

DIVERSITY OF MOTHS (LEPIDOPTERA: HETEROCCERA) IN THE SURROUNDINGS OF THE BEDNJA RIVER, VARAŽDIN COUNTY, NORTHERN CROATIA

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Koren, T.: Diversity of moths (Lepidoptera: Heterocera) in the surroundings of the Bednja River, Varaždin County, Northern Croatia. Nat. Croat., Vol. 27, No. 1, 111-141, Zagreb, 2018.

The first survey of the moth fauna on the Natura 2000 site Livade uz Bednju I to IV and its near surroundings was conducted in 2016. Four locations were selected and visited three times in different seasons. A total of 381 moth species were recorded, with the most numerous families being Geometridae (102 species), Noctuidae (94 species), Erebidae (44 species) and Crambidae (35 species). In order to put the results in perspective, a preliminary checklist of moths in the Varaždin county was created based on the literature overview and this survey, containing 603 species. 189 species recorded during this survey represent new county records. The greatest increase in the number of species was for the Noctuidae (40 species) and Geometridae (19 species) families. Some species like *Diachrysia zosimi* were previously recorded only a few times in Croatia. The surveyed sites can now be regarded as some of the best studied areas in Croatia in respect to their moth fauna.

Key words: wet meadows, Natura 2000, checklist, fauna

Koren, T.: Raznolikost noćnih leptira (Lepidoptera: Heterocera) u okolici rijeke Bednje, Varaždinska županija, sjeverna Hrvatska. Nat. Croat., Vol. 27, No. 1, 111-141, Zagreb, 2018.

Tijekom 2016. godine provedeno je prvo istraživanje noćnih leptira na Natura 2000 lokacijama Livade uz Bednju I – IV i u bližoj okolici. Četiri odabrane lokacije posjećene su po tri puta u različitim godišnjim dobima. Ukupno je zabilježeno 381 vrsta noćnih leptira, a najbrojnije porodice bile su Geometridae (120 vrsta), Noctuidae (94 vrste), Erebidae (44 vrste) te Crambidae (35 vrsta). Kako bismo stavili podatke u perspektivu, temeljem dostupne literature i ovog istraživanja izrađen je preliminarni popis noćnih leptira Varaždinske županije koji trenutno broji 603 vrste. Od vrsta zabilježenih ovim istraživanjem 189 ih je po prvi puta pronađeno na području županije. Najviše dodatnih vrsta zabilježeno je za porodice Noctuidae (40 vrsta) i Geometridae (19 vrsta). Neke vrste poput *Diachrysia zosimi* zabilježene su svega nekoliko puta na području Hrvatske. Istraživane se lokacije mogu smatrati nekim od najbolje istraženih lokacija u Hrvatskoj s obzirom na faunu noćnih leptira.

Ključne riječi: vlažne livade, Natura 2000, popis, fauna

INTRODUCTION

Moths are a numerous and highly diverse group of insects. They are important plant pollinators with more than two hundred different moth-plant interactions described so far (HAHN & BRÜHL, 2016). Moths also represent prey for many invertebrate and vertebrate species (KITCHING *et al.*, 2000; SUMMERVILLE & CRIST, 2004).

The moth fauna of most parts of Croatia has not been the subject of systematic faunistic studies in the past and the same is true for Varaždin County. Only a few references

containing a very limited amount of, in almost all cases, more than a century-old data are available (e.g. JURINAC, 1884; TABORSKY, 1910; GRUND, 1918). In the work of JURINAC (1884) the general term "Varaždin" is used for the locality, with no precise locations mentioned, according to the common practice at that time. TABORSKY (1910) lists only some dozens of species that he recorded during his short visit to the area and GRUND (1918) mentions only a number of Microlepidoptera species from the area. Recent papers dealing with the moth fauna of the county were the results of the revision of Franjo Koščec's insect collection currently stored in the Entomological Department of Varaždin City Museum. The collection is extremely rich in all the insect groups, including butterflies and moths. The data from the Koščec butterfly collection were completely published (MARČEC, 2006), while only some of the moths from the Koščec collection have been published to date, including the Geometridae (MIHOČI, 2008), Noctuidae (KUČINIĆ & BREGOVIĆ, 1996) and the Sesiidae (KUČINIĆ *et al.*, 1997; PREDOVNIK, 2010). Nevertheless, almost all the mentioned publications were based on specimens collected at the beginning of the 20th century. Their historical value is unquestionable but they do not represent the current state of the biodiversity of the area. The goal of this survey was to gain a baseline insight into the moth diversity of the surroundings of the Bednja River, Varaždin County. Additionally, in order to put the collected data in perspective, the secondary goal was to create a preliminary checklist of moth species known from the county based on the available literature and this survey.

MATERIALS AND METHODS

Study site

Varaždin County has an area of 1 262 km² and 175 951 inhabitants. The county contains only a few cities (Varaždin, Ivanec, Ludbreg, Lepoglava, Novi Marof and Varaždinske Toplice) and a large number of villages and small settlements. The whole area is a mosaic of settlements, agricultural land, forest fragments and grasslands of different kinds. The two largest rivers in the area are the Drava, which flows along the northern border of the county, and the Bednja which flows into the Drava within the county. The Bednja is a tributary of the Drava, and the whole of its course is in Croatia. The river is 133 km long and rises at Mt Macelj and flows through Bednja, Beletinec, Novi Marof, Varaždinske Toplice, Ludbreg and joins the Drava at Mali Bukovac near Ludbreg.

A total of 14 Special Protection Areas (SPAs) sites have been designated in the county, including the Natura 2000 areas Livade uz Bednju I-V (site codes: HR2001408, HR2001409, HR2001410, HR2001411, and HR2001412) occupying a total area of 1,534.761 ha. The Bednja River and its valley constitute an important area of the ecological network, particularly because of the meadow and pasture habitats, and the associated species (ANONYMOUS, 2015). In the river's surroundings, several important habitats are present: lowland meadows (with *Alopecurus pratensis* and *Sanguisorba officinalis*), Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) and hydrophilic edges higher green with rivers and forests (*Convolvulion sepia*, *Filipendulion*, *Senecion fluviatilis*). The dominant soils are acidic brown soil on clastic rocks, luviziol on clay and partly hydroameliorated wetland rendzinas on flysch and soft limestone (ANONYMOUS, 2015). The Bednja River area and the surrounding habitat is one of last remaining natural sites in the county and, consequently large parts of the remaining mesophilous grasslands are included in the Natura 2000 network. Still, except for basic knowledge about the Natura 2000 species and habitats, almost no other available data exist for the area.

Moth survey

This study took place at four localities in the Natura 2000 areas, Livade uz Bednju I - IV, or in the near surroundings (Fig. 1). The area Livade uz Bednju V was not included as it was not easily accessible by car. Each locality was visited three times in different seasons (spring, summer and autumn). On average, four hours were spent at each locality on each date, depending on the time of year and the climate conditions. Five to seven UV light tents were used per locality to attract moths. Most of the moths attracted were identified in the field and released. Only in cases where the identification was questionable were the moths collected and identified in the lab using standard identification keys (e.g. FIBIGER, 1997; HAUSMANN & VIIDALEPP, 2012; MACEK *et al.*, 2012; NOWACKI, 1998; SLAMKA, 2006, 2008, 2010, 2013). Some members of the families Erebiidae, Geometridae and Noctuidae, and all the encountered Microlepidoptera were collected and stored in the private collection of the author. The nomenclature follows the online database Fauna Europaea (DE JONG *et al.*, 2014). For several species, examination of the genital structures was carried out in order to confirm the correct species identification.

In order to validate the results and compare them with historical records, a preliminary checklist of moths of the county was created based on the available literature (JURINAC, 1884; TABORSKY, 1910; GRUND, 1918, KUČINIĆ & BREGOVIĆ, 1996, KUČINIĆ *et al.*, 1997; MIHOČI, 2008; PREDOVNIK, 2010).

Tab. 1. List of surveyed localities along with habitats, coordinates, altitude and dates of visits.

	Locality	Habitat	X	Y	Altitude (m a.s.l.)	Dates of visit
1.	Trakošćan, south of Cvetlin Village	forest edge, wet meadows	46,268605	15,950217	252	9.5.2016, 12.7.2016, 5.10.2016
2.	Ivanec, lakes	forest edge, wet meadows, edge of the lakes	46,230913	16,102167	207	6.4.2016, 11.7.2016, 14.11.2016
3.	Novi Marof, Ivci, riverbank of Bednja	forest edge, wet meadows	46,153744	16,364668	187	7.6.2016, 18.7.2016, 23.10.2016
4.	Donji Martijanec, east of the village	forest edge, wet meadows	46,230737	16,552234	168	18.5.2016, 25.8.2016, 2.11.2016

RESULTS

During this survey we gathered data of 381 moth species within the study area. The Geometridae are the best-represented group with a total of 102 recorded species, followed by Noctuidae with 94 species, Erebiidae with 44 and Crambidae with 35 species. All four localities had a similar number of species and abundance of specimens across three different seasons (Fig. 2).

From the available literature a list of 414 moth species from the Varaždin County was created. Overall, 189 species recorded during this survey represent new county records and when they are included the known number of moths occurring in Varaždin County is actually 603 (Appendix I).

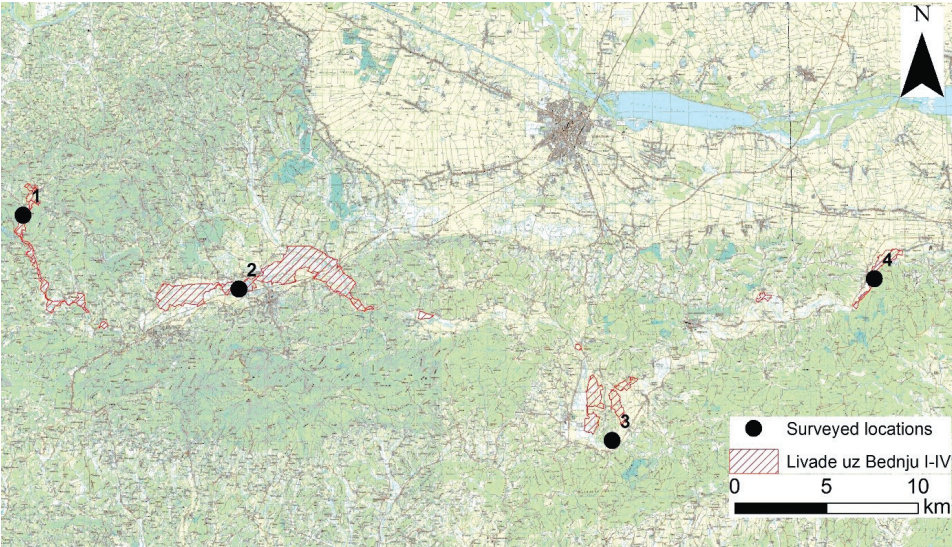


Fig. 1. Surveyed locations in the Natura 2000 areas Livade uz Bednju I-IV. Locality numbers follow Tab. 1.

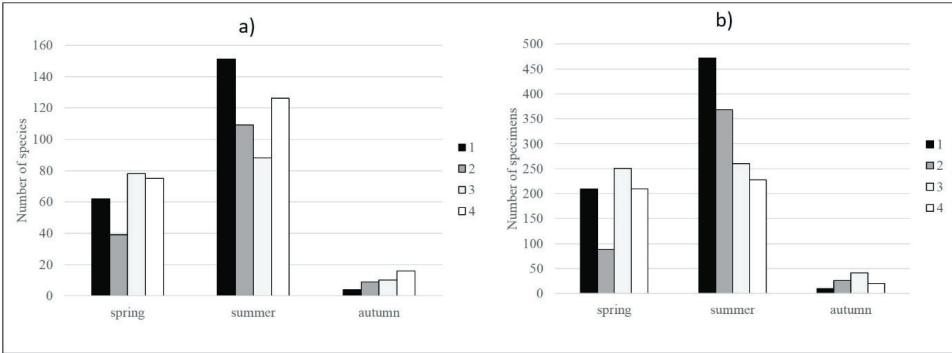


Fig. 2. Number of species (a) and specimens (b) per each locality and season. Locality numbers follow Tab. 1.

Tab. 2. List of recorded moth species during this survey. The locality numbers correspond to the ones given in Tab. 1. Species for which the identification is based on the examination of the genital structures are marked with an * symbol.

Species	Location number				Total No. of individuals
	1	2	3	4	
Chimabachidae					
1. <i>Diurnea fagella</i> ([Denis & Schiffermüller], 1775)		6			6
2. <i>Diurnea lipsiella</i> ([Denis & Schiffermüller], 1775)	1				1
Cossidae					
3. <i>Cossus cossus</i> (Linnaeus, 1758)	1		5		6
4. <i>Zeuzera pyrina</i> (Linnaeus, 1761)		3			3
Crambidae					
5. <i>Agrotora nemoralis</i> (Scopoli, 1763)	3	1		1	5

	Species	Location number				Total No. of individuals
		1	2	3	4	
6.	<i>Anania coronata</i> (Hufnagel, 1767)				3	3
7.	<i>Anania fuscalis</i> ([Denis & Schiffermüller], 1775)			5		5
8.	<i>Anania lancealis</i> ([Denis & Schiffermüller], 1775)				2	2
9.	<i>Anania stachydalis</i> (Germar, 1821)	2	1	1	1	5
10.	<i>Anania verbascalis</i> ([Denis & Schiffermüller], 1775)	5		1	2	8
11.	<i>Calamotropha paludella</i> (Hübner, 1824)*		5			5
12.	<i>Cataclysta lemnata</i> (Linnaeus, 1758)		5	5	1	11
13.	<i>Catoptria osthelderi</i> (Lattin, 1950)*	5				5
14.	<i>Chrysoteuchia culmella</i> (Linnaeus, 1758)	3	1			4
15.	<i>Crambus lathoniellus</i> (Zincken, 1817)			6		6
16.	<i>Cynaeda dentalis</i> ([Denis & Schiffermüller], 1775)		1			1
17.	<i>Diasemia reticularis</i> (Linnaeus, 1761)				1	1
18.	<i>Ecpyrorrhoe rubiginalis</i> (Hübner, 1796)				5	5
19.	<i>Evergestis forficalis</i> (Linnaeus, 1758)	5			1	6
20.	<i>Evergestis pallidata</i> (Hufnagel, 1767)				3	3
21.	<i>Metasia ophialis</i> (Treitschke, 1829)			2		2
22.	<i>Myelos circumvoluta</i> (Fourcroy, 1785)			3		3
23.	<i>Nomophila noctuella</i> ([Denis & Schiffermüller], 1775)			1	1	2
24.	<i>Nymphula nitidulata</i> (Hufnagel, 1767)				1	1
25.	<i>Ostrinia nubilalis</i> (Hübner, 1796)	2	3	5	1	11
26.	<i>Palpita vitrealis</i> (Rossi, 1794)				2	2
27.	<i>Paracorsia repandalis</i> ([Denis & Schiffermüller], 1775)		3			3
28.	<i>Parapoynx stratiotata</i> (Linnaeus, 1758)			3		3
29.	<i>Paratalanta pandalis</i> (Hübner, 1825)	5				5
30.	<i>Pediasia contaminella</i> (Hübner, 1796)			5	1	6
31.	<i>Pleuroptya ruralis</i> (Scopoli, 1763)	5	4	5	2	16
32.	<i>Pyrausta aurata</i> (Scopoli, 1763)	5			1	6
33.	<i>Pyrausta despicata</i> (Scopoli, 1763)			2		2
34.	<i>Pyrausta purpuralis</i> (Linnaeus, 1758)				1	1
35.	<i>Sclerocona acutella</i> (Eversmann, 1842)	1	2			3
36.	<i>Scoparia pyralella</i> ([Denis & Schiffermüller], 1775)			5		5
37.	<i>Sitochroa verticalis</i> (Linnaeus, 1758)	1			1	2
38.	<i>Udea accolalis</i> (Zeller, 1867)	1				1
39.	<i>Udea ferrugalis</i> (Hübner, 1796)	4	3	5	2	14
Drepanidae						
40.	<i>Drepana curvatula</i> (Borkhausen, 1790)	2			2	4
41.	<i>Drepana falcataria</i> (Linnaeus, 1758)	8	1		3	12
42.	<i>Falcaria lacertinaria</i> (Linnaeus, 1758)	3	1		1	5
43.	<i>Habrosyne pyritoides</i> (Hufnagel, 1766)	9		5	2	16
44.	<i>Polyploca ridens</i> (Fabricius, 1787)		1			1
45.	<i>Sabra harpagula</i> (Esper, 1786)	3				3
46.	<i>Tethea or</i> ([Denis & Schiffermüller], 1775)			2	1	3
47.	<i>Thyatira batis</i> (Linnaeus, 1758)	7	5		1	13
48.	<i>Watsonalla binaria</i> (Hufnagel, 1767)			4		4
49.	<i>Watsonalla cultraria</i> (Fabricius, 1775)				1	1
Elachistidae						
50.	<i>Agonopterix ocellana</i> (Fabricius, 1775)		20			20

	Species	Location number				Total No. of individuals
		1	2	3	4	
51.	<i>Agonopterix yeatiana</i> (Fabricius, 1781)	4				4
	Erebidae					
52.	<i>Amata phegea</i> (Linnaeus, 1758)	3				3
53.	<i>Arctia villica</i> (Linnaeus, 1758)			3		3
54.	<i>Arctornis l-nigrum</i> (Muller, 1764)				1	1
55.	<i>Callimorpha dominula</i> (Linnaeus, 1758)	4				4
56.	<i>Calliteara pudibunda</i> (Linnaeus, 1758)			5	5	10
57.	<i>Catocala fraxini</i> (Linnaeus, 1758)	4				4
58.	<i>Colobochyla salicalis</i> ([Denis & Schiffermüller], 1775)			6		6
59.	<i>Dysauxes ancilla</i> (Linnaeus, 1767)	1				1
60.	<i>Eilema caniola</i> (Hübner, 1808)				1	1
61.	<i>Eilema complana</i> (Linnaeus, 1758)		6			6
62.	<i>Eilema depressa</i> (Esper, 1787)	4	6		1	11
63.	<i>Eilema lurideola</i> (Zincken, 1817)	2			1	3
64.	<i>Eilema sororcula</i> (Hufnagel, 1766)	5	12	6	1	24
65.	<i>Euclidia (Euclidia) glyphica</i> (Linnaeus, 1758)	1				1
66.	<i>Euplagia quadripunctaria</i> (Poda, 1761)				1	1
67.	<i>Euproctis (Sphrageidus) similis</i> (Fuessly, 1775)			3	1	4
68.	<i>Herminia grisealis</i> ([Denis & Schiffermüller], 1775)	2	10	4	2	18
69.	<i>Herminia tarsicrinalis</i> (Knoch, 1782)	5		7	3	15
70.	<i>Herminia tenuialis</i> (Rebel, 1899)			1		1
71.	<i>Hypena proboscidalis</i> (Linnaeus, 1758)	2		2	2	6
72.	<i>Hypena rostralis</i> (Linnaeus, 1758)	5			1	6
73.	<i>Laspeyria flexula</i> ([Denis & Schiffermüller], 1775)			4	1	5
74.	<i>Lithosia quadra</i> (Linnaeus, 1758)	4		5	1	10
75.	<i>Lygephila cracca</i> ([Denis & Schiffermüller], 1775)	5				5
76.	<i>Lygephila pastinum</i> (Treitschke, 1826)			1		1
77.	<i>Lymantria dispar</i> (Linnaeus, 1758)	4	3	4		11
78.	<i>Lymantria monacha</i> (Linnaeus, 1758)	1		4		5
79.	<i>Miltochrista miniata</i> (Forster, 1771)	1		1		2
80.	<i>Minucia lunaris</i> ([Denis & Schiffermüller], 1775)				1	1
81.	<i>Orgyia (Orgyia) antiqua</i> (Linnaeus, 1758)	1	1	3		5
82.	<i>Pechipogo strigilata</i> (Linnaeus, 1758)	3		3		6
83.	<i>Pelosia muscerda</i> (Hufnagel, 1766)		3			3
84.	<i>Penthopha morio</i> (Linnaeus, 1767)	5				5
85.	<i>Phragmatobia fuliginosa</i> (Linnaeus, 1758)	2	3	4	1	10
86.	<i>Phytometra viridaria</i> (Clerck, 1759)	4				4
87.	<i>Polyphaenis sericata</i> (Esper, 1787)	2		5		7
88.	<i>Polypogon gryphalis</i> (Herrich-Schäffer, 1851)	2	1	1		4
89.	<i>Polypogon tentacularia</i> (Linnaeus, 1758)			3	5	8
90.	<i>Rivula sericealis</i> (Scopoli, 1763)	2	5	5	5	17
91.	<i>Scoliopteryx libatrix</i> (Linnaeus, 1758)	5				5
92.	<i>Spilosoma lubricipeda</i> (Linnaeus, 1758)	7	1	7	6	21
93.	<i>Spilosoma lutea</i> (Hufnagel, 1766)	4		4	7	15
94.	<i>Thumatha senex</i> (Hübner, 1808)		2			2
95.	<i>Trisateles emortualis</i> ([Denis & Schiffermüller], 1775)				2	2

	Species	Location number				Total No. of individuals
		1	2	3	4	
	Geometridae					
96.	<i>Abraxas (Calospilos) sylvata</i> (Scopoli, 1763)	3				3
97.	<i>Acasis viretata</i> (Hübner, 1799)	2			2	4
98.	<i>Aethalura punctulata</i> ([Denis & Schiffermüller], 1775)	3	21			24
99.	<i>Alcis repandata</i> (Linnaeus, 1758)	5		3		8
100.	<i>Angerona prunaria</i> (Linnaeus, 1758)	4	2		1	7
101.	<i>Ascotis selenaria</i> ([Denis & Schiffermüller], 1775)	1		2	1	4
102.	<i>Asthena albulata</i> (Hufnagel, 1767)	1		9		10
103.	<i>Asthena anseraria</i> (Herrich-Schäffer, 1855)				2	2
104.	<i>Biston betularia</i> (Linnaeus, 1758)	4	1			5
105.	<i>Cabera exanthemata</i> (Scopoli, 1763)	5	2	2	1	10
106.	<i>Cabera pusaria</i> (Linnaeus, 1758)	5	1		2	8
107.	<i>Campaea margaritaria</i> (Linnaeus, 1761)	4		3	2	9
108.	<i>Campptogramma bilineata</i> (Linnaeus, 1758)				1	1
109.	<i>Catarhoe cuculata</i> (Hufnagel, 1767)	1	4	2	1	8
110.	<i>Chiasmia clathrata</i> (Linnaeus, 1758)	3	1	4	3	11
111.	<i>Chlorissa cloraria</i> (Hübner, 1813)		2	4		6
112.	<i>Chloroclysta siterata</i> (Hufnagel, 1767)	1				1
113.	<i>Cleora cinctaria</i> ([Denis & Schiffermüller], 1775)		1			1
114.	<i>Colostygia pectinataria</i> (Knoch, 1781)	5			3	8
115.	<i>Colotois pennaria</i> (Linnaeus, 1761)			4		4
116.	<i>Cosmorhoe ocellata</i> (Linnaeus, 1758)				1	1
117.	<i>Cyclophora (Codonia) linearia</i> (Hübner, 1799)	5	3	1	1	10
118.	<i>Cyclophora (Codonia) porata</i> (Linnaeus, 1767)				1	1
119.	<i>Cyclophora (Codonia) punctaria</i> (Linnaeus, 1758)	3		5	1	9
120.	<i>Cyclophora (Cyclophora) annularia</i> (Fabricius, 1775)	8	2	4	6	20
121.	<i>Cyclophora (Cyclophora) pendularia</i> (Clerck, 1759)		3	2		5
122.	<i>Cyclophora (Cyclophora) ruficiliaria</i> (Herrich-Schäffer, 1855)	2	1		1	4
123.	<i>Ecliptopera capitata</i> (Herrich-Schäffer, 1839)				1	1
124.	<i>Ecliptopera silaceata</i> ([Denis & Schiffermüller], 1775)	5				5
125.	<i>Ectropis crepuscularia</i> ([Denis & Schiffermüller], 1775)	5	1	2	2	10
126.	<i>Ematurga atomaria</i> (Linnaeus, 1758)	4	4	5	1	14
127.	<i>Ennomos fuscantaria</i> (Haworth, 1809)		4	4		8
128.	<i>Ennomos quercinaria</i> (Hufnagel, 1767)	4				4
129.	<i>Epione repandaria</i> (Hufnagel, 1767)			3		3
130.	<i>Epirrhoe alternata</i> (Muller, 1764)	5	6		2	13
131.	<i>Erannis defoliaria</i> (Clerck, 1759)		2			2
132.	<i>Euchoeca nebulata</i> (Scopoli, 1763)	3	4		2	9
133.	<i>Euphyia biangulata</i> (Haworth, 1809)				1	1
134.	<i>Euphyia unangulata</i> (Haworth, 1809)	4				4
135.	<i>Gandaritis pyraliata</i> ([Denis & Schiffermüller], 1775)			2		2
136.	<i>Geometra papilionaria</i> (Linnaeus, 1758)	5				5
137.	<i>Gymnoscelis rufifasciata</i> (Haworth, 1809)		1		1	2
138.	<i>Heliomata glarearia</i> ([Denis & Schiffermüller], 1775)	5				5
139.	<i>Hemistola chrysoprasaria</i> (Esper, 1795)	4				4
140.	<i>Hemithoa aestivaria</i> (Hübner, 1789)	4		4		8
141.	<i>Horisme radicularia</i> (de La Harpe, 1855)	5				5

	Species	Location number				Total No. of individuals
		1	2	3	4	
142.	<i>Horisme tersata</i> ([Denis & Schiffermüller], 1775)*	1			3	4
143.	<i>Horisme vitalbata</i> ([Denis & Schiffermüller], 1775)	2				2
144.	<i>Hydrelia flammeolaria</i> (Hufnagel, 1767)	3	1			4
145.	<i>Hydriomena impluviata</i> ([Denis & Schiffermüller], 1775)				5	5
146.	<i>Hypomecis punctinalis</i> (Scopoli, 1763)	5	1		1	7
147.	<i>Hypomecis roboraria</i> ([Denis & Schiffermüller], 1775)	5	3	7	3	18
148.	<i>Idaea aversata</i> (Linnaeus, 1758)	5	2		1	8
149.	<i>Idaea degeneraria</i> (Hübner, 1799)				4	4
150.	<i>Idaea dimidiata</i> (Hufnagel, 1767)	3			1	4
151.	<i>Idaea humiliata</i> (Hufnagel, 1767)	2				2
152.	<i>Idaea muricata</i> (Hufnagel, 1767)	1			1	2
153.	<i>Idaea ochrata</i> (Scopoli, 1763)		2			2
154.	<i>Jodis lactearia</i> (Linnaeus, 1758)	7		2		9
155.	<i>Lampropteryx suffumata</i> ([Denis & Schiffermüller], 1775)	1				1
156.	<i>Ligdia adustata</i> ([Denis & Schiffermüller], 1775)	5	3	8	2	18
157.	<i>Lomaspilis marginata</i> (Linnaeus, 1758)	6		5	2	13
158.	<i>Lomographa bimaculata</i> (Fabricius, 1775)	2	4	3	1	10
159.	<i>Lomographa temerata</i> ([Denis & Schiffermüller], 1775)	5	2	2		9
160.	<i>Lycia hirtaria</i> (Clerck, 1759)		4			4
161.	<i>Macaria alternata</i> ([Denis & Schiffermüller], 1775)	6	2	8	6	22
162.	<i>Macaria liturata</i> (Clerck, 1759)	5	1	5	3	14
163.	<i>Macaria notata</i> (Linnaeus, 1758)		1	4	1	6
164.	<i>Macaria signaria</i> (Hübner, 1809)	3				3
165.	<i>Melanthia procellata</i> ([Denis & Schiffermüller], 1775)	2	1	5	2	10
166.	<i>Mesoleuca albicillata</i> (Linnaeus, 1758)	10	1		4	15
167.	<i>Odontoptera bidentata</i> (Clerck, 1759)	3				3
168.	<i>Operophtera brumata</i> (Linnaeus, 1758)*		6			6
169.	<i>Ourapteryx sambucaria</i> (Linnaeus, 1758)			3		3
170.	<i>Parectropis similaria</i> (Hufnagel, 1767)	4	1			5
171.	<i>Pareulype berberata</i> ([Denis & Schiffermüller], 1775)	5				5
172.	<i>Peribatodes rhomboidaria</i> ([Denis & Schiffermüller], 1775)			1	3	4
173.	<i>Perizoma alchemillata</i> (Linnaeus, 1758)	5	4		1	10
174.	<i>Perizoma flavofasciata</i> (Thunberg, 1792)	2				2
175.	<i>Perizoma lugdunaria</i> (Herrich-Schäffer, 1855)	4				4
176.	<i>Petrophora chlorosata</i> (Scopoli, 1763)	3				3
177.	<i>Phaiogramma etruscaria</i> (Zeller, 1849)			3		3
178.	<i>Plagodis dolabraria</i> (Linnaeus, 1767)	1	1			2
179.	<i>Plagodis pulveraria</i> (Linnaeus, 1758)	7	1			8
180.	<i>Pungeleria capreolaria</i> ([Denis & Schiffermüller], 1775)	1				1
181.	<i>Scopula (Calothysanis) immutata</i> (Linnaeus, 1758)			5	1	6
182.	<i>Scopula (Calothysanis) incanata</i> (Linnaeus, 1758)				10	10
183.	<i>Scopula (Calothysanis) subpunctaria</i> (Herrich-Schäffer, 1847)			4		4
184.	<i>Scopula (Scopula) immorata</i> (Linnaeus, 1758)		2			2
185.	<i>Scopula (Scopula) nigropunctata</i> (Hufnagel, 1767)			6	1	7
186.	<i>Scopula (Scopula) ornata</i> (Scopoli, 1763)	1				1
187.	<i>Scopula (Scopula) tessellaria</i> (Boisduval, 1840)				2	2
188.	<i>Scotopteryx luridata</i> (Hufnagel, 1767)	4				4

	Species	Location number				Total No. of individuals
		1	2	3	4	
189.	<i>Selenia dentaria</i> (Fabricius, 1775)	1	1	4		6
190.	<i>Selenia lunularia</i> (Hübner, 1788)	2		1	1	4
191.	<i>Selenia tetralunaria</i> (Hufnagel, 1767)		5	3	1	9
192.	<i>Thera variata</i> ([Denis & Schiffermüller], 1775)	4			1	5
193.	<i>Timandra comae</i> Schmidt, 1931	1		4	3	8
194.	<i>Xanthorhoe designata</i> (Hufnagel, 1767)	4				4
195.	<i>Xanthorhoe ferrugata</i> (Clerck, 1759)	6	2		11	19
196.	<i>Xanthorhoe fluctuata</i> (Linnaeus, 1758)	5				5
197.	<i>Xanthorhoe spadicearia</i> ([Denis & Schiffermüller], 1775)			3		3
Gracillariidae						
198.	<i>Parectopa robiniella</i> Clemens, 1863				1	1
Hepialidae						
199.	<i>Triodia sylvina</i> (Linnaeus, 1761)				1	1
Incurvariidae						
200.	<i>Incurvaria oehlmanniella</i> (Hübner, 1796)	6			1	7
Lasiocampidae						
201.	<i>Euthrix potatoria</i> (Linnaeus, 1758)	3				3
202.	<i>Gastropacha</i> (<i>Gastropacha</i>) <i>quercifolia</i> (Linnaeus, 1758)	1	1			2
203.	<i>Lasiocampa</i> (<i>Lasiocampa</i>) <i>quercus</i> (Linnaeus, 1758)	3				3
204.	<i>Macrothylacia rubi</i> (Linnaeus, 1758)	5				5
205.	<i>Malacosoma</i> (<i>Clisiocampa</i>) <i>neustria</i> (Linnaeus, 1758)			1		1
206.	<i>Odonestis pruni</i> (Linnaeus, 1758)	5	1			6
207.	<i>Phyllodesma</i> (<i>Phyllodesma</i>) <i>tremulifolia</i> (Hübner, 1810)	5				5
Limacodidae						
208.	<i>Apoda limacodes</i> (Hufnagel, 1766)	3	1	1		5
209.	<i>Heterogenea asella</i> ([Denis & Schiffermüller], 1775)				1	1
Noctuidae						
210.	<i>Acontia</i> (<i>Emmelia</i>) <i>trabealis</i> (Scopoli, 1763)	2	4			6
211.	<i>Acronicta</i> (<i>Acronicta</i>) <i>aceris</i> (Linnaeus, 1758)		1			1
212.	<i>Acronicta</i> (<i>Acronicta</i>) <i>leporina</i> (Linnaeus, 1758)		1			1
213.	<i>Acronicta</i> (<i>Triaena</i>) <i>cuspis</i> (Hübner, 1813)*				1	1
214.	<i>Acronicta</i> (<i>Triaena</i>) <i>psi</i> (Linnaeus, 1758)				11	11
215.	<i>Acronicta</i> (<i>Viminia</i>) <i>euphorbiae</i> ([Denis & Schiffermüller], 1775)				1	1
216.	<i>Acronicta</i> (<i>Viminia</i>) <i>rumicis</i> (Linnaeus, 1758)		5	1		6
217.	<i>Aedia leucomelas</i> (Linnaeus, 1758)		1		1	2
218.	<i>Agrochola</i> (<i>Leptologia</i>) <i>lota</i> (Clerck, 1759)			2		2
219.	<i>Agrochola</i> (<i>Sumira</i>) <i>circellaris</i> (Hufnagel, 1766)		2	4		6
220.	<i>Agrotis exclamationis</i> (Linnaeus, 1758)				1	1
221.	<i>Agrotis segetum</i> ([Denis & Schiffermüller], 1775)			5		5
222.	<i>Allophytes oxyacanthae</i> (Linnaeus, 1758)			4	1	5
223.	<i>Amphipyra</i> (<i>Amphipyra</i>) <i>pyramidea</i> (Linnaeus, 1758)	3			1	4
224.	<i>Anarta</i> (<i>Caloestra</i>) <i>trifolii</i> (Hufnagel, 1766)				1	1
225.	<i>Anortha munda</i> ([Denis & Schiffermüller], 1775)		2			2
226.	<i>Asteroscopus sphinx</i> (Hufnagel, 1766)		6		1	7
227.	<i>Autographa gamma</i> (Linnaeus, 1758)	4		1	1	6
228.	<i>Axylia putris</i> (Linnaeus, 1761)		4	2	12	18
229.	<i>Callopostria juvenina</i> (Stoll, 1782)	2	2	1		5

	Species	Location number				Total No. of individuals
		1	2	3	4	
230.	<i>Caradrina (Paradrina) clavipalpis</i> Scopoli, 1763				1	1
231.	<i>Cerastis leucographa</i> ([Denis & Schiffermüller], 1775)		1			1
232.	<i>Cerastis rubricosa</i> ([Denis & Schiffermüller], 1775)		3			3
233.	<i>Charanyca (Charanyca) trigammica</i> (Hufnagel, 1766)			2		2
234.	<i>Charanyca (Rusina) ferruginea</i> (Esper, 1785)	2				2
235.	<i>Colocasia coryli</i> (Linnaeus, 1758)	2	4	4	5	15
236.	<i>Conistra (Conistra) ligula</i> (Esper, 1791)		1			1
237.	<i>Conistra (Conistra) vaccinii</i> (Linnaeus, 1761)		1	5		6
238.	<i>Conistra (Dasycampa) erythrocephala</i> ([Denis & Schiffermüller], 1775)		2		1	3
239.	<i>Conistra (Dasycampa) rubiginea</i> ([Denis & Schiffermüller], 1775)		1			1
240.	<i>Cosmia (Nemus) pyralina</i> ([Denis & Schiffermüller], 1775)	2				2
241.	<i>Craniophora ligustri</i> ([Denis & Schiffermüller], 1775)	5	3		1	9
242.	<i>Cryphia (Euthales) algae</i> (Fabricius, 1775)	2	3			5
243.	<i>Deltote (Deltote) bankiana</i> (Fabricius, 1775)	4	1	10	2	17
244.	<i>Deltote (Deltote) uncula</i> (Clerck, 1759)	8				8
245.	<i>Deltote (Protodeltote) pygarga</i> (Hufnagel, 1766)	2	4	2	6	14
246.	<i>Diachrysia chrysis</i> (Linnaeus, 1758)				1	1
247.	<i>Diachrysia stenochrysis</i> (Warren, 1913)				1	1
248.	<i>Diachrysia zosimi</i> (Hübner, 1822)		1	1		2
249.	<i>Diloba caeruleocephala</i> (Linnaeus, 1758)				1	1
250.	<i>Dypterygia scabriuscula</i> (Linnaeus, 1758)				2	2
251.	<i>Elaphria venustula</i> (Hübner, 1790)	5		2	11	18
252.	<i>Eucarta amethystina</i> (Hübner, 1803)	3		3	2	8
253.	<i>Eucarta virgo</i> (Treitschke, 1835)	5	5	4		14
254.	<i>Euplexia lucipara</i> (Linnaeus, 1758)	4			4	8
255.	<i>Eupsilia transversa</i> (Hufnagel, 1766)		2	4	1	7
256.	<i>Hydraecia micacea</i> (Esper, 1789)	2				2
257.	<i>Ipimorpha retusa</i> (Linnaeus, 1761)	1	1			2
258.	<i>Lacanobia (Dianobia) thalassina</i> (Hufnagel, 1766)		1			1
259.	<i>Lacanobia (Diataraxia) oleracea</i> (Linnaeus, 1758)			5		5
260.	<i>Lacanobia (Diataraxia) splendens</i> (Hübner, 1808)		1			1
261.	<i>Lateroligia ophiogramma</i> (Esper, 1794)	4	1	2		7
262.	<i>Macdunnoughia confusa</i> (Stephens, 1850)				1	1
263.	<i>Meganephria bimaculosa</i> (Linnaeus, 1767)				1	1
264.	<i>Melanchnra persicariae</i> (Linnaeus, 1761)	5	1			6
265.	<i>Mesapamea secalis</i> (Linnaeus, 1758)*				1	1
266.	<i>Mesolia furuncula</i> ([Denis & Schiffermüller], 1775)	3				3
267.	<i>Moma alpium</i> (Osbeck, 1778)	1	2			3
268.	<i>Mormo maura</i> (Linnaeus, 1758)				1	1
269.	<i>Mythimna (Hyphilare) albipuncta</i> ([Denis & Schiffermüller], 1775)		1	4		5
270.	<i>Mythimna (Hyphilare) congrua</i> (Hübner, 1817)		1			1
271.	<i>Mythimna (Hyphilare) l-album</i> (Linnaeus, 1767)			3		3
272.	<i>Mythimna (Mythimna) impura</i> (Hübner, 1808)	1	1	1		3
273.	<i>Mythimna (Mythimna) pallens</i> (Linnaeus, 1758)			2	1	3
274.	<i>Mythimna (Mythimna) pudorina</i> ([Denis & Schiffermüller], 1775)			2		2
275.	<i>Mythimna (Mythimna) turca</i> (Linnaeus, 1761)			5	2	7
276.	<i>Noctua comes</i> Hübner, 1813			1		1

	Species	Location number				Total No. of individuals
		1	2	3	4	
277.	<i>Noctua fimbriata</i> (Schreber, 1759)	4			1	5
278.	<i>Noctua interposita</i> (Hübner, 1790)				1	1
279.	<i>Noctua orbona</i> (Hufnagel, 1766)			4		4
280.	<i>Noctua pronuba</i> (Linnaeus, 1758)		3		2	5
281.	<i>Ochropleura plecta</i> (Linnaeus, 1761)	8	4	8	2	22
282.	<i>Oligia latruncula</i> ([Denis & Schiffermüller], 1775)	1				1
283.	<i>Oligia strigilis</i> (Linnaeus, 1758)			5		5
284.	<i>Orthosia (Monima) cerasi</i> (Fabricius, 1775)		5			5
285.	<i>Orthosia (Monima) cruda</i> ([Denis & Schiffermüller], 1775)		2			2
286.	<i>Orthosia (Monima) miniosa</i> ([Denis & Schiffermüller], 1775)		2			2
287.	<i>Orthosia (Orthosia) incerta</i> (Hufnagel, 1766)		1			1
288.	<i>Orthosia (Semiophora) gothica</i> (Linnaeus, 1758)		1			1
289.	<i>Panolis flammea</i> ([Denis & Schiffermüller], 1775)		1			1
290.	<i>Pseudeustrotia candidula</i> ([Denis & Schiffermüller], 1775)	1	4	1	21	27
291.	<i>Senta flammea</i> (Curtis, 1828)		5	2		7
292.	<i>Sideridis (Aneda) rivularis</i> (Fabricius, 1775)				3	3
293.	<i>Simyra albovenosa</i> (Goeze, 1781)		1			1
294.	<i>Spodoptera exigua</i> (Hübner, 1808)		1			1
295.	<i>Tiliacea aurago</i> ([Denis & Schiffermüller], 1775)			5		5
296.	<i>Trachea atriplicis</i> (Linnaeus, 1758)	3	1	1		5
297.	<i>Tyta luctuosa</i> ([Denis & Schiffermüller], 1775)	4	2	2		8
298.	<i>Xanthia (Cirrha) icteritia</i> (Hufnagel, 1766)			4		4
299.	<i>Xanthia (Xanthia) togata</i> (Esper, 1788)		3	4	1	8
300.	<i>Xestia (Megasema) c-nigrum</i> (Linnaeus, 1758)	6		6	1	13
301.	<i>Xestia (Megasema) triangulum</i> (Hufnagel, 1766)		2			2
302.	<i>Xestia (Xestia) castanea</i> (Esper, 1798)				1	1
303.	<i>Xestia (Xestia) stigmatica</i> (Hübner, 1813)		2			2
Nolidae						
304.	<i>Bena bicolorana</i> (Fuessly, 1775)		2			2
305.	<i>Earias clorana</i> (Linnaeus, 1761)	4		8		12
306.	<i>Meganola albula</i> ([Denis & Schiffermüller], 1775)	4		7	1	12
307.	<i>Meganola strigula</i> ([Denis & Schiffermüller], 1775)				1	1
308.	<i>Nola chlamitulalis</i> (Hübner, 1813)	4				4
309.	<i>Nola cristatula</i> (Hübner, 1793)		1			1
310.	<i>Nycteola asiatica</i> (Krukovsky, 1904)				1	1
311.	<i>Nycteola revayana</i> (Scopoli, 1772)				1	1
312.	<i>Pseudoips prasinana</i> (Linnaeus, 1758)	3	2		1	6
Notodontidae						
313.	<i>Clostera anachoreta</i> ([Denis & Schiffermüller], 1775)	5	7			12
314.	<i>Clostera anastomosis</i> (Linnaeus, 1758)				1	1
315.	<i>Clostera curtula</i> (Linnaeus, 1758)	1		5		6
316.	<i>Clostera pigra</i> (Hufnagel, 1766)	3			1	4
317.	<i>Drymonia dodonaea</i> ([Denis & Schiffermüller], 1775)	1				1
318.	<i>Drymonia melagona</i> (Borkhausen, 1790)	1		5		6
319.	<i>Drymonia ruficornis</i> (Hufnagel, 1766)		2			2
320.	<i>Drymonia velitaris</i> (Hufnagel, 1766)	2				2
321.	<i>Furcula bicuspis</i> (Borkhausen, 1790)				1	1

	Species	Location number				Total No. of individuals
		1	2	3	4	
322.	<i>Furcula furcula</i> (Clerck, 1759)		8			8
323.	<i>Gluphisia crenata</i> (Esper, 1785)			3		3
324.	<i>Notodonta dromedarius</i> (Linnaeus, 1767)				1	1
325.	<i>Notodonta tritophus</i> ([Denis & Schiffermüller], 1775)	5				5
326.	<i>Notodonta ziczac</i> (Linnaeus, 1758)	5				5
327.	<i>Pterostoma palpina</i> (Clerck, 1759)	5		4		9
328.	<i>Ptilodon capucina</i> (Linnaeus, 1758)	10			1	11
329.	<i>Ptilodon cucullina</i> ([Denis & Schiffermüller], 1775)		1	1	1	3
330.	<i>Ptilophora plumigera</i> ([Denis & Schiffermüller], 1775)				1	1
331.	<i>Spatalia argentina</i> ([Denis & Schiffermüller], 1775)	4	2		1	7
332.	<i>Stauropus fagi</i> (Linnaeus, 1758)		1	7		8
	Oecophoridae					
333.	<i>Harpella forcicella</i> (Scopoli, 1763)	2				2
	Peleopodidae					
334.	<i>Carcina quercana</i> (Fabricius, 1775)	3		5		8
	Plutellidae					
335.	<i>Plutella (Plutella) xylostella</i> (Linnaeus, 1758)			5	2	7
	Psychidae					
336.	<i>Bijugis bombycella</i> ([Denis & Schiffermüller], 1775)				1	1
	Pterophoridae					
337.	<i>Emmelina monodactyla</i> (Linnaeus, 1758)				1	1
338.	<i>Pterophorus pentadactyla</i> (Linnaeus, 1758)		4	5		9
	Pyralidae					
339.	<i>Aphomia sociella</i> (Linnaeus, 1758)			2		2
340.	<i>Dioryctria abietella</i> ([Denis & Schiffermüller], 1775)		4			4
341.	<i>Ematheudes punctella</i> (Treitschke, 1833)		4			4
342.	<i>Endotricha flammealis</i> ([Denis & Schiffermüller], 1775)	3		3	1	7
343.	<i>Homoeosoma sinuella</i> (Fabricius, 1794)			4		4
344.	<i>Hypsopygia costalis</i> (Fabricius, 1775)	4				4
345.	<i>Nephopterix angustella</i> (Hübner, 1796)		4			4
346.	<i>Nyctegretis lineana</i> (Scopoli, 1786)				1	1
347.	<i>Oncocera semirubella</i> (Scopoli, 1763)	4	2	4	1	11
348.	<i>Phycitodes binaevella</i> (Hübner, 1813)		4		1	5
349.	<i>Pyralis regalis</i> Denis & Schiffermüller, 1775			4		4
350.	<i>Sciota adelphella</i> (Fischer v. Röslerstamm, 1836)	3		4	1	8
	Saturniidae					
351.	<i>Aglia tau</i> (Linnaeus, 1758)		2			2
352.	<i>Antheraea (Antheraea) yamamai</i> (Guérin-Méneville, 1861)				1	1
353.	<i>Saturnia (Eudia) pavoniella</i> (Scopoli, 1763)		1			1
	Sphingidae					
354.	<i>Agrius convolvuli</i> (Linnaeus, 1758)	1				1
355.	<i>Deilephila elpenor</i> (Linnaeus, 1758)	4		5		9
356.	<i>Deilephila porcellus</i> (Linnaeus, 1758)			3		3
357.	<i>Laothoe populi</i> (Linnaeus, 1758)				1	1
358.	<i>Macroglossum stellatarum</i> (Linnaeus, 1758)				1	1
359.	<i>Mimas tiliae</i> (Linnaeus, 1758)	8	1			9
360.	<i>Smerinthus ocellata</i> (Linnaeus, 1758)	7				7

	Species	Location number				Total No. of individuals
		1	2	3	4	
361.	<i>Sphinx ligustri</i> Linnaeus, 1758			5		5
362.	<i>Sphinx pinastri</i> Linnaeus, 1758	5			1	6
	Tineidae					
363.	<i>Euplocamus anthracinalis</i> (Scopoli, 1763)				1	1
	Tortricidae					
364.	<i>Acleris hastiana</i> (Linnaeus, 1758)*		1			1
365.	<i>Agapeta hamana</i> (Linnaeus, 1758)	1	20			21
366.	<i>Ancylis mitterbacheriana</i> ([Denis & Schiffmüller], 1775)	2				2
367.	<i>Ancylis paludana</i> Barrett, 1871*	4				4
368.	<i>Archips oporana</i> (Linnaeus, 1758)	5				5
369.	<i>Archips xylosteana</i> (Linnaeus, 1758)				1	1
370.	<i>Celypha lacunana</i> ([Denis & Schiffmüller], 1775)	3				3
371.	<i>Cnephasia</i> (<i>Cnephasia</i>) <i>communana</i> (Herrich-Schäffer, 1851)	4				4
372.	<i>Epiblema foenella</i> (Linnaeus, 1758)	5	20	2		27
373.	<i>Eulia ministrana</i> (Linnaeus, 1758)	1				1
374.	<i>Hedya salicella</i> (Linnaeus, 1758)		20	4		24
375.	<i>Notocelia cynosbatella</i> (Linnaeus, 1758)			3	1	4
376.	<i>Notocelia uddmanniana</i> (Linnaeus, 1758)			5		5
377.	<i>Tortrix viridana</i> Linnaeus, 1758	2	20	1		23
	Yponomeutidae					
378.	<i>Yponomeuta plumbella</i> ([Denis & Schiffmüller], 1775)				1	1
	Zygaenidae					
379.	<i>Zygaena</i> (<i>Agrumenia</i>) <i>carriolica</i> (Scopoli, 1763)			5		5
380.	<i>Zygaena</i> (<i>Mesembrymus</i>) <i>purpuralis</i> (Brünnich, 1763)*			1		1
381.	<i>Zygaena</i> (<i>Zygaena</i>) <i>filipendulae</i> (Linnaeus, 1758)			4		4
	Number of species per locality:	193	149	151	183	381
	Number of specimens per locality:	693	482	552	353	2079

DISCUSSION

With the 381 moth species recorded during this survey, the area of Bednja River can now be regarded as one of the better surveyed Natura 2000 areas of Croatia in respect to the moth fauna (VIGNJEVIĆ *et al.*, 2011; KOREN & LADAVAC, 2013; KRANJČEV, 1985). Still, the recorded number probably represents about half of the moth fauna present in the area in comparison with the nearby best surveyed region, Podravina (KRANJČEV, 1985).

In respect to the moth fauna of the county, which now counts 603 species, 189 species were recorded for the first time in the area. The increase is partially because even the existing and mentioned data from the Košćec collection are still unpublished. This unpublished part includes all moth families except Geometridae & Noctuidae (and partially Erebididae as these species were previously treated within the Noctuidae family) (KUČINIĆ & BREGOVIĆ, 1996; MIHOČI, 2008). Also within Noctuidae and Geometridae a significant increase in the number of species present in the county was evident with this survey. An additional 40 species of Noctuidae and 19 species of Geometridae were recorded as new county records (KUČINIĆ & BREGOVIĆ, 1996; MIHOČI, 2008). It is worth noting that although it is rather short, this is the first moth checklist of any county in Croatia, although hopefully not the last.

Notes on some interesting species records

Crambidae

Catoptria osthelderi (de Lattin, 1950)

This species is distributed mainly in central and northern Europe, with records from France, northern Italy, Romania, Bulgaria and Yugoslavia (SLAMKA, 2012). The adults fly from June till September depending on the location. The larvae feed on various mosses.

Five specimens were collected during this survey. The correct identification of this species was confirmed by the examination of the genital structures (according to SLAMKA, 2012). The only available record that may be traced back to Croatia originates from maps present in SLAMKA (2012), however, it is not mentioned in the text (except possibly as “Yugoslavia”). No other records from Croatia exist in the literature available to the author (e.g. HABELER, 2008; DE JONG *et al.*, 2014). Due to its presence in the nearby countries of Slovenia and Hungary, additional records are expected in the future across northern Croatia.

Noctuidae

Diachrysia stenochrysis (Warren, 1913)

This species is distributed from Europe, through Asia to Japan. It is generally problematic, being part of a cryptic species complex, and certain specimens are hardly distinguishable from one another. In the area of Croatia, the most similar relative is *Diachrysia chrysitis* (Linnaeus, 1758). The external morphological appearance and the genital structure are very similar in these species. They can be reliably identified only based on the female pheromones (MACEK *et al.*, 2012). One of the better distinguishing features is the shape of the golden area on the fore wing of *D. stenochrysis*, which is usually well connected (rather H-shaped) while it is regularly discontinuous in *D. chrysitis*. However, the connective golden streak can also be thin or interrupted in *D. stenochrysis*. As the collected specimens show the typical features of *D. stenochrysis*, they were included in the analysis. Further studies of the populations from Croatia needs to be carried out in the future to obtain confirmed data about the occurrence and distribution of this species-pair.

Diachrysia zosimi (Hübner, 1822)

This is a Trans-Palaearctic marshland species with the “Sibylla-type” distribution pattern, absent or local in Asia Minor. It is widespread but uncommon in Siberia and the Pacific Region, very sporadic in western Asia but present and locally frequent or even common in certain parts of Central and northern Central Europe. In Central Europe it is bivoltine with two more or less continuous generations from the end of May to the end of September. In most parts of its area, the caterpillars feed on both *Sanguisorba officinalis* and *Parnassia palustris* L. but preferring *Sanguisorba*. This species was recorded for the first time in Croatia in the Podravina (KRANJČEV, 1985) and in Turo-polje regions (KUČINIĆ & PEROVIĆ, 1992/93). The records from the Bednja River contribute to the known distribution of this species in Croatia, and indicate it may be more common than previously thought (MACEK *et al.*, 2008).

Heterogenea asella ([Denis & Schiffermüller], 1775)

This Limacodidae species is usually not very rare, but can be very easily overlooked during surveys, due to its very small size, grey wings and its inconspicuous overall appearance, especially in the cases where only Macroheterocera are studied. This Palearctic species is distributed in most parts of Europe. Only some scattered records of this species exist from Croatia, most of them from the Podravina region (KRANJČEV, 1985).

CONCLUSIONS

While the general trend in moth research includes ecological studies on moths (e.g. HIGHLAND *et al.*, 2013; SUMMERVILLE & CRIST, 2003, 2004), Croatia is still without a baseline knowledge of moth fauna. Faunistic surveys would provide basic data for future ecological studies and, if properly done, a baseline for further trend assessments. Such studies are necessary, especially due to the recent changes in land use.

The changes in the human lifestyle within the Varaždin County, and consequently in the land use, have been extreme. For example, in 1890, 91.36% of the county's inhabitants lived from agriculture (REĐEP & ŽUGAJ, 1991); this percentage was reduced in 1991 to 13.7% only, showing a drastic decline (ANONYMOUS, 2000).

Across the whole Bednja Valley, a clear practice of either complete abandonment or intensification in use of the grasslands is present. Even in the last few years, the changes have been very visible, and the area of wet grasslands is shrinking year by year. With the disappearance of the habitat, plant communities, as well as the connecting fauna (in this case the hygrophilous moths) are also endangered.

The trends in the moth fauna are not known across Europe due to the absence of reference data from previous decades, but for some countries like the Netherlands about one-third of the macromoth species are decreasing (GROENENDIJK & ELLIS, 2011). In order to recognise such trends in Croatia in the future, more baseline surveys are needed.

ACKNOWLEDGMENTS

I am grateful to Ronkay László for useful corrections of and additions to the manuscript. This moth survey was supported by the Public Institution for the Management of Protected areas of Varaždin County, for which I am eternally grateful.

Received September 22, 2017

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SAŽETAK

Raznolikost noćnih leptira (Lepidoptera: Heterocera) u okolici rijeke Bednje, Varaždinska županija, sjeverna Hrvatska

T. Koren

Tijekom 2016. godine provedeno je prvo istraživanje noćnih leptira na Natura 2000 lokacijama Livade uz Bednju I – IV i u bližoj okolici. Odabrane su ukupno četiri lokacije, od kojih je svaka bila posjećena po tri puta, u proljeće, ljeto i jesen. Ukupno je zabilježeno 381 vrsta noćnih leptira, a najbrojnije porodice bile su Geometridae (120 vrsta), Noctuidae (94 vrste), Erebidae (44 vrste) te Crambidae (35 vrsta). Broj zabilježenih vrsta i jedinki bio je približno isti na svim lokacijama. Kako bismo stavili rezultate u perspektivu, izrađen je prvi preliminarni popis noćnih leptira Varaždinske županije temeljen na dostupnoj literaturi i rezultatima ovog istraživanja koji broji 603 vrste; 189 vrsta po prvi puta je zabilježeno na području županije. Razlog tome je neistraženost te nedostatak objavljenih podataka iz privatnih i muzejskih zbirki. No čak i za porodice koje su istraživane u prošlosti poput sovica i grbica, zabilježeno je povećanje od 40 vrsta (sovica – Noctuidae) te 19 vrsta (Geometridae - grbice) što ukazuje na nedovoljnu istraženost Županije. Daljnjim će se istraživanjima zasigurno udvostručiti broj vrsta poznatih za područje Županije. Neke vrste poput *Diachrysia zosimi* tek su relativno nedavno zabilježene za faunu Hrvatske i nije poznata njihova točna rasprostranjenost na području Hrvatske. Nakon ovog istraživanja, Natura 2000 područja Livade uz Bednju I - IV mogu se svrstati u najbolje istražene lokacije na području Hrvatske s obzirom na faunu noćnih leptira.

Appendix I. List of the moths so far recorded in the Varaždin County.

List of species	Literature data	This survey
Alucitidae		
<i>Alucita grammodactyla</i> Zeller, 1841	•	
Bombycidae		
<i>Bombyx mori</i> (Linnaeus, 1758)	•	
Chimabachidae		
<i>Diurnea fagella</i> ([Denis & Schiffermüller], 1775)		•
<i>Diurnea lipsiella</i> ([Denis & Schiffermüller], 1775)		•
Cossidae		
<i>Cossus cossus</i> (Linnaeus, 1758)	•	•
<i>Zeuzera pyrina</i> (Linnaeus, 1761)	•	•
Crambidae		
<i>Agriphila geniculea</i> (Haworth, 1811)	•	
<i>Agriphila tristella</i> ([Denis & Schiffermüller], 1775)	•	
<i>Agrotera nemoralis</i> (Scopoli, 1763)		•
<i>Anania coronata</i> (Hufnagel, 1767)		•
<i>Anania fuscalis</i> ([Denis & Schiffermüller], 1775)		•
<i>Anania lancealis</i> ([Denis & Schiffermüller], 1775)		•
<i>Anania stachydalis</i> (Germar, 1821)		•
<i>Anania verbascalis</i> ([Denis & Schiffermüller], 1775)		•
<i>Calamotropha paludella</i> (Hübner, 1824)		•
<i>Cataclysta lemnata</i> (Linnaeus, 1758)		•
<i>Catoptria osthelderi</i> (Lattin, 1950)		•
<i>Chrysoteuchia culmella</i> (Linnaeus, 1758)	•	•
<i>Crambus lathoniellus</i> (Zincken, 1817)		•
<i>Crambus perlella</i> (Scopoli, 1763)	•	
<i>Cydalima perspectalis</i> (Walker, 1859)	•	
<i>Cynaeda dentalis</i> ([Denis & Schiffermüller], 1775)		•
<i>Diasemia reticularis</i> (Linnaeus, 1761)	•	•
<i>Ecpyrorrhoe rubiginalis</i> (Hübner, 1796)		•
<i>Evergestis forficalis</i> (Linnaeus, 1758)		•
<i>Evergestis pallidata</i> (Hufnagel, 1767)		•
<i>Metasia ophialis</i> (Treitschke, 1829)		•
<i>Myelois circumvoluta</i> (Fourcroy, 1785)		•
<i>Nomophila noctuella</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Nymphula nitidulata</i> (Hufnagel, 1767)		•
<i>Ostrinia nubilalis</i> (Hübner, 1796)		•
<i>Palpita vitrealis</i> (Rossi, 1794)		•
<i>Paracorsia repandalis</i> ([Denis & Schiffermüller], 1775)		•
<i>Parapoynx stratiotata</i> (Linnaeus, 1758)		•
<i>Paratalanta pandalis</i> (Hübner, 1825)		•
<i>Pediasia contaminella</i> (Hübner, 1796)		•
<i>Pleuroptya ruralis</i> (Scopoli, 1763)		•
<i>Pyrausta aurata</i> (Scopoli, 1763)		•
<i>Pyrausta despicata</i> (Scopoli, 1763)	•	•
<i>Pyrausta purpuralis</i> (Linnaeus, 1758)	•	•
<i>Sclerocona acutella</i> (Eversmann, 1842)		•
<i>Scoparia pyralella</i> ([Denis & Schiffermüller], 1775)		•

List of species	Literature data	This survey
<i>Sitochroa verticalis</i> (Linnaeus, 1758)		•
<i>Udea accolalis</i> (Zeller, 1867)		•
<i>Udea ferrugalis</i> (Hübner, 1796)		•
Drepanidae		
<i>Drepana curvatula</i> (Borkhausen, 1790)		•
<i>Drepana falcataria</i> (Linnaeus, 1758)		•
<i>Falcaria lacertinaria</i> (Linnaeus, 1758)		•
<i>Habrosyne pyritoides</i> (Hufnagel, 1766)		•
<i>Polyploca ridens</i> (Fabricius, 1787)		•
<i>Sabra harpagula</i> (Esper, 1786)		•
<i>Tethea</i> or ([Denis & Schiffermüller], 1775)		•
<i>Thyatira batis</i> (Linnaeus, 1758)		•
<i>Watsonalla binaria</i> (Hufnagel, 1767)		•
<i>Watsonalla cultraria</i> (Fabricius, 1775)		•
Elachistidae		
<i>Agonopterix ocellana</i> (Fabricius, 1775)		•
<i>Agonopterix yeatiana</i> (Fabricius, 1781)		•
Endromiidae		
<i>Endromis versicolora</i> (Linnaeus, 1758)	•	
Erebidae		
<i>Amata phegea</i> (Linnaeus, 1758)	•	•
<i>Apopestes spectrum</i> (Esper, 1787)	•	
<i>Arctia villica</i> (Linnaeus, 1758)	•	•
<i>Arctornis l-nigrum</i> (Muller, 1764)		•
<i>Callimorpha dominula</i> (Linnaeus, 1758)		•
<i>Calliteara pudibunda</i> (Linnaeus, 1758)	•	•
<i>Catephia alchymista</i> ([Denis & Schiffermüller], 1775)	•	
<i>Catocala electa</i> (Vieweg, 1790)	•	
<i>Catocala elocata</i> (Esper, 1787)	•	
<i>Catocala fraxini</i> (Linnaeus, 1758)	•	•
<i>Catocala fulminea</i> (Scopoli, 1763)	•	
<i>Catocala nupta</i> (Linnaeus, 1767)	•	
<i>Catocala promissa</i> ([Denis & Schiffermüller], 1775)	•	
<i>Catocala sponsa</i> (Linnaeus, 1767)	•	
<i>Colobochyla salicalis</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Cybosia mesomella</i> (Linnaeus, 1758)	•	
<i>Diacrisia sannio</i> (Linnaeus, 1758)	•	
<i>Dicallomera fascelina</i> (Linnaeus, 1758)	•	
<i>Dysauxes ancilla</i> (Linnaeus, 1767)		•
<i>Eilema caniola</i> (Hübner, 1808)		•
<i>Eilema complana</i> (Linnaeus, 1758)		•
<i>Eilema depressa</i> (Esper, 1787)		•
<i>Eilema lurideola</i> (Zincken, 1817)		•
<i>Eilema sororcula</i> (Hufnagel, 1766)		•
<i>Euclidia (Euclidia) glyphica</i> (Linnaeus, 1758)	•	•
<i>Euplagia quadripunctaria</i> (Poda, 1761)		•
<i>Euproctis (Euproctis) chrysorrhoea</i> (Linnaeus, 1758)	•	
<i>Euproctis (Sphrageidus) similis</i> (Fuessly, 1775)	•	•

List of species	Literature data	This survey
<i>Herminia grisealis</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Herminia tarsicrinalis</i> (Knoch, 1782)	•	•
<i>Herminia tarsipennalis</i> (Treitschke, 1835)	•	
<i>Herminia tenuialis</i> (Rebel, 1899)		•
<i>Hypena proboscidalis</i> (Linnaeus, 1758)	•	•
<i>Hypena rostralis</i> (Linnaeus, 1758)	•	•
<i>Hyphoraia aulica</i> (Linnaeus, 1758)	•	
<i>Idia calvaria</i> ([Denis & Schiffermüller], 1775)	•	
<i>Laspeyria flexula</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Leucoma salicis</i> (Linnaeus, 1758)	•	
<i>Lithosia quadra</i> (Linnaeus, 1758)	•	•
<i>Lygephila cracca</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Lygephila pastinum</i> (Treitschke, 1826)	•	•
<i>Lymantria dispar</i> (Linnaeus, 1758)	•	•
<i>Lymantria monacha</i> (Linnaeus, 1758)	•	•
<i>Miltochrista miniata</i> (Forster, 1771)		•
<i>Minucia lunaris</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Orgyia (Orgyia) antiqua</i> (Linnaeus, 1758)		•
<i>Paracolax tristalis</i> (Fabricius, 1794)	•	
<i>Parascotia fuliginaria</i> (Linnaeus, 1761)	•	
<i>Pechipogo strigilata</i> (Linnaeus, 1758)	•	•
<i>Pelosia muscerda</i> (Hufnagel, 1766)		•
<i>Penthophaera morio</i> (Linnaeus, 1767)		•
<i>Phragmatobia fuliginosa</i> (Linnaeus, 1758)	•	•
<i>Phytometra viridaria</i> (Clerck, 1759)	•	•
<i>Polyphaenis sericata</i> (Esper, 1787)		•
<i>Polypogon gryphalis</i> (Herrich-Schäffer, 1851)		•
<i>Polypogon tentacularia</i> (Linnaeus, 1758)	•	•
<i>Rivula sericealis</i> (Scopoli, 1763)	•	•
<i>Scoliopteryx libatrix</i> (Linnaeus, 1758)	•	•
<i>Spilosoma lubricipeda</i> (Linnaeus, 1758)	•	•
<i>Spilosoma lutea</i> (Hufnagel, 1766)		•
<i>Spilosoma urticae</i> (Esper, 1789)	•	
<i>Thumatha senex</i> (Hübner, 1808)		•
<i>Trisateles emortualis</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Tyria jacobaeae</i> (Linnaeus, 1758)	•	
<i>Zanclognatha lunalis</i> (Scopoli, 1763)	•	
Geometridae		
<i>Abraxas (Abraxas) grossulariata</i> (Linnaeus, 1758)	•	
<i>Abraxas (Calospilos) sylvata</i> (Scopoli, 1763)	•	•
<i>Acasis viretata</i> (Hübner, 1799)		•
<i>Aethalura punctulata</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Agriopsis aurantiaria</i> (Hübner, 1799)	•	
<i>Agriopsis bajaria</i> ([Denis & Schiffermüller], 1775)	•	
<i>Agriopsis leucophaearia</i> ([Denis & Schiffermüller], 1775)	•	
<i>Agriopsis marginaria</i> (Fabricius, 1776)	•	
<i>Alcis repandata</i> (Linnaeus, 1758)	•	•
<i>Angerona prunaria</i> (Linnaeus, 1758)	•	•

List of species	Literature data	This survey
<i>Anticollix sparsata</i> (Treitschke, 1828)	•	
<i>Apeira syringaria</i> (Linnaeus, 1758)	•	
<i>Aplocera plagata</i> (Linnaeus, 1758)	•	
<i>Aplocera praeformata</i> (Hübner, 1826)	•	
<i>Artiora evonymaria</i> ([Denis & Schiffermüller], 1775)	•	
<i>Ascotis selenaria</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Asthena albulata</i> (Hufnagel, 1767)	•	•
<i>Asthena anseraria</i> (Herrich-Schäffer, 1855)		•
<i>Biston betularia</i> (Linnaeus, 1758)	•	•
<i>Cabera exanthemata</i> (Scopoli, 1763)	•	•
<i>Cabera pusaria</i> (Linnaeus, 1758)	•	•
<i>Campaea margaritaria</i> (Linnaeus, 1761)	•	•
<i>Campptogramma bilineata</i> (Linnaeus, 1758)	•	•
<i>Catarhoe cuculata</i> (Hufnagel, 1767)	•	•
<i>Catarhoe rubidata</i> ([Denis & Schiffermüller], 1775)	•	
<i>Cepphis advenaria</i> (Hübner, 1790)	•	
<i>Chiasmia clathrata</i> (Linnaeus, 1758)	•	•
<i>Chlorissa cloraria</i> (Hübner, 1813)	•	•
<i>Chlorissa viridata</i> (Linnaeus, 1758)	•	
<i>Chloroclysta siterata</i> (Hufnagel, 1767)		•
<i>Chloroclystis v-ata</i> (Haworth, 1809)	•	
<i>Cleora cinctaria</i> ([Denis & Schiffermüller], 1775)		•
<i>Colostygia olivata</i> ([Denis & Schiffermüller], 1775)	•	
<i>Colostygia pectinataria</i> (Knoch, 1781)	•	•
<i>Colotois pennaria</i> (Linnaeus, 1761)		•
<i>Cosmorhoe ocellata</i> (Linnaeus, 1758)	•	•
<i>Crocallis elinguarina</i> (Linnaeus, 1758)	•	
<i>Crocallis tusciaria</i> (Borkhausen, 1793)	•	
<i>Cyclophora (Codonia) linearia</i> (Hübner, 1799)	•	•
<i>Cyclophora (Codonia) porata</i> (Linnaeus, 1767)	•	•
<i>Cyclophora (Codonia) punctaria</i> (Linnaeus, 1758)	•	•
<i>Cyclophora (Cyclophora) albipunctata</i> (Hufnagel, 1767)	•	
<i>Cyclophora (Cyclophora) annularia</i> (Fabricius, 1775)	•	•
<i>Cyclophora (Cyclophora) pendularia</i> (Clerck, 1759)		•
<i>Cyclophora (Cyclophora) ruficiliaria</i> (Herrich-Schäffer, 1855)		•
<i>Ecliptopera capitata</i> (Herrich-Schäffer, 1839)		•
<i>Ecliptopera silaceata</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Ectropis crepuscularia</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Electrophaes corylata</i> (Thunberg, 1792)	•	
<i>Ematurga atomaria</i> (Linnaeus, 1758)	•	•
<i>Ennomos autumnaria</i> (Werneburg, 1859)	•	
<i>Ennomos erosaria</i> ([Denis & Schiffermüller], 1775)	•	
<i>Ennomos fuscantaria</i> (Haworth, 1809)	•	•
<i>Ennomos quercinaria</i> (Hufnagel, 1767)	•	•
<i>Epione repandaria</i> (Hufnagel, 1767)	•	•
<i>Epirrhoe alternata</i> (Muller, 1764)	•	•
<i>Epirrhoe galiata</i> ([Denis & Schiffermüller], 1775)	•	
<i>Epirrhoe hastulata</i> (Hübner, 1790)	•	

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<i>Epirrhoe rivata</i> (Hübner, 1813)	•	
<i>Epirrhoe tristata</i> (Linnaeus, 1758)	•	
<i>Epirrita dilutata</i> ([Denis & Schiffermüller], 1775)	•	
<i>Erannis defoliaria</i> (Clerck, 1759)	•	•
<i>Euchoeca nebulata</i> (Scopoli, 1763)		•
<i>Euphyia biangulata</i> (Haworth, 1809)	•	•
<i>Euphyia unangulata</i> (Haworth, 1809)	•	•
<i>Eupithecia absinthiata</i> (Clerck, 1759)	•	
<i>Eupithecia centaureata</i> ([Denis & Schiffermüller], 1775)	•	
<i>Eupithecia denotata</i> (Hübner, 1813)	•	
<i>Eupithecia distinctaria</i> Herrich-Schäffer, 1848	•	
<i>Eupithecia inturbata</i> (Hübner, 1817)	•	
<i>Eupithecia linariata</i> ([Denis & Schiffermüller], 1775)	•	
<i>Eupithecia plumbeolata</i> (Haworth, 1809)	•	
<i>Eupithecia pygmaeata</i> (Hübner, 1799)	•	
<i>Eupithecia subfuscata</i> (Haworth, 1809)	•	
<i>Eupithecia succenturiata</i> (Linnaeus, 1758)	•	
<i>Eupithecia vulgata</i> (Haworth, 1809)	•	
<i>Gandaritis pyraliata</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Geometra papilionaria</i> (Linnaeus, 1758)		•
<i>Gnophos</i> (<i>Gnophos</i>) <i>furcata</i> ([Denis & Schiffermüller], 1775)	•	
<i>Gymnoscelis ruffasciata</i> (Haworth, 1809)	•	•
<i>Heliomata glarearia</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Hemistola chrysoprasaria</i> (Esper, 1795)	•	•
<i>Hemithea aestivaria</i> (Hübner, 1789)	•	•
<i>Horisme corticata</i> (Treitschke, 1835)	•	
<i>Horisme radicularia</i> (de La Harpe, 1855)		•
<i>Horisme tersata</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Horisme vitalbata</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Hydrelia flammeolaria</i> (Hufnagel, 1767)	•	•
<i>Hydrelia sylvata</i> ([Denis & Schiffermüller], 1775)	•	
<i>Hydria cervinalis</i> (Scopoli, 1763)	•	
<i>Hydria undulata</i> (Linnaeus, 1758)	•	
<i>Hydriomena impluviata</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Hypomecis punctinalis</i> (Scopoli, 1763)	•	•
<i>Hypomecis roboraria</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Idaea aureolaria</i> ([Denis & Schiffermüller], 1775)	•	
<i>Idaea aversata</i> (Linnaeus, 1758)	•	•
<i>Idaea biselata</i> (Hufnagel, 1767)	•	
<i>Idaea camparia</i> (Herrich-Schäffer, 1852)	•	
<i>Idaea degeneraria</i> (Hübner, 1799)	•	•
<i>Idaea dilutaria</i> (Hübner, 1799)	•	
<i>Idaea dimidiata</i> (Hufnagel, 1767)	•	•
<i>Idaea emarginata</i> (Linnaeus, 1758)	•	
<i>Idaea humiliata</i> (Hufnagel, 1767)	•	•
<i>Idaea inquinata</i> (Scopoli, 1763)	•	
<i>Idaea laevigata</i> (Scopoli, 1763)	•	
<i>Idaea moniliata</i> ([Denis & Schiffermüller], 1775)	•	

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<i>Idaea muricata</i> (Hufnagel, 1767)	•	•
<i>Idaea ochrata</i> (Scopoli, 1763)	•	•
<i>Idaea rufaria</i> (Hübner, 1799)	•	
<i>Idaea serpentata</i> (Hufnagel, 1767)	•	
<i>Idaea straminata</i> (Borkhausen, 1794)	•	
<i>Isturgia arenacearia</i> ([Denis & Schiffermüller], 1775)	•	
<i>Isturgia murinaria</i> ([Denis & Schiffermüller], 1775)	•	
<i>Jodis lactearia</i> (Linnaeus, 1758)	•	•
<i>Lampropteryx suffumata</i> ([Denis & Schiffermüller], 1775)		•
<i>Ligdia adustata</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Lithostege griseata</i> ([Denis & Schiffermüller], 1775)	•	
<i>Lomaspolis marginata</i> (Linnaeus, 1758)	•	•
<i>Lomographa bimaculata</i> (Fabricius, 1775)	•	•
<i>Lomographa temerata</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Lycia hirtaria</i> (Clerck, 1759)	•	•
<i>Lycia zonaria</i> ([Denis & Schiffermüller], 1775)	•	
<i>Lythria cruentaria</i> (Hufnagel, 1767)	•	
<i>Lythria purpuraria</i> (Linnaeus, 1758)	•	
<i>Macaria alternata</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Macaria liturata</i> (Clerck, 1759)	•	•
<i>Macaria notata</i> (Linnaeus, 1758)	•	•
<i>Macaria signaria</i> (Hübner, 1809)		•
<i>Macaria wauaria</i> (Linnaeus, 1758)	•	
<i>Melanthia procellata</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Mesoleuca albicillata</i> (Linnaeus, 1758)	•	•
<i>Minoa murinata</i> (Scopoli, 1763)	•	
<i>Nebula nebulata</i> (Treitschke, 1828)	•	
<i>Nycterosea obstipata</i> (Fabricius, 1794)	•	
<i>Odontoptera bidentata</i> (Clerck, 1759)		•
<i>Operophtera brumata</i> (Linnaeus, 1758)	•	•
<i>Operophtera fagata</i> (Scharfenberg, 1805)	•	
<i>Opisthograptis luteolata</i> (Linnaeus, 1758)	•	
<i>Ourapteryx sambucaria</i> (Linnaeus, 1758)		•
<i>Pachycnemia hippocastanaria</i> (Hübner, 1799)	•	
<i>Parectropis similaria</i> (Hufnagel, 1767)	•	•
<i>Pareulype berberata</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Pasiphila debiliata</i> (Hübner, 1817)	•	
<i>Pasiphila rectangularata</i> (Linnaeus, 1758)	•	
<i>Pelurga comitata</i> (Linnaeus, 1758)	•	
<i>Peribatodes rhomboidaria</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Peribatodes secundaria</i> ([Denis & Schiffermüller], 1775)	•	
<i>Perizoma alchemillata</i> (Linnaeus, 1758)	•	•
<i>Perizoma flavofasciata</i> (Thunberg, 1792)	•	•
<i>Perizoma lugdunaria</i> (Herrich-Schäffer, 1855)		•
<i>Perizoma minorata</i> (Treitschke, 1828)	•	
<i>Petrophora chlorosata</i> (Scopoli, 1763)	•	•
<i>Phaioграмма etruscaria</i> (Zeller, 1849)		•
<i>Philereme transversata</i> (Hufnagel, 1767)	•	

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<i>Philereme vetulata</i> ([Denis & Schiffermüller], 1775)	•	
<i>Plagodis dolabraria</i> (Linnaeus, 1767)	•	•
<i>Plagodis pulveraria</i> (Linnaeus, 1758)	•	•
<i>Plemyria rubiginata</i> ([Denis & Schiffermüller], 1775)	•	
<i>Pseudopanthera macularia</i> (Linnaeus, 1758)	•	
<i>Pseudoterpna pruinata</i> (Hufnagel, 1767)	•	
<i>Pungeleria capreolaria</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Rheumaptera subhastata</i> (Nolcken, 1870)	•	
<i>Rhodometra sacraria</i> (Linnaeus, 1767)	•	
<i>Rhodostrophia vibicaria</i> (Clerck, 1759)	•	
<i>Scopula (Calothysanis) emutaria</i> (Hübner, 1809)	•	
<i>Scopula (Calothysanis) immutata</i> (Linnaeus, 1758)	•	•
<i>Scopula (Calothysanis) incanata</i> (Linnaeus, 1758)		•
<i>Scopula (Calothysanis) marginepunctata</i> (Goeze, 1781)	•	
<i>Scopula (Calothysanis) subpunctaria</i> (Herrich-Schäffer, 1847)		•
<i>Scopula (Scopula) caricaria</i> (Reutti, 1853)	•	
<i>Scopula (Scopula) immorata</i> (Linnaeus, 1758)	•	•
<i>Scopula (Scopula) nigropunctata</i> (Hufnagel, 1767)	•	•
<i>Scopula (Scopula) ornata</i> (Scopoli, 1763)	•	•
<i>Scopula (Scopula) rubiginata</i> (Hufnagel, 1767)	•	
<i>Scopula (Scopula) tessellaria</i> (Boisduval, 1840)		•
<i>Scopula (Scopula) virgulata</i> ([Denis & Schiffermüller], 1775)	•	
<i>Scotopteryx bipunctaria</i> ([Denis & Schiffermüller], 1775)	•	
<i>Scotopteryx chenopodiata</i> (Linnaeus, 1758)	•	
<i>Scotopteryx luridata</i> (Hufnagel, 1767)	•	•
<i>Scotopteryx moeniata</i> (Scopoli, 1763)	•	
<i>Selenia dentaria</i> (Fabricius, 1775)	•	•
<i>Selenia lunularia</i> (Hübner, 1788)	•	•
<i>Selenia tetralunaria</i> (Hufnagel, 1767)	•	•
<i>Siona lineata</i> (Scopoli, 1763)	•	
<i>Stegania cararia</i> (Hübner, 1790)		
<i>Stegania dilectaria</i> (Hübner, 1790)	•	
<i>Thalera fimbrialis</i> (Scopoli, 1763)	•	
<i>Thera variata</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Thetidia (Antonechloris) smaragdaria</i> (Fabricius, 1787)	•	
<i>Timandra comae</i> Schmidt, 1931	•	•
<i>Trichopteryx polyommata</i> ([Denis & Schiffermüller], 1775)	•	
<i>Triphosa dubitata</i> (Linnaeus, 1758)	•	
<i>Xanthorhoe designata</i> (Hufnagel, 1767)	•	•
<i>Xanthorhoe ferrugata</i> (Clerck, 1759)	•	•
<i>Xanthorhoe fluctuata</i> (Linnaeus, 1758)	•	•
<i>Xanthorhoe montanata</i> ([Denis & Schiffermüller], 1775)	•	
<i>Xanthorhoe quadrifasiata</i> (Clerck, 1759)	•	
<i>Xanthorhoe spadicearia</i> ([Denis & Schiffermüller], 1775)	•	•
Gracillariidae		
<i>Parectopa robiniella</i> Clemens, 1863		•
Hepialidae		
<i>Triodia sylvina</i> (Linnaeus, 1761)		•

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Incurvariidae		
<i>Incurvaria oehlmanniella</i> (Hübner, 1796)		•
Lasiocampidae		
<i>Eriogaster (Eriogaster) lanestris</i> (Linnaeus, 1758)	•	
<i>Euthrix potatoria</i> (Linnaeus, 1758)		•
<i>Gastropacha (Gastropacha) quercifolia</i> (Linnaeus, 1758)	•	•
<i>Lasiocampa (Lasiocampa) quercus</i> (Linnaeus, 1758)	•	•
<i>Macrothylacia rubi</i> (Linnaeus, 1758)	•	•
<i>Malacosoma (Clisiocampa) neustria</i> (Linnaeus, 1758)	•	•
<i>Odonestis pruni</i> (Linnaeus, 1758)	•	•
<i>Phylloidesma (Phylloidesma) tremulifolia</i> (Hübner, 1810)		•
Limacodidae		
<i>Apoda limacodes</i> (Hufnagel, 1766)		•
<i>Heterogenea asella</i> ([Denis & Schiffermüller], 1775)		•
Noctuidae		
<i>Abrostola triplasia</i> (Linnaeus, 1758)	•	
<i>Acontia (Acontia) lucida</i> (Hufnagel, 1766)	•	
<i>Acontia (Emmelia) trabealis</i> (Scopoli, 1763)	•	•
<i>Acronicta (Acronicta) aceris</i> (Linnaeus, 1758)	•	•
<i>Acronicta (Acronicta) leporina</i> (Linnaeus, 1758)	•	•
<i>Acronicta (Hyboma) strigosa</i> ([Denis & Schiffermüller], 1775)	•	
<i>Acronicta (Jocheaera) alni</i> (Linnaeus, 1767)	•	
<i>Acronicta (Triaena) cuspis</i> (Hübner, 1813)		•
<i>Acronicta (Triaena) psi</i> (Linnaeus, 1758)		•
<i>Acronicta (Viminia) euphorbiae</i> ([Denis & Schiffermüller], 1775)		•
<i>Acronicta (Viminia) rumicis</i> (Linnaeus, 1758)	•	•
<i>Aedia leucomelas</i> (Linnaeus, 1758)		•
<i>Agrochola (Anchoscelis) litura</i> (Linnaeus, 1758)	•	
<i>Agrochola (Leptologia) lota</i> (Clerck, 1759)		•
<i>Agrochola (Leptologia) macilentata</i> (Hübner, 1809)	•	
<i>Agrochola (Sunira) circellaris</i> (Hufnagel, 1766)	•	•
<i>Agrotis bigramma</i> (Esper, 1790)	•	
<i>Agrotis exclamationis</i> (Linnaeus, 1758)	•	•
<i>Agrotis ipsilon</i> (Hufnagel, 1766)	•	
<i>Agrotis segetum</i> ([Denis & Schiffermüller], 1775)		•
<i>Allophyes oxyacanthae</i> (Linnaeus, 1758)		•
<i>Amphipyra (Amphipyra) livida</i> ([Denis & Schiffermüller], 1775)	•	
<i>Amphipyra (Amphipyra) pyramidea</i> (Linnaeus, 1758)	•	•
<i>Amphipyra (Amphipyra) tragopoginis</i> (Clerck, 1759)	•	
<i>Anarta (Anarta) myrtilli</i> (Linnaeus, 1761)	•	
<i>Anarta (Caloestra) trifoli</i> (Hufnagel, 1766)	•	•
<i>Anorthoa munda</i> ([Denis & Schiffermüller], 1775)		•
<i>Apamea lithoxylaea</i> ([Denis & Schiffermüller], 1775)	•	
<i>Apamea monoglypha</i> (Hufnagel, 1766)	•	
<i>Apamea sordens</i> (Hufnagel, 1766)	•	
<i>Asteroscopus sphinx</i> (Hufnagel, 1766)		•
<i>Autographa gamma</i> (Linnaeus, 1758)	•	•
<i>Axylia putris</i> (Linnaeus, 1761)	•	•

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<i>Bryophila (Bryoleuca) raptricula</i> ([Denis & Schiffermüller], 1775)	•	
<i>Bryophila (Bryophila) domestica</i> (Hufnagel, 1766)	•	
<i>Callopietria juvenina</i> (Stoll, 1782)	•	•
<i>Calophasia lunula</i> (Hufnagel, 1766)	•	
<i>Calophasia platyptera</i> (Esper, 1788)	•	
<i>Caradrina (Paradrina) clavipalpis</i> Scopoli, 1763		•
<i>Caradrina (Platyperigea) kadenii</i> Freyer, 1836	•	
<i>Cerastis leucographa</i> ([Denis & Schiffermüller], 1775)		•
<i>Cerastis rubricosa</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Charanyca (Charanyca) trigrammica</i> (Hufnagel, 1766)	•	•
<i>Charanyca (Rusina) ferruginea</i> (Esper, 1785)	•	•
<i>Colocasia coryli</i> (Linnaeus, 1758)	•	•
<i>Conistra (Conistra) ligula</i> (Esper, 1791)		•
<i>Conistra (Conistra) vaccinii</i> (Linnaeus, 1761)	•	•
<i>Conistra (Dasycampa) erythrocephala</i> ([Denis & Schiffermüller], 1775)		•
<i>Conistra (Dasycampa) rubiginea</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Cosmia (Calymnia) trapezina</i> (Linnaeus, 1758)	•	
<i>Cosmia (Nemus) pyralina</i> ([Denis & Schiffermüller], 1775)		•
<i>Craniophora ligustri</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Cryphia (Cryphia) fraudatricula</i> (Hübner, 1803)	•	
<i>Cryphia (Cryphia) recepticula</i> (Hübner, 1803)	•	
<i>Cryphia (Euthales) algae</i> (Fabricius, 1775)	•	•
<i>Cucullia (Cucullia) umbratica</i> (Linnaeus, 1758)	•	
<i>Cucullia (Shargacucullia) prenanthis</i> Boisduval, 1840	•	
<i>Cucullia (Shargacucullia) verbasci</i> (Linnaeus, 1758)	•	
<i>Deltote (Deltote) bankiana</i> (Fabricius, 1775)	•	•
<i>Deltote (Deltote) uncula</i> (Clerck, 1759)	•	•
<i>Deltote (Protodeltote) pygarga</i> (Hufnagel, 1766)	•	•
<i>Diachrysia chrysitis</i> (Linnaeus, 1758)	•	•
<i>Diachrysia chryson</i> (Esper, 1789)	•	
<i>Diachrysia stenochrysis</i> (Warren, 1913)		•
<i>Diachrysia zosimi</i> (Hübner, 1822)		•
<i>Dichagyris (Albocosta) flammata</i> ([Denis & Schiffermüller], 1775)	•	
<i>Diloba caeruleocephala</i> (Linnaeus, 1758)		•
<i>Dypterygia scabriuscula</i> (Linnaeus, 1758)	•	•
<i>Egira conspiciellaris</i> (Linnaeus, 1758)	•	
<i>Elaphria venustula</i> (Hübner, 1790)		•
<i>Eucarta amethystina</i> (Hübner, 1803)	•	•
<i>Eucarta virgo</i> (Treitschke, 1835)		•
<i>Euplexia lucipara</i> (Linnaeus, 1758)	•	•
<i>Eupsilia transversa</i> (Hufnagel, 1766)	•	•
<i>Euxoa (Euxoa) tritici</i> (Linnaeus, 1761)	•	
<i>Hada plebeja</i> (Linnaeus, 1761)	•	
<i>Hadena (Anepia) perplexa</i> ([Denis & Schiffermüller], 1775)	•	
<i>Hadena (Hadena) bicurris</i> (Hufnagel, 1766)	•	
<i>Hecatera bicolorata</i> (Hufnagel, 1766)	•	
<i>Hecatera dysodea</i> ([Denis & Schiffermüller], 1775)	•	
<i>Heliiothis ononis</i> ([Denis & Schiffermüller], 1775)	•	

List of species	Literature data	This survey
<i>Heliothis peltigera</i> ([Denis & Schiffermüller], 1775)	•	
<i>Heliothis viriplaca</i> (Hufnagel, 1766)	•	
<i>Hoplodrina ambigua</i> ([Denis & Schiffermüller], 1775)	•	
<i>Hoplodrina superstes</i> (Ochsenheimer, 1816)	•	
<i>Hydraecia micacea</i> (Esper, 1789)		•
<i>Ipimorpha retusa</i> (Linnaeus, 1761)	•	•
<i>Lacanobia (Dianobia) contigua</i> ([Denis & Schiffermüller], 1775)	•	
<i>Lacanobia (Dianobia) suasa</i> ([Denis & Schiffermüller], 1775)	•	
<i>Lacanobia (Dianobia) thalassina</i> (Hufnagel, 1766)	•	•
<i>Lacanobia (Diataraxia) oleracea</i> (Linnaeus, 1758)	•	•
<i>Lacanobia (Diataraxia) splendens</i> (Hübner, 1808)		•
<i>Laterologia ophiogramma</i> (Esper, 1794)		•
<i>Leucania (Leucania) comma</i> (Linnaeus, 1761)	•	
<i>Leucania (Leucania) obsoleta</i> (Hübner, 1803)	•	
<i>Lithophane (Lithophane) ornitopus</i> (Hufnagel, 1766)	•	
<i>Luperina testacea</i> ([Denis & Schiffermüller], 1775)	•	
<i>Macdunnoughia confusa</i> (Stephens, 1850)	•	•
<i>Mamestra brassicae</i> (Linnaeus, 1758)	•	
<i>Meganephria bimaculosa</i> (Linnaeus, 1767)		•
<i>Melanchra persicariae</i> (Linnaeus, 1761)	•	•
<i>Mesapamea secalis</i> (Linnaeus, 1758)	•	•
<i>Mesologia furuncula</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Mniotype satura</i> ([Denis & Schiffermüller], 1775)	•	
<i>Moma alpium</i> (Osbeck, 1778)		•
<i>Mormo maura</i> (Linnaeus, 1758)	•	•
<i>Mythimna (Hyphilare) albipuncta</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Mythimna (Hyphilare) congrua</i> (Hübner, 1817)		•
<i>Mythimna (Hyphilare) l-album</i> (Linnaeus, 1767)	•	•
<i>Mythimna (Mythimna) impura</i> (Hübner, 1808)		•
<i>Mythimna (Mythimna) pallens</i> (Linnaeus, 1758)	•	•
<i>Mythimna (Mythimna) pudorina</i> ([Denis & Schiffermüller], 1775)		•
<i>Mythimna (Mythimna) turca</i> (Linnaeus, 1761)	•	•
<i>Mythimna (Mythimna) vitellina</i> (Hübner, 1808)	•	
<i>Naenia typica</i> (Linnaeus, 1758)	•	
<i>Noctua comes</i> Hübner, 1813		•
<i>Noctua fimbriata</i> (Schreber, 1759)	•	•
<i>Noctua interposita</i> (Hübner, 1790)		•
<i>Noctua orbona</i> (Hufnagel, 1766)		•
<i>Noctua pronuba</i> (Linnaeus, 1758)	•	•
<i>Ochropleura plecta</i> (Linnaeus, 1761)	•	•
<i>Oligia latruncula</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Oligia strigilis</i> (Linnaeus, 1758)	•	•
<i>Orthosia (Monima) cerasi</i> (Fabricius, 1775)		•
<i>Orthosia (Monima) cruda</i> ([Denis & Schiffermüller], 1775)		•
<i>Orthosia (Monima) miniosa</i> ([Denis & Schiffermüller], 1775)		•
<i>Orthosia (Orthosia) incerta</i> (Hufnagel, 1766)	•	•
<i>Orthosia (Semiophora) gothica</i> (Linnaeus, 1758)	•	•
<i>Panemeria tenebrata</i> (Scopoli, 1763)	•	

List of species	Literature data	This survey
<i>Panolis flammea</i> ([Denis & Schiffermüller], 1775)		•
<i>Peridroma saucia</i> (Hübner, 1808)	•	
<i>Phlogophora meticulosa</i> (Linnaeus, 1758)	•	
<i>Plusia festucae</i> (Linnaeus, 1758)	•	
<i>Polia nebulosa</i> (Hufnagel, 1766)	•	
<i>Pseudeustrotia candidula</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Pyrrhia umbra</i> (Hufnagel, 1766)	•	
<i>Rhyacia simulans</i> (Hufnagel, 1766)	•	
<i>Senta flammea</i> (Curtis, 1828)		•
<i>Sideridis (Aneda) rivularis</i> (Fabricius, 1775)	•	•
<i>Simyra albovenosa</i> (Goeze, 1781)		•
<i>Spaelotis ravidia</i> ([Denis & Schiffermüller], 1775)	•	
<i>Spodoptera exigua</i> (Hübner, 1808)	•	•
<i>Subacronicta megacephala</i> ([Denis & Schiffermüller], 1775)	•	
<i>Tholera cespitis</i> ([Denis & Schiffermüller], 1775)	•	
<i>Tholera decimalis</i> (Poda, 1761)	•	
<i>Tiliacea aurago</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Trachea atriplicis</i> (Linnaeus, 1758)	•	•
<i>Tyta luctuosa</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Valeria oleagina</i> ([Denis & Schiffermüller], 1775)	•	
<i>Xanthia (Cirrha) gilvago</i> ([Denis & Schiffermüller], 1775)	•	
<i>Xanthia (Cirrha) icteritia</i> (Hufnagel, 1766)	•	•
<i>Xanthia (Xanthia) togata</i> (Esper, 1788)		•
<i>Xestia (Megasema) c-nigrum</i> (Linnaeus, 1758)	•	•
<i>Xestia (Megasema) ditrapezium</i> ([Denis & Schiffermüller], 1775)	•	
<i>Xestia (Megasema) triangulum</i> (Hufnagel, 1766)		•
<i>Xestia (Xestia) castanea</i> (Esper, 1798)		•
<i>Xestia (Xestia) stigmatica</i> (Hübner, 1813)		•
Nolidae		
<i>Bena bicolorana</i> (Fuessly, 1775)		•
<i>Earias clorana</i> (Linnaeus, 1761)	•	•
<i>Earias vernana</i> (Fabricius, 1787)	•	
<i>Meganola albula</i> ([Denis & Schiffermüller], 1775)	•	•
<i>Meganola strigula</i> ([Denis & Schiffermüller], 1775)		•
<i>Nola chlamitulalis</i> (Hübner, 1813)		•
<i>Nola cristatula</i> (Hübner, 1793)		•
<i>Nycteola asiatica</i> (Krulikovskiy, 1904)		•
<i>Nycteola revayana</i> (Scopoli, 1772)		•
<i>Pseudoips prasinana</i> (Linnaeus, 1758)	•	•
Notodontidae		
<i>Cerura (Cerura) vinula</i> (Linnaeus, 1758)	•	
<i>Clostera anachoreta</i> ([Denis & Schiffermüller], 1775)		•
<i>Clostera anastomosis</i> (Linnaeus, 1758)		•
<i>Clostera curtula</i> (Linnaeus, 1758)		•
<i>Clostera pigra</i> (Hufnagel, 1766)		•
<i>Drymonia dodonaea</i> ([Denis & Schiffermüller], 1775)		•
<i>Drymonia melagona</i> (Borkhausen, 1790)		•
<i>Drymonia ruficornis</i> (Hufnagel, 1766)		•

List of species	Literature data	This survey
<i>Drymonia velitaris</i> (Hufnagel, 1766)		•
<i>Furcula bicuspis</i> (Borkhausen, 1790)		•
<i>Furcula furcula</i> (Clerck, 1759)		•
<i>Gluphisia crenata</i> (Esper, 1785)		•
<i>Notodonta dromedarius</i> (Linnaeus, 1767)		•
<i>Notodonta tritophus</i> ([Denis & Schiffermüller], 1775)		•
<i>Notodonta ziczac</i> (Linnaeus, 1758)		•
<i>Phalera bucephala</i> (Linnaeus, 1758)	•	
<i>Pterostoma palpina</i> (Clerck, 1759)		•
<i>Ptilodon capucina</i> (Linnaeus, 1758)		•
<i>Ptilodon cucullina</i> ([Denis & Schiffermüller], 1775)		•
<i>Ptilophora plumigera</i> ([Denis & Schiffermüller], 1775)		•
<i>Spatalia argentina</i> ([Denis & Schiffermüller], 1775)		•
<i>Stauropus fagi</i> (Linnaeus, 1758)		•
Oecophoridae		
<i>Harpella forcicella</i> (Scopoli, 1763)		•
Peleopodidae		
<i>Carcina quercana</i> (Fabricius, 1775)		•
Plutellidae		
<i>Plutella (Plutella) xylostella</i> (Linnaeus, 1758)		•
Psychidae		
<i>Bijugis bombycella</i> ([Denis & Schiffermüller], 1775)		•
<i>Canephora hirsuta</i> (Poda, 1761)	•	
Pterophoridae		
<i>Emmelina monodactyla</i> (Linnaeus, 1758)		•
<i>Pterophorus pentadactyla</i> (Linnaeus, 1758)	•	•
Pyralidae		
<i>Aphomia sociella</i> (Linnaeus, 1758)		•
<i>Dioryctria abietella</i> ([Denis & Schiffermüller], 1775)		•
<i>Ematheudes punctella</i> (Treitschke, 1833)		•
<i>Endotricha flammealis</i> ([Denis & Schiffermüller], 1775)		•
<i>Ephestia elutella</i> (Hübner, 1796)	•	
<i>Homoeosoma sinuella</i> (Fabricius, 1794)		•
<i>Hypsopygia costalis</i> (Fabricius, 1775)		•
<i>Nephopterix angustella</i> (Hübner, 1796)		•
<i>Nyctegretis lineana</i> (Scopoli, 1786)		•
<i>Oncocera semirubella</i> (Scopoli, 1763)	•	•
<i>Phycitodes binaevella</i> (Hübner, 1813)		•
<i>Phycitodes inquinatella</i> (Ragonot, 1887)	•	
<i>Plodia interpunctella</i> (Hübner, 1813)	•	
<i>Pyralis regalis</i> Denis & Schiffermüller, 1775		•
<i>Sciota adelphella</i> (Fischer v. Röslerstamm, 1836)		•
Saturniidae		
<i>Aglia tau</i> (Linnaeus, 1758)		•
<i>Antheraea (Antheraea) yamamai</i> (Guérin-Ménéville, 1861)		•
<i>Saturnia (Eudia) pavoniella</i> (Scopoli, 1763)	•	•
<i>Saturnia (Saturnia) pyri</i> ([Denis & Schiffermüller], 1775)	•	

List of species	Literature data	This survey
Sesiidae		
<i>Bembecia albanensis</i> (Rebel, 1918)	•	
<i>Bembecia ichneumoniformis</i> ([Denis & Schiffermüller], 1775)	•	
<i>Bembecia megillaeformis</i> (Hübner, 1813)	•	
<i>Chamaesphex euceraeformis</i> (Ochsenheimer, 1816)	•	
<i>Chamaesphex hungarica</i> (Tomala, 1901)	•	
<i>Chamaesphex nigrifrons</i> (Le Cerf, 1911)	•	
<i>Chamaesphex tenthrediniformis</i> ([Denis & Schiffermüller], 1775)	•	
<i>Paranthrene tabaniformis</i> (Rottemburg, 1775)	•	
<i>Pyropteron triamuliformis</i> (Freyer, 1843)	•	
<i>Sesia apiformis</i> (Clerck, 1759)	•	
<i>Synanthedon cephiformis</i> (Ochsenheimer, 1808)	•	
<i>Synanthedon conopiformis</i> (Esper, 1782)	•	
<i>Synanthedon culiciformis</i> (Linnaeus, 1758)	•	
<i>Synanthedon formicaeformis</i> (Esper, 1783)	•	
<i>Synanthedon myopaeformis</i> (Borkhausen, 1789)	•	
<i>Synanthedon sphaeciformis</i> ([Denis & Schiffermüller], 1775)	•	
<i>Synanthedon stomoxiformis</i> (Hübner, 1790)	•	
<i>Synanthedon tipuliformis</i> (Clerck, 1759)	•	
<i>Synanthedon vespiformis</i> (Linnaeus, 1761)	•	
Sphingidae		
<i>Acherontia atropos</i> (Linnaeus, 1758)	•	
<i>Agrius convolvuli</i> (Linnaeus, 1758)	•	•
<i>Deilephila elpenor</i> (Linnaeus, 1758)	•	•
<i>Deilephila porcellus</i> (Linnaeus, 1758)	•	•
<i>Hemaris tityus</i> (Linnaeus, 1758)	•	
<i>Hyles euphorbiae</i> (Linnaeus, 1758)	•	
<i>Laothoe populi</i> (Linnaeus, 1758)	•	•
<i>Macroglossum stellatarum</i> (Linnaeus, 1758)	•	•
<i>Mimas tiliae</i> (Linnaeus, 1758)	•	•
<i>Smerinthus ocellata</i> (Linnaeus, 1758)	•	•
<i>Sphinx ligustri</i> Linnaeus, 1758	•	•
<i>Sphinx pinastri</i> Linnaeus, 1758		•
Tineidae		
<i>Euplocamus anthracinalis</i> (Scopoli, 1763)		•
Tortricidae		
<i>Acleris hastiana</i> (Linnaeus, 1758)		•
<i>Agapeta hamana</i> (Linnaeus, 1758)		•
<i>Ancylis mitterbacheriana</i> ([Denis & Schiffermüller], 1775)		•
<i>Ancylis paludana</i> Barrett, 1871		•
<i>Archips oporana</i> (Linnaeus, 1758)		•
<i>Archips xylosteana</i> (Linnaeus, 1758)		•
<i>Celypha lacunana</i> ([Denis & Schiffermüller], 1775)		•
<i>Celypha rivulana</i> (Scopoli, 1763)	•	
<i>Clepsis rurinana</i> (Linnaeus, 1758)	•	
<i>Cnephasia (Cnephasia) communana</i> (Herrich-Schäffer, 1851)		•
<i>Epiblema foenella</i> (Linnaeus, 1758)	•	•
<i>Eulia ministrana</i> (Linnaeus, 1758)		•

List of species	Literature data	This survey
<i>Hedya salicella</i> (Linnaeus, 1758)	•	•
<i>Notocelia cynosbatella</i> (Linnaeus, 1758)		•
<i>Notocelia uddmanniana</i> (Linnaeus, 1758)		•
<i>Pandemis dumetana</i> (Treitschke, 1835)	•	
<i>Tortrix viridana</i> Linnaeus, 1758		•
Yponomeutidae		
<i>Argyresthia (Argyresthia) bonnetella</i> (Linnaeus, 1758)	•	
<i>Yponomeuta plumbella</i> ([Denis & Schiffermüller], 1775)		•
Zygaenidae		
<i>Zygaena (Agrumenia) carniolica</i> (Scopoli, 1763)		•
<i>Zygaena (Mesembrynus) purpuralis</i> (Brünnich, 1763)		•
<i>Zygaena (Zygaena) filipendulae</i> (Linnaeus, 1758)	•	•
Total:	414	381

