
Erannis defoliaria (CLERCK, 1759)	+	+	+	Deciduous trees: Quercus cerris, Tilia sp., Ulmus sp., Carpinus betulus, Betula sp., Fagus sylvatica, Sorbus aucuparia, Crataegus monogyna	F
Peribatodes rhomboidaria (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Herbaceous plants and deciduous trees	R
Cleora cinctaria (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Deciduous trees, herbaceous plants	F
Alcis repandatus (LINNAEUS, 1758)	+	+	+	Deciduous trees, herbaceous plants	F
Ascotis selenaria (DENIS & SCHIFFERMÜLLER, 1775)	-	+	+	Herbaceous plants	F
Ematurga atomaria (LINNAEUS, 1758)	+	+	+	Herbaceous plants	VF
Ectropis crepuscularia (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Deciduous trees and herbaceous plants	F
Lomographa bimaculata (FABRICIUS, 1775)	+	+	+	Deciduous trees and shrubs	RF

Taxa	L	CC	B	LF	F
<i>Perconia strigillaria</i> (HÜBNER, 1787)	+	+	+	Herbaceous plants	R
<i>Siona lineata</i> (SCOPOLI, 1763)	+	+	+	Herbaceous plants	VF
<i>Aplasta ononaria</i> (FUESSLY, 1783)	+	+	-	Ononis spinosa	VR
<i>Geometra papilionaria</i> (LINNAEUS, 1758)	+	+	-	Deciduous trees	R
<i>Antonechloris smaragdaria</i> (FABRICIUS, 1787)	+	+	+	Asteraceae	R
<i>Thalera fimbrialis</i> (SCOPOLI, 1763)	-	+	+	Herbaceous plants	R
<i>Jodis lactearia</i> (LINNAEUS, 1758)	+	-	-	Deciduous trees	R
<i>Cyclophora annulata</i> (SCHULZE, 1775)	+	+	+	Deciduous trees: <i>Betula pendula</i> , <i>Acer sp.</i>	F
<i>Cyclophora albipunctata</i> (HUFNAGEL, 1767)	+	+	-	Deciduous trees	F
<i>Cyclophora linearia</i> (HÜBNER, 1799)	+	+	+	Deciduous trees: <i>Quercus cerris</i> , <i>Q. petraea</i> , <i>Betula verrucosa</i> , <i>Fagus sylvatica</i> , <i>Crataegus monogyna</i>	F
<i>Timandra comae</i> SCHMIDT, 1931	+	+	-	Polygonaceae	F
<i>Scopula immorata</i> (LINNAEUS, 1758)	+	+	+	<i>Thymus serpyllum</i> , <i>Origanum vulgare</i>	F
<i>Scopula ornata</i> (SCOPOLI, 1763)	+	+	+	<i>Thymus serpyllum</i> , <i>Achillea millefolium</i> , <i>Origanum vulgare</i>	F
<i>Scopula rubiginata</i> (HUFNAGEL, 1767)	+	+	+	Herbaceous plants: <i>Thymus serpyllum</i> , <i>Medicago sp.</i> , <i>Lotus corniculatus</i> , <i>Vicia cracca</i> , <i>Convolvulus arvensis</i> , <i>Polygonum aviculare</i>	R
<i>Idaea ochrata</i> (SCOPOLI, 1763)	+	+	+	<i>Stellaria holostea</i>	F
<i>Idaea trigeminata</i> (HAWORTH, 1809)	+	+	-	<i>Polygonum aviculare</i>	R
<i>Idaea aversata</i> (LINNAEUS, 1758)	+	+	+	Saprophyte	F
<i>Rhodostrophia vibicaria</i> (CLERCK, 1759)	+	+	-	<i>Sarothamnus sp.</i>	F

Taxa	L	CC	B	LF	F
<i>Lythria purpurata</i> (LINNAEUS, 1758)	+	+	-	Herbaceous plants	F
<i>Scotopteryx moeniata</i> (SCOPOLI, 1763)	+	+	+	Fabaceae	RF
<i>Scotopteryx bipunctiaria</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	-	Fabaceae	F
<i>Scotopteryx luridata</i> (HUFNAGEL, 1767)	+	+	+	Fabaceae	F
<i>Xanthorhoe designata</i> (HUFNAGEL, 1767)	+	+	+	Brassicaceae	F
<i>Xanthorhoe ferrugata</i> (CLERCK, 1759)	+	+	+	Galium sp.	F
<i>Catarhoe cuculata</i> (HUFNAGEL, 1767)	+	+	+	Galium sp.	R
<i>Epirrhoe alternata</i> (O.F.MÜLLER, 1767)	-	+	+	Galium sp.	R
<i>Camptogramma bilineatum</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants	VF
<i>Mesoleuca albicillata</i> (LINNAEUS, 1758)	+	+	+	Rubus sp.	R
<i>Ecliptopera silaceata</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Herbaceous plants: <i>Impatiens noli-tangere</i> , <i>Epilobium angustifolium</i> , <i>Lythrum salicaria</i>	R
<i>Eustroma reticulatum</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	<i>Impatiens noli-tangere</i>	R
<i>Horisme vitalbata</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	-	<i>Clematis vitalba</i>	R
<i>Horisme tersata</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	-	<i>Clematis vitalba</i>	R
<i>Melanthia procellata</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	<i>Clematis vitalba</i>	RF
<i>Triphosa dubitata</i> (LINNAEUS, 1758)	+	+	-	<i>Frangula alnus</i> , <i>Rhamnus cathartica</i>	RF

Taxa	L	CC	B	LF	F
<i>Perizoma alchemillata</i> (LINNAEUS, 1758)	+	+	+	Lamiaceae	RF
<i>Eupithecia centaureata</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Herbaceous plants	F
<i>Lithostege farinata</i> (HUFNAGEL, 1767)	+	-	-	Herbaceous plants	R
<i>Asthena albulata</i> (HUFNAGEL, 1767)	+	+	+	Deciduous trees	R
NOTODONTIDAE					
<i>Furcula furcula forficula</i> (FISCHER V. WALDHEIM, 1820)	+	+	+	Deciduous trees	F
<i>Phalera bucephala</i> (LINNAEUS, 1819)	+	+	+	Quercus petraea, Salix sp., Populus tremula, Tilia cordata	RF
<i>Stauropus fagi</i> (LINNAEUS, 1758)	+	+	+	Deciduous trees: Quercus cerris, Crataegus monogyna, Betula pendula, Fagus sylvatica	F
<i>Spatalia argentina</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Deciduous trees: Quercus cerris, Fagus sylvatica, Carpinus betulus	F
<i>Notodonta dromedarius</i> (LINNAEUS, 1767)	+	+	+	Deciduous trees: Beulaceae, Salicaceae	R
<i>Tritophia tritophus</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Beulaceae, Salicaceae	R
<i>Drymonia ruficornis</i> (HUFNAGEL, 1766)	+	-	-	Quercus petraea, Q. cerris	R
<i>Drymonia dodonaea</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Quercus petraea, Q. cerris	RF
<i>Pheosia gnoma</i> (FABRICIUS, 1777)	+	+	+	Betula pendula	RF
<i>Ptilodon capucina</i> (LINNAEUS, 1758)	+	+	+	Deciduous trees: Quercus petraea, Fagus sylvatica, Tilia cordata	R

Taxa	L	CC	B	LF	F
NOCTUIDAE					
<i>Acronicta leporina</i> (LINNAEUS, 1758)	+	+	+	Deciduous trees: Betula pendula, Populus tremula, Salix caprea,	VF
<i>Acronicta alni</i> (LINNAEUS, 1767)	+	+	-	Deciduous trees: Quercus petraea, Betula pendula, Tilia cordata, Prunus sp., Fagus sylvatica, Carpinus betulus, Alnus glutinosa	R
<i>Acronicta aceris aceris</i> (LINNAEUS, 1758)	+	+	-	Populus sp.	RF
<i>Acronicta tridens</i> (DENIS & SCHIFFERMÜLLER, 17875)	+	+	+	Deciduous trees: Salix caprea, Alnus glutinosa, Betula pendula	RF
<i>Acronista megacephala</i> (DENIS & SCHIFFERMÜLLER, 17875)	+	+	+	Salicaceae	RF
<i>Acronista strigosa</i> (DENIS & SCHIFFERMÜLLER, 17875)	+	+	+	Deciduous trees: Rhamnus catharticus, Ligustrum vulgare, Prunus spinosa, Sorbus aucuparia	R
<i>Acronicta strigosa</i> (DENIS & SCHIFFERMÜLLER, 1775)	-	+	-	Ligustrum vulgare, Crataegus monogyna, Rhamnus frangula	R
<i>Craniophora ligustri</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Oleaceae	F
<i>Polypogon tentacularia</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants and grasses	F
<i>Catocala nupta</i> (LINNAEUS, 1767)	+	+	+	Salicaceae	RF
<i>Catocala fraxini</i> (LINNAEUS, 1758)	-	+	-	Deciduous trees	R
<i>Catocala elocata</i> (ESPER, 1787)	+	+	+	Salicaceae	VR
<i>Lygephila viciae</i> (HÜBNER, 1822)	-	+	-	Fabaceae	RF

Taxa	L	CC	B	LF	F
<i>Catephia alchymista</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	-	-	Quercus sp.	VR
<i>Aedia funesta</i> (ESPER, 1766)	+	+	+	Herbaceous plants: Convolvulus arvensis, Calystegia sepium	RF
<i>Tyta luctuosa</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Malva sp., Convolvulus arvensis, Linum sp., Calystegia sepium, Plantago sp., Chenopodium sp.	F
<i>Callistege mi</i> (CLERCK, 1759)	+	+	+	Herbaceous plants	VF
<i>Euclidia glyphica</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants and grasses: Rumex sp., Trifolium sp., Medicago sp., Lathyrus vernus, Hippocrepis comosa, Lotus corniculatus; Poaceae	VF
<i>Laspeyria flexula</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Lichens	RF
<i>Hypena proboscidalis</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants: Urtica sp., Aegopodium sp., Lamium sp., Plantago sp., Stachysylvatica	VF
<i>Hypena rostralis</i> (LINNAEUS, 1758)	+	+	+	Urtica dioica, Ranunculus sp., Humulus sp., Rubus caesioides, etc.	R
<i>Eutelia adulatrix</i> (HÜBNER, 1813)	+	+	+	Ligustrum vulgare, Cotinus sp.	R
<i>Euchalcia modestoides</i> POOLE, 1989	-	+	-	Pulmonaria, Cynoglossum, Symphytum	
<i>Diachrysia chrysitis</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants	VF
<i>Diachrysia chryson</i> (ESPER, 1789)	+	+	+	Herbaceous plants	RF
<i>Macdounoughia confusa</i> (STEPHENS, 1850)	+	+	+	Herbaceous plants	VF
<i>Autographa gamma</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants	VF

Taxa	L	CC	B	LF	F
<i>Abrostola tripartita</i> (HUFNAGEL, 1766)	+	+	+	Urtica sp.	RF
<i>Abrostola triplasia</i> (LINNAEUS, 1758)	-	+	-	Urtica sp.	RF
<i>Emmelia trabealis</i> (SCOPOLI, 1763)	+	+	+	Convolvulus sp.	F
<i>Acontia lucida</i> (HUFNAGEL, 1766)	+	+	-	Herbaceous plants and shrubs: Convolvulus sp., Malva.	R
<i>Pseudeustrotia candidula</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Polygonaceae	R
<i>Cucullia umbratica</i> (LINNAEUS, 1758)	+	+	+	Asteraceae	F
<i>Shargacucullia thapsiphaga</i> (TREITSCHKE, 1826)	+	-	-	Verbascum sp.	VR
<i>Calophasia lunula</i> (HUFNAGEL, 1766)	+	+	+	Linaria	RF
<i>Amphipyra pyramidea</i> (LINNAEUS, 1758)	+	+	+	Deciduous trees	F
<i>Amphipyra perflua</i> (FABRICIUS, 1787)	+	+	-	Deciduous trees	VR
<i>Amphipyra tragopoginis</i> (CLERCK, 1759)	+	+	+	Herbaceous plants	RF
<i>Brachionycha nubeculosa</i> (ESPER, 1785)	-	+	+	Deciduous trees	
<i>Diloba caeruleocephala</i> (LINNAEUS, 1758)	+	+	+	Deciduous trees and shrubs: Quercus petraea, Crataegus monogyna, Prunus spinosa, Corylus avellana, Sorbus aucuparia, Populus tremula, Salix caprea	RF
<i>Helicoverpa armigera</i> (HUFNAGEL, 1808)	+	+	-	Herbaceous plants	R
<i>Pyrrhia umbra</i> (HUFNAGEL, 1766)	+	+	+	Herbaceous plants and shrubs: Ononis spinosa, Geranium arvense, Fraxinus ornus, Corylus acellana	VF
<i>Platypterygia kadenii</i> (FREYER, 1836)	-	+	-	Herbaceous plants	R

Taxa	L	CC	B	LF	F
<i>Paradrina clavipalpis</i> (SCOPOLI, 1763)	+	+	+	Herbaceous plants	VF
<i>Hoplodrina blanda</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Herbaceous plants: <i>Achillea millefolium</i> , <i>Rumex acetosa</i> , etc.	RF
<i>Hoplodrina respersa</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Herbaceous plants	RF
<i>Atypha pulmonaris</i> (ESPER, 1790)	+	-	-	<i>Quercus petraea</i> , <i>Q. cerris</i>	VF
<i>Dypterygia scabriuscula</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants	RF
<i>Rusina tristis</i> (RETZIUS, 1783)	-	+	-	Herbaceous plants	R
<i>Mormo maura</i> (LINNAEUS, 1758)	-	+	-	Herbaceous plants	R
<i>Thalpophila matura</i> (HUFNAGEL, 1766)	+	+	+	Herbaceous plants and grasses	F
<i>Trachea atriplicis</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants	F
<i>Phlogophora meticulosa</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants and deciduous trees	RF
<i>Phlogophora scita</i> (HÜBNER, 1890)	-	+	+	Deciduous trees	R
<i>Callopietria juvenina</i> (STOLL, 1782)	-	+	-	<i>Pteridium aquilinum</i>	R
<i>Eucarta amethystina</i> (HÜBNER, 1803)	+	+	-	Umbelliferae	R
<i>Enargia paleacea</i> (ESPER, 1788)	-	+	-	Deciduous trees	R
<i>Mesogona acetosellae</i> (DENIS & SCHIFFERMÜLLER, 1775)	-	+	-	Deciduous trees and shrubs	R
<i>Cosmia pyralina</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Deciduous trees: <i>Ulmus</i> sp., <i>Quercus petraea</i> , <i>Tilia cordata</i> , <i>Populus tremula</i> , <i>Salix</i> sp., <i>Betula pendula</i> , <i>Prunus</i> sp.	F
<i>Cosmia trapezina</i> (LINNAEUS, 1758)	+	+	+	Deciduous trees: <i>Quercus petraea</i> , <i>Ulmus glabra</i> , <i>Tilia tomentosa</i> , <i>Salix</i> sp.	F

Taxa	L	CC	B	LF	F
<i>Cosmia affinis</i> (LINNAEUS, 1767)	+	+	+	Deciduous trees: Ulmus sp., Quercus sp.	F
<i>Xanthia togata</i> (ESPER, 1788)	+	+	+	Salicaceae	F
<i>Xanthia ocellaris</i> (BORKHAUSEN, 1792)	+	+	+	Populus sp.	F
<i>Conistra erythrocephala</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Deciduous trees: Quercus petraea, Carpinus betulus, Fagus sylvatica, Ulmus sp., herbaceous plants	F
<i>Lithophane ornitopus</i> (HUFNAGEL, 1761)	+	+	+	Deciduous trees: Quercus robur, Quercus petraea, Fagus sylvatica, Carpinus betulus, etc	VF
<i>Xylena vetusta</i> (HÜBNER, 1813)	+	-	-	Herbaceous plants and Cyperaceae	VR
<i>Allophyes oxyacanthae</i> (LINNAEUS, 1758)	+	+	+	Rosaceae: Malus sp., Prunus sp., Crataegus monogyna	R
<i>Valearia oleagina</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	-	-	Prunus spinosa	R
<i>Apamea monoglypha</i> (HUFNAGEL, 1766)	+	+	+	Poaceae (roots)	VF
<i>Oligia strigilis</i> (LINNAEUS, 1758)	+	+	+	Poaceae	VF
<i>Hadula trifolii</i> (HUFNAGEL, 1766)	+	+	+	Herbaceous plants	VF
<i>Lacanobia oleracea</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants	VF
<i>Lacanobia thalassina</i> (HUFNAGEL, 1766)	+	-	-	Herbaceous plants	R
<i>Hadena albimacula</i> (BORKHAUSEN, 1792)	+	+	-	Herbaceous plants: Silene sp., Melandrium sp.	R
<i>Sideridis reticulata</i> (GOEZE, 1781)	+	+	+	Caryophyllaceae	RF
<i>Melanchra persicariae</i> (LINNAEUS, 1761)	+	+	+	Herbaceous plants and shrubs	RF

Taxa	L	CC	B	LF	F
Mamestra brassicae (LINNAEUS, 1758)	+	+	+	Herbaceous plants	VF
Polia nebulosa (HUFNAGEL, 1766)	+	+	+	Deciduous trees and herbaceous plants	RF
Mythimna conigera (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Herbaceous plants	RF
Mythimna albipuncta (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Poaceae	RF
Mythimna l-album (LINNAEUS, 1767)	+	+	+	Poaceae	VF
Orthosia gothica (LINNAEUS, 1758)	+	+	+	Deciduous trees, herbaceous plants	VF
Orthosia incerta (HUFNAGEL, 1766)	+	+	+	Deciduous trees	F
Perigrapha munda (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Deciduous trees	F
Tholera cespititis ((DENIS & SCHIFFERMÜLLER, 1775)	-	+	-	Poaceae	RF
Egira conspiciellaris (LINNAEUS, 1758)	+	+	+	Genista, Sarothamnus, Clematis vitalba, Ru-mex, Prunus	VF
Ochroleura plecta (LINNAEUS, 1761)	+	+	+	Herbaceous plants	VF
Noctua pronuba (LINNAEUS, 1758)	+	+	+	Herbaceous plants	F
Noctua fimbriata (SCHREBER, 1759)	+	+	+	Herbaceous plants, shrubs and deciduous trees	F
Noctua janthina (DENIS & SCHIFFERMÜLLER, 1775)	+	-	-	Herbaceous plants	R
Eugraphe sigma (DENIS & SCHIFFERMÜLLER, 1775)	+	-	-	Herbaceous plants and deciduous trees	VR
Xestia c-nigrum (LINNAEUS, 1758)	+	+	+	Herbaceous plants (roots)	VF

Taxa	L	CC	B	LF	F
<i>Xestia triangulum</i> (HUFNAGEL, 1766)	+	+	+	Herbaceous plants and shrubs	R
<i>Anaplectoides prasina</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	<i>Rubus</i> sp., <i>Polygonum vulgare</i> , <i>Epilobium angustifolium</i> , etc.	RF
<i>Peridroma saucia</i> (HÜBNER, 1808)	+	+	+	Herbaceous plants	F
<i>Agrotis segetum</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	+	Roots of herbaceous plants and grasses	VF
<i>Agrotis exclamationis</i> (LINNAEUS, 1758)	+	+	+	Roots of plants	VF
<i>Agrotis crassa</i> (HÜBNER, 1803)	+	+	+	Roots of plants	R
PANTHEIDAE					
<i>Colocasia coryli</i> (Linnaeus, 1758)	+	+	+	Deciduous trees	VF
LYMANTRIIDAE					
<i>Arctornis l-nigrum</i> (O.F. MÜLLER, 1764)	+	+	+	Deciduous trees	RF
<i>Dasychira pudibunda</i> (LINNAEUS, 1758)	-	+	+	Deciduous trees	RF
<i>Leucoma salicis</i> (LINNAEUS, 1758)	+	+	+	Salicaceae	F
NOLIDAE					
<i>Nola cucullatella</i> (LINNAEUS, 1758)	+	+	+	Shrubs	RF
ARCTIIDAE					
<i>Setina irrorella</i> (LINNAEUS, 1758)	+	-	-	Lichens	RF
<i>Atolmis rubricollis</i> (LINNAEUS, 1758)	+	+	+	Lichens	F
<i>Lithosia quadra</i> (LINNAEUS, 1758)	+	+	-	Lichens	RF
<i>Eilema lurideola</i> (ZINCKEN, 1817)	+	+	+	Lichens	VF
<i>Miltochrysta miniata</i> (FORSTER, 1771)	+	+	+	Lichens	VF

Taxa	L	CC	B	LF	F
<i>Syntomis phegea</i> OBRATZSOV, 1966	+	+	+	Herbaceous plants	VF
<i>Dysauxes ancilla</i> (LINNAEUS, 1767)	+	+	-	Lichens and moos	RF
<i>Phragmatobia fuliginosa</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants	VF
<i>Phragmatobia luctifera</i> (DENIS & SCHIFFERMÜLLER, 1775)	+	+	-	Herbaceous plants	VR
<i>Spilosoma lutea</i> (HUFNAGEL, 1766)	+	+	+	Herbaceous plants and shrubs	VF
<i>Spilosoma lubricipeda</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants and shrubs	VF
<i>Diaphora mendica</i> (CLERCK, 1759)	+	+	-	Herbaceous plants and shrubs	RF
<i>Diacrisia sannio</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants	F
<i>Arctia caja</i> (LINNAEUS, 1758)	+	+	-	Herbaceous plants and shrubs	VF
<i>Arctia villica</i> (LINNAEUS, 1758)	+	+	+	Herbaceous plants (Taraxacum, Lamium, Achillea) and shrubs	VF
<i>Euplagia quadripunctaria</i> (PODA, 1761)	+	+	+	Lamium, Epilobium, Corylus, Urtica, Lon- icera, etc.	

Legend: R - Rare species (5-10 individuals/generation); VR - Very Rare species (1-4 individuals/generation); F - Frequent species (6-15 individuals/day); VF - Very Frequent species (> 16 individuals/day); RF - Relative frequent species (1-5 individuals/day)

The diversity of species varies among the sites: 273 species were recorded in the limestone habitats of Lunca locality, 297 at Crăciunești Gorges and 232 species at Băița locality (Fig. 1).

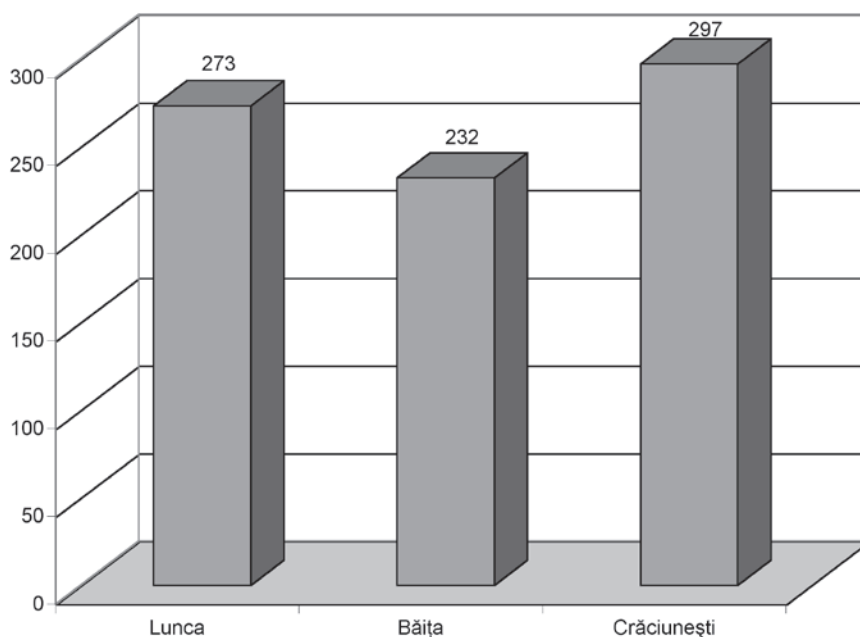


Fig. 1. Number of Macrolepidoptera species recorded from the area of Crăciunești Gorges, Lunca and Băița localities

The frequency of the species was calculated according to their occurrence on the samples.

Five stage of frequency was applied according to RÁKOSY classification (1987, 1996, 2000) (Fig. 2).

The species with a high frequency (> 16 individuals/day) represent 25% from all the captured species (*Agrotis exclamationis*, *Agrotis segetum*, *Autographa gamma*, *Ochropleura plecta*, *Xestia c-nigrum*, *Lithophane ornitopus*, *Oligia strigilis*, *Eilema lurideola*, *Apamea monoglypha*, *Acrionicta leporina*, *Pseudopanthera macularia*, *Camptogramma bilineatum*, *Pieris rapae*, *Pieris napi meridionalis*, *Melitaea athalia*, *Melitaea cinxia*, *Coenonympha pamphilus*, *Coenonympha arcania*). Very rare species are *Eugraphe sigma*, *Aplasta ononaria*, *Catephia alchymista*, *Amphipyra perflua*, *Shargacucullia thapsiphaga*, *Phragmatobia luctifera*, *Xylena vetusta*. Rare species represent 18% from all the collected species. 73 species, representing 27% from all the lepidopterological material, are frequent species.

With some exceptions, the majority of the lepidoptera species record-

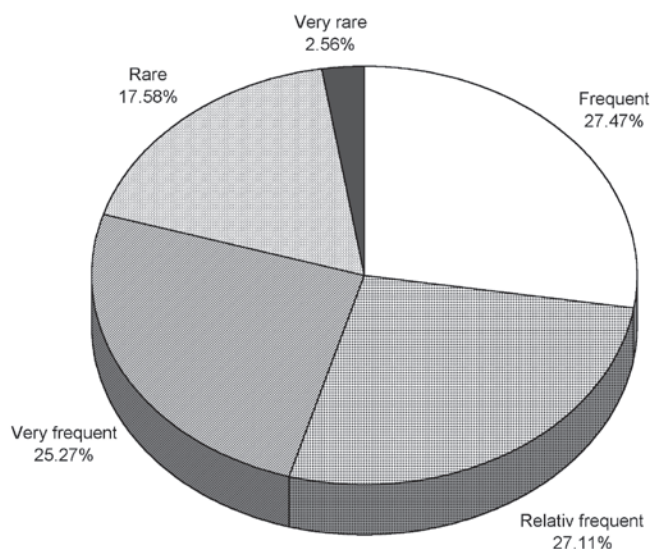


Fig. 2. The frequency of the Macrolepidoptera species captured in the area of Lunca, Băița and Crăciunești Gorges (Metaliferi Mountains)

ed from these areas feed as larvae on dicotyledonata and monocotyledonata plants. Arctiidae species like: *Eilema lurideolum*, *Atolmis rubricollis*, *Lithosia quadra*, etc, are specialized on lichens.

Deciduous forests and their edges as well as the mesophytic, mezohygrophytic and mezoxerophytic grasslands are the principal habitats inhabited by the lepidoptera species.

Some rare or localised species in the fauna of Romania are recorded especially from the habitats of the Crăciunești Gorges.

Zerynthia polyxena polyxena (DENIS & SCHIFFERMÜLLER, 1775) – It was collected on the sunny rocks and the clearings of the Crăciunești Gorges. The adults fly in May. Larvae breed on *Aristolochia pallida*.

Euphydryas maturna partiensis VARGA, 1973 – Mesohygrophilous species found in the habitats of the open deciduous forests. The adults fly in May and visit *Fragaria vesca*, *Cardaminopsis arenosa*, *Chamaecytisus leiocarpus*, *Anthyllis vulneraria*, *Primula veris*, *Primula elatior*, etc. Larvae, polyphagous, breed on *Fraxinus excelsior*, *Populus tremula*, *Salix caprea*, *Plantago lanceolata*, *Veronica chamaedrys*, *Succisa pratensis*.

Euphydryas aurinia aurinia (ROTTEMBERG, 1775) – It was recorded especially from the wet meadows situated in the area of the Crăciunești Gorge but also in the neighbourhood of Lunca locality. The adults fly in May and visit different flowery plants of the meadows: *Taraxacum officinale*, *Ranunculus repens*, *Primula elatior*, *Potentilla recta*, etc. Larvae breed on *Succisa*

pratensis, *Scabiosa ochroleuca*, *Knautia arvensis*, *Digitalis* sp., *Plantago* sp. (NICULESCU 1965; STILL 1996).

Maculineaalcon (DENIS & SCHIFFERMÜLLER, 1775) - It occurs in grasslands, forest margins and sunny rocks. The adults fly in July-August. The flowers selected by adults are *Dianthus carthusianorum*, *Leucanthemum vulgare*, *Origanum vulgare*, etc. Larvae start by feeding on their host plant: *Gentiana pneumonanthe* and then switch to being looked after by ants of *Myrmica*. The species needs a strict protection in Romania.

The report of the European Council: Red Data Book of European Butterflies – Rhopalocera, 1999 has established 7 categories of status. MIHUȚ (2000) and RÁKOSY (2002) have applied these categories to the lepidoptera species (Rhopalocera) of Romania. According to this classification, *Zerynthia polyxena* is an endangered species. Vulnerable species are: *Parnassius mnemosyne distincta*, *Lycaena dispar rutila*, *Scoliantides orion lariana*, *Maculinea arion*, *Maculineaalcon*, *Euphydryas maturna partiensis*. This fact is due to the pollution and the alteration of the environment.

Rare species are also considered: *Lasiocampa quercus*, *Trichiura crataegi*, *Catephia alchymista*, *Xylena vetusta*, *Eugraphe sigma*, *Phragmatobia luctifera*, etc.

The populations of *Zerynthia polyxena*, *Euphydryas maturna partiensis*, *Euphydryas aurinia* and *Maculineaalcon* have a regional importance and therefore they must be protected. It seems that *Euphydryas aurinia* has the greatest population in the Crăciunești Gorges comparing with another calcareous zones of Metaliferi Mountains and therefore it should be especially protected.

REFERENCES

- BALAZS M. 1997. La caractérisation de la flore des gorges calcarifères des Monts Metaliferes. Des aspects phytocoenologiques. Sargetia, Acta Mus. Dev., Ser. Sci. Nat., 17: 49-108.
- BALAZS M. 1999. Les associations saxicoles des gorges calcareuses des Monts Metallifères. Sargetia, Acta Mus. Dev., Ser. Sci.Nat., 18: 91- 135.
- BALAZS M. 2002. Les phytocoenoses arborescentes des gorges calcareuses de Monts Metallifères (le département de Hunedoara). Sargetia, Acta Mus. Dev., Ser. Sci.Nat., Deva, 19: 87-132.
- BURNAZ S. 1992. Contribuții la cunoașterea faunei de macrolepidoptere din zonele carstice ale Munților Metaliferi. Bul.Inf. Soc. Lepid. Rom., Cluj-Napoca, 3(2): 19- 31.
- BURNAZ S. 2002. Fauna de lepidoptere diurne (Ord. Lepidoptera, S.ord. Rhopalocera) a județului Hunedoara, România. Considerații ecologice, biologice și zoogeografice. Bul. inf. Soc. lepid. rom., Cluj-Napoca, 13(1-4): 41-66.
- CHINERY M. 1996. Insects of Britain & Western Europe. Harper Collins Publish-

- ers, London.
- FELTWELL J. (2001): The illustrated encyclopedia of butterflies. Chartwell Books. Ed. New Jersey.
- MIHUȚ S. 2000. Biological, ecological and zoogeographical considerations on Romanian butterflies.- In: Evolution and Adaptation, Cluj-Napoca, 6:45- 76.
- NICULESCU E.V. 1961. Fam. Papilionidae. În: Fauna R.P.R. Insecta, 11(5): 1-103.
- NICULESCU E.V. 1963. Fam. Pieridae. În: Fauna R.P.R., Insecta, 11(6): 1-202.
- NICULESCU E.V. 1965. Familia Nymphalidae. În: Fauna R.P.R., Insecta, 11(7):1-358.
- POPESCU-GORJ A. 1987. La liste systématique révisée des espèces de macrolépidoptères mentionnées dans la faune de Roumanie. Mise à jour de leur classification et nomenclature. Trav. Mus. Hist. Nat. "Grigore Antipa", București, 29: 69-123.
- RÁKOSY L. 1996. Die Noctuiden Rumäniens (Lepidoptera: Noctuidae). Staphia, Linz, 46: 648 p.
- RÁKOSY L. 2001. Diversitat der Schmetterlinge (Lepidoptera) im Cheile Turzii Naturschutzgebiet (Siebenburgen, Rumaniein). Entomol. Rom., Cluj-Napoca, 6: 55-92.
- RÁKOSY L. 2002. Lista roșie pentru fluturii diurni din România. Bul. inf. Soc. lepid. Rom. 13(1-4):9-26.
- RÁKOSY L. & I.VIEHMANN 1991. Argumente în favoarea unei rezervații naturale în Cheile Turului. Ocrot. Nat. Med. Inconj., București, 35(1-2): 15-26.
- STILL J. 1996. Butterflies & Moths. Collins wild Guide. Harper Collins Publishers. London.
- SZÉKELY L. 1999. Actualizarea sistematicii fluturilor diurne din România (Lepidoptera, Rhopalocera). Bul. Inf. Soc. Lepid. Rom., Cluj-Napoca, 10(1-4): 225-226.

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