

Repetated macromoth faunistic survey in Zselic Hills after 40 years (Lepidoptera: Macrolepidoptera)

PÉTER SCHMIDT¹, LEVENTE ÁBRAHÁM¹ & SÁNDOR FARKAS²

¹Rippl-Rónai Museum, Kaposvár, Hungary, email: peter.schmidt.smmi@gmail.com, labraham@smmi.hu

²Hungarian University of Agriculture and Life Sciences, Kaposvár, Institute for Wildlife Management and Nature Conservation, Hungary, email: Farkas.Sandor@uni-mate.hu

SCHMIDT, P., ÁBRAHÁM, L. & FARKAS, S.: *Repeated macromoth faunistic survey in Zselic after 40 years (Lepidoptera: Macrolepidoptera)*.

Abstract: This is the first of a series of papers dealing with the results of light trapping research in Ropolypuszta, Zselic Hills, Hungary. In this paper, the authors publish the basic faunistic results of two-year sampling taken between 2019-2020. Altogether 24,499 specimens of 375 macromoth species were collected. The circumstances of the whole survey, the species list with quantitative data, and the protected and valuable species in nature conservational point of view are given.

Keywords: macromoth, faunistic, light pollution, basic survey, nature conservation

Introduction

The butterfly and moth fauna of the Zselic is one of the best documented in Hungary. Research in this area began already at the beginning of the 20th century. The research carried out in the 20th century can be divided into two parts: the first period, which lasted from the beginning of the century until the 1970s, was characterized by intensive entomological collections in the vicinity of Kaposvár by local lepidopteran researchers (ÁBRAHÁM & UHERKOVICH 2001).

Among the lepidopterologists, who mainly carried out faunal recordings, prominent collectors were István Karvajszky, secondary school teacher Sándor Pazsiczky and clerk Miklós Nattán.

The local collectors left very beautiful and valuable collections of butterflies and moths for museums. Sándor Pazsiczky's collection was transferred to the Hungarian Natural History Museum (Budapest), Miklós Nattán's collection to the Janus Pannonius Museum (Pécs). Published faunistic data from this period only appeared after the collections had been housed in museums (KOVÁCS 1953, 1954, ÁBRAHÁM 1989). Apart from a few small papers (eg. PAZSICZKY 1942), the very active collectors did not publish the data of their collection materials but provided the faunistic data for the fauna catalogue of Kovács (1953, 1954). After that, Miklós Nattán increased his collection for another 25 years, the complete processing of which was published by ÁBRAHÁM (1989).

In the second half of the 20th century, research methods completely changed. Traditional petroleum vapor lamps were no longer used during night samplings, as they could not result in the same amount of collected material as the mercury vapor lamp

samplings that appeared with the technical development of the second half of the '70s.

In parallel with the personal samplings, light traps were operated in five places for several years, their data was mainly determined by A. Uherkovich. Thus, we have available not only faunistic data but also quantitative data based on traps from the second period of lepidopterological research in Zselic. These can be regarded as basic survey data of the fauna (UHERKOVICH 1978, 1981a,b, 1982, 1983, ÁBRAHÁM 1992).

After that, further investigations were carried out in Zselic, but their material remained unpublished. A nature conservation population survey was conducted by Sándor Farkas in the vicinity of Dombóvár.

With the start of the South Transdanubian nature conservation investigation in Somogy County, the weight of faunal surveys shifted to other areas. Of these, the fauna surveys carried out in the Boronka landscape protection area (ÁBRAHÁM 1992), in and around Lake Baláta (ÁBRAHÁM 2016), and finally in the Danube-Drava National Park near Drava (UHERKOVICH & ÁBRAHÁM 1995, ÁBRAHÁM & UHERKOVICH 1998).

After that, only occasional samplings took place in the Zselic, during the first half of the 21st century (SZABÓ 2007) and researchers carried out surveys in the framework of the Hungarian Biodiversity Days purposes near Gyűrűfű (ÁBRAHÁM et al. 2013).

One of man's harmful effects on nature is light pollution, which has only been seriously addressed in recent decades. The unnecessary, energy-wasting and environmentally damaging illumination of the evening sky with artificial light sources is called light pollution. It is well known that if there is more light pollution somewhere, the number of light-sensitive species decreases drastically, which can eventually lead to their local disappearance. Nowadays, this phenomenon has reached such proportions that it is hardly possible to find a natural area that is not affected by this negative effect. The International Starry Sky Association was created to search for these areas. If researchers find an area with no or negligible light pollution, the area is awarded the title of International Astronomy Park. This title was won in Europe for the first time by the Zselic Landscape Protection District together with Galloway Park in Scotland on 16th November 2009. Our task was to carry out a status assessment of the current Macrolepidoptera fauna and to compare it with the results of the above-mentioned previous research. For this, in addition to traditional mercury vapor lamps, we used light traps with different types of light sources with the aim of determining which type of lamp has the least effect on insects active at night. The investigation, which lasted for about 3 years, was carried out in Zselic by experts from the Department of Nature Conservation of the University of Kaposvár and the Department of Natural Sciences of the Rippel-Rónai Museum.

Material and methods

Between 1979-1982, Ákos Uherkovich set up a light trap installed in a permanent place to examine the macromoth fauna of Zselic hills (UHERKOVICH 1981a), at Ropolypusztá, behind the buildings and from the edge of the forest approx. 10 meters away. This light trap was powered by a 125 Watt mercury vapor bulb.

In our present research, the sampling area was selected in the Ropoly forest, in the plant communities typical of the area. One permanent, 125 W mercury vapor Jermy-type light trap operated at the buildings, while five portable light traps were placed 100 meters from each other in a dice fives pattern. One light trap was installed in a silver-linden beech, another in a candle-oak association. Three additional traps were installed

in the ecotone zone, on the meeting line of the two plant associations. The coordinates of the light traps are given in Table 1., while their location is in Fig.1.

Table 1: The coordinates of the light traps

Jermy trap	46°15'22.99"N	17°47'10.65"E
TRAP 1	46°15'28.94"N	17°47'6.74"E
TRAP 2	46°15'28.85"N	17°47'11.50"E
TRAP 3	46°15'29.06"N	17°47'2.12"E
TRAP 4	46°15'25.81"N	17°47'7.82"E
TRAP 5	46°15'32.28"N	17°47'6.94"E

The distance of light traps was 1.5 meters from the ground surface. Three different light sources were applied: two traps were equipped with white UV tubes, two others with black UV tubes and one trap had LED strips. Power was provided by a 7 Ah battery. During the two-year sampling period, the traps were operated for five days in each month from April to the end of October. The sampling of the month was chosen depending on the phases of the Moon so that they fall during the period of the lunar eclipse. In some cases, the weather was very unfavorable during the five-day sampling (cool, rainy), so the sampling was shifted to the next 5 appropriate days.

The 5 different light sources (UV tube and UV LED) were changed continuously during the five sampling days in order to operate the light trap for at least one night at each sampling location. With this method, we increased the light spectrum and reduced the differences resulting from the inhomogeneity of the sampling location.



Fig. 1: The sampling area in Zselic in the vicinity of Ropoly



Fig. 2: The light trap used for sampling with a UV tube and battery

Results and discussion

A total of 23,499 individuals of 375 moth species were determined during the 2-year survey. In an annual summarization, for 2019, this means 304 species and 9,761 individuals, and for 2020, 328 species and 14,738 of them. Before the evaluation, it is worth noting that, due to the limited circumstances of the study, there are species groups and periods whose data are missing from the compilation. The collections only took place from April to October, so the data do not include the winter aspect species that were on the wing from November to March. Only light traps were used in the survey, so the species groups that are more sensitive to baits (e.g. *Catocala* sp.) are only included in the data series to a limited extent, as well as those species that cannot be collected successfully by any of the previously described methods (e.g. Plusiinae, Cucullinae) are also in low abundance. Finally, those species that could not be precisely defined due to the lack of an expert were also left out of the final species list (only the easily defined individuals of *Eupithecia* species were identified). Overall, a maximum of 20-25 species were not included in the final species list for these reasons.

Examining the dominance proportions, the 5 dominant species detected in the largest number of individuals were *Cyclophora annularia* (1410 specimens, 5.8%), *Colocasia coryli* (1349 specimens, 5.5%), *Hypomecis punctinalis* (1270 specimens, 5.2%), *Paracolax tristalis* (1182 specimens, 4.9%) and *Eilema lurideola* (790 specimens, 3.2%). The 3 most common species, according to the habitat conditions of the sampling area, are general foliage consumers, whose caterpillars can live on the leaves of practically all native tree and shrub species found around Ropoly. The fourth most common

has the same food plant requirements as the first 3, with the difference that the caterpillars of *Paracolax tristalis* preferred dead, withered leaves. It is interesting that the lichen-consumer species *Eilema lurideola* is the fifth most abundant. The *Eilema* species appeared in an outstanding number of individuals (1954 individuals, 8%), which can probably be traced back to the relatively significant lichen flora of the area. A total of 6001 individuals of the 5 most common species were caught by the traps, which is 24.5% of all collected individuals. At the other end of the line of dominance are the most vulnerable species caught in the lowest number of individuals, that is, closest to disappearing from the area. We detected a total of 141 species of which less than 5 individuals were collected by the light traps in 2 years. This is more than 37% of the total number of species, which is an extremely high rate, meaning that practically every third species that were still present in the area at the time of the study is most likely on the verge of extinction.

Over the course of 2 years, the light traps operating in Ropoly collected 9 protected and 1 strictly protected (SP), also Natura 2000 species (Magyar Közlöny 2015). These and their specimens numbers are as follows: *Eriogaster rimicola* (45), *Perconia strigilaria* (1), *Drymonia velitaris* (13), *Polypogon gryphalis* (95), *Idia calvaria* (4), *Diachrysia chryson* (4), *Arytrura musculus* (SP 2), *Naenia typica* (1), *Euplagia quadripunctaria* (81), *Tyria jacobaeae* (2).

Based on the light trap data, 4 of these species definitely still have a significant population in Ropoly (*Eriogaster rimicola*, *Drymonia velitaris*, *Polypogon gryphalis*, *Euplagia quadripunctaria*). Among them, *Eriogaster rimicola* and *Polypogon gryphalis* are species with a significant population at the national level. *Drymonia velitaris* is a species that becomes significantly more common as a result of the general warming of the climate, and occurs in warmer oak forests, almost throughout Transdanubia. *Euplagia quadripunctaria* is a common and not an endangered species on a national level at all: it occurs in all larger forested areas (except for the Great Hungarian Plain).

Climate change has significant negative effects primarily for species that require coolness and moisture. Until the 1980s, such species, which still had a significant population in all Hungarian mid mountains and cooler hilly areas (including Zselic), show a significant decline after the 2000s. The few faunistic researches of the last decade have not yet shown this process quantified in an exact way, but the individual and unique samplings clearly show that viable populations of these submontane species currently only survive in our coldest landscape units (Örség, Soproni Mts, Kőszegi Mts, Magas Bakony Mts, Bükk Mts, Mátra Mts). They have almost completely disappeared from the Hungarian mountainous and hilly areas (including from Zselic) (e.g. *Proserpinus proserpina*, *Abraxas sylvata*, *Paradarisa consonaria*, *Xanthorhoe biriviata*, *Perizoma bifaciata*, *Larentia clavaria*, *Diachrysia chryson*, *Autographa jota*, *Naenia typica*, *Callimorpha dominula*).

Among the species found in the materials of the light traps, the following species are considered valuable from a faunistic and a nature conservation point of view.

Eriogaster rimicola ([Denis & Schiffermüller] 1775) - It has a single generation in autumn, imagoes on the wing in September and October. Its host plants are native oak species (*Quercus* sp.), primarily *Quercus cerris*. It occurs over almost the entire width of the central and southern parts of Europe, very locally in Western and absent in Northern Europe. It is more widespread in the Eastern Mediterranean and also occurs in the Middle East (LERAUT 2006). Its Hungarian habitats are dry, hilly and mountainous Pannonian-Balcanic *Quercus cerris*-*Quercus petraea* woodlands, where usually it is generally widespread but rare. However, it is considered common in the Zselic hills (VOJNITS et al. 1991). Protected species in Hungary.

Drepana curvatula (Borkhausen 1790) – Imago flies in May and late July and early August. The food plants are *Alnus* and *Betula* sp. so its typical occurrences are associated to different types of more extensive alder woodlands everywhere. It is common in the central and northern parts of Europe and its area continues through Asia to Japan (LERAUT 2006). Habitats in Hungary are hilly and mountainous alder tree stands. The largest populations live in South and West Transdanubia (VOJNITS et al. 1991). Several oligophagous willow (*Salix* sp.), poplar (*Populus* sp.) and alder (*Alnus* sp.) consuming species also occur in the studied area, which are considered endangered and valuable (*Aethalura punctulata*, *Cyclophora pendularia*, *Geometra papilionaria*, *Colobochoyla salicalis*, *Acronicta alni*).

Drymonia velitaris (Hufnagel 1766) – The moth has only one generation during June–July. Caterpillar food plants are *Quercus cerris* and *Q. pubescens*. It is widespread but not common in Europe, missing the northern and southernmost areas (Leraut 2006). Habitats are warm, dry Pannonian-Balcanic *Quercus cerris*-*Quercus petraea* woodlands and *Quercus pubescens* scrubs in Hungary. The most abundant populations can be found in Southern Transdanubia (VOJNITS et al. 1991). It has become more common in the last decade (probably in connection with climate change). Protected species in Hungary.

Cepphis advenaria (Hübner 1790) – It has only one generation, that flies in the first half of summer, during June–July. Its food plants are various fresh forest herbs: *Actaea spicata* and *Melampyrum* sp. in the studied area. In Europe, it is absent only from the Mediterranean archipelago and the Balkan peninsula, elsewhere it is widespread in the Palaearctic zone as far as Japan, but in the southern part of its range it is highly sporadic and rare (LERAUT 2009). In Hungary, it is also strongly associated with wet, humid forests (beech woodlands, riverine and swamp woodlands) (VOJNITS 1980). Habitat-drying and degradation decrease the remaining populations. It occurs in the cooler forest habitats of the Hungarian mountains and hilly areas, and is very local and rare species.

Perconia strigillaria (Hübner 1787) – It has only one generation and the imago flies for a relatively short period, in the end of May. In Hungary, its host plant is mainly *Cytiscus scoparius*. It is known in most of Europe and Central Asia but is a very local species (LERAUT 2009). It was previously documented in *Calluna* heaths of the western and northeastern part of Hungary. In Southern and Central Transdanubia, its host plant was spreading in parallel many new recording places and abundant populations became known (VOJNITS 1980). Protected species in Hungary.

Polypogon gryphalis (Herrich-Schaffer, 1851) – A European moth species with a very narrow distribution area. Its patchy area extends from Southeastern France through the southern part of the Alps to Western Ukraine (LERAUT 2019). In Hungary, it is known from few places, mainly Transdanubia. This species is rare everywhere, but populations are characterized by a fluctuating trend. During the summer, only one generation is on wing. The characteristic habitats are rich fens and riverine and swamp woodlands. The biology of caterpillar is poorly known, it probably feeds dried leaves and plant debris (GOZMÁNY 1970). Protected species in Hungary.

Idia calvaria ([Denis & Schiffermüller] 1775) – A species found in Central and Southern Europe, in the east as far as the Urals (LERAUT 2019). In Hungary, it prefers different thermophilous *Quercus* woodlands in hilly and mountainous areas. Populations are usually low. A single generation flies in June–July, rarely a partial one develops at the end of summer. Its caterpillar is known as a decomposer and mushroom-consumer (GOZMÁNY 1970). Protected in Hungary.

Diachrysia chryson (Esper 1789) – Its populations are in decline throughout Western Europe, threatened with extinction in many countries (Great Britain, Germany) – otherwise, widespread in Palaearctic zone as far as Japan (LERAUT 2019). It is also generally

widespread in Hungary, we know a large number of its occurrence data mainly from Hungarian mountainous regions, and also from some suitable lowland habitats (Nyírség, Szatmár, Dráva-plain). As a result of global warming, it has disappeared from its former locations in the plains and hills. The caterpillar's host plant is *Eupatorium cannabinum* and *Salvia* sp., and it rests on the underside of the leaves during the day. The adult flies in July-August in mountainous area at montane ravines, rocky forests, limestone beech woodlands, tall-herb vegetations of stream banks, where its host plant can be found in larger numbers. Its populations are endangered by changing the natural or seminatural stream valleys. Critically endangered and protected species in Hungary (GOZMÁNY 1970).

Arytrura musculus (Ménétriés, 1859) – A very rare species having a disjunct distribution: this species is widespread in the Pacific areas of East Asia, the Amur region, Korea, and Japan. It also occurs, but much more sporadically in the Caucasus Mts, and Eastern and Central-Eastern Europe. It lives in some populations in Europe, Russia, Ukraine, Romania, Hungary and recently found in the northern part of the Mediterranean (Croatia, Italy). Earlier it was a rarity in Hungary. Currently, there are relatively abundant in the willow bogs of Southern Nyírség. It was the only known occurrence at Little Balaton for a long time in South Transdanubia, then in the 2000s it was found in several places: Sumony (NÉMETH & SZABÓKY 1998), Gyűrűfü (UHERKOVICH & ÁBRAHÁM 2007) and the Drava valley and adjacent areas (MALGAY & BRUNNER 2011). The increasing number of collecting sites suggests that the species is spreading. Adults of the species fly from the middle of June to the middle of July, and strongly attracted to artificial light. It is likely that it is a wandering moth species because some specimens were caught in places where the nearest suitable habitats were 2-3 kilometers away. In lab conditions, caterpillar feeds on the leaves of *Salix cinerea*. A species associated with willow bogs (mainly willow carrs, riverine willow scrubs), but its exact ecological needs are unknown. Natura 2000 species, and highly protected in Hungary (HARASZTHY 2014).

Atypha pulmonaris (Esper 1790) - Its area extends in the wide middle band of Europe from northern Spain in the east and south to the Caucasus and Asia Minor (LERAUT 2019). It is also widespread in Hungary and can be found in many places, mainly in the fresh forests of Hungarian hilly and mountainous regions - beech woodlands, hornbeam woodlands, oak-hornbeam woodlands. Its host plants are *Pulmonaria* sp. In the last decade, probably due to the global warming, it has become rarer. Imagoes on wings during May-June (GOZMÁNY 1970).

Apamea aquila Donzel 1837- It has sporadic distribution in western and northern part of Europe (missing in the south), and also known from a slightly related area in Central Asia, and then in Eastern Asia again (LERAUT 2019). In Hungary, it is a very rare species that occurs in habitat of montane ravines, tall-herb vegetations of stream banks, limestone beech woodlands, riverine and swamp woodlands. Caterpillar feeds on *Molinia* sp.

Pabulatrix pabulatricula (Brahm 1791) – It occurs mainly in Central and Eastern Europe, but its area extends to Japan. It has already disappeared from many places in Western Europe (e.g. the British Isles) (LERAUT 2019). Many faunistic data are known from Hungary, but the populations are always low and sporadic. Adults fly during the summer. Caterpillars live on different Poaceae species, typically on *Molinia* sp. (GOZMÁNY 1970). A valuable species in decline.

Cleoceris scoriacea (Esper 1789) – It is found in many places in the Mediterranean, through Asia Minor to the Middle East. It is a very local and rare species in the northern part of its area, and already become extinct in Germany (LERAUT 2019). It used to be a rare species in Hungary, but in recent years (probably due to the abandonment of grape and fruit plantations in the foothills and climate change), its faunistic data increased. At

the same time, it is also a local and sporadic species that occurs in dry oak woodlands, groves, steppe meadows at the foothills, thermophilous *Quercus* woodlands, *Quercus pubescens* scrubs, closed, mixed steppic oak woodlands. Its only host plants are sand lily species (*Anthericum* sp.). The imago flies during August-September (RONKAY & RONKAY 2006).

Xestia castanea (Esper 1798) – An Atlanto-Mediterranean moth that is widespread in almost the entire area of Europe, as far as Asia Minor, but almost everywhere is local and sporadic (LERAUT 2019). Host plants are *Calluna vulgaris*, *Vaccinium* sp., *Genista* sp., *Cytisus scoparius*. In the past, only a few populations of it were known in Hungary, mainly from the North Hungarian Mountains and Western Transdanubia, but in the last decade (similarly to the species *Perconia strigillaria*) the faunistic data increased. It was also found in several places in the Zselic hills, where its caterpillars most likely develop on *Cytisus scoparius*, *Genista* species, or perhaps on *Quercus cerris*. It has only one generation per year, imagoes on wings from the end of August to the beginning of October (Ronkay & Ronkay 2006).

Naenia typica (Linnaeus 1758) – Widespread everywhere in Europe, except for the northernmost and Mediterranean areas, spreading to Central Asia, but common only in the northern regions (LERAUT 2019). It was found in a relatively lot of places in Hungary associated with wet gallery forests, stream valleys, where caterpillars develop on small dicotyledons, but it shows a significant decrease, probably due to climate change. Its single generation flies from mid-June to August (RONKAY & RONKAY 2006). Protected and endangered species in Hungary.

Tyria jacobaeae (Linnaeus 1758) - It can be found in certain parts of North America and in almost the entire territory of Europe except for the north. Its area spreads to Central Asia. Due to oligophagous species, it is very local everywhere (LERAUT 2006). Generally distributed in Hungary, but it is rare in the Great Plain. The host plants of the caterpillars are *Senecio* sp., mainly *Senecio jacobaea*. Adults are on wings in May-June and active also during the hot days. Imagoes are characterized by slow, fluttering and short-distance flight. Habitats are dry, warm, south-facing grassy meadows and hillsides in the hilly and lower mountain regions of Hungary. Some populations are relatively high, but the species decreasing in general. It is protected and highly endangered due to the construction of industry and housing of dry meadows and aggressive spreading of alien plants.

Table 1: List of samples collected in 2019-2020

Family	Species	2019	2020	Total
LASIOCAMPIIDAE	<i>Malacosoma neustria</i> (Linnaeus, 1758)	7	7	14
	<i>Eriogaster rimicola</i> (Denis & Schiffermüller, 1775)	8	37	45
	<i>Lasiocampa trifolii</i> (Denis & Schiffermüller, 1775)	2	2	4
	<i>Lasiocampa quercus</i> (Linnaeus, 1758)	1	26	27
	<i>Dendrolimus pini</i> (Linnaeus, 1758)	4	3	7
	<i>Phyllodesma tremulifolia</i> (Hübner, 1810)		2	2
	<i>Euthrix potatoria</i> (Linnaeus, 1758)	1	3	4
	<i>Gastropacha quercifolia</i> (Linnaeus, 1758)		5	5
	<i>Odonestis pruni</i> (Linnaeus, 1758)	8	7	15

Family	Species	2019	2020	Total
SPHINGIDAE	<i>Agrius convolvuli</i> (Linnaeus, 1758)		1	1
	<i>Sphinx ligustri</i> Linnaeus, 1758	2		2
	<i>Hyloicus pinastri</i> (Linnaeus, 1758)		1	1
	<i>Laothoe populi</i> (Linnaeus, 1758)		2	2
	<i>Mimas tiliae</i> (Linnaeus, 1758)	16	15	31
	<i>Smerinthus ocellata</i> (Linnaeus, 1758)		2	2
	<i>Deilephila elpenor</i> (Linnaeus, 1758)		1	1
SATURNIIDAE	<i>Antheraea yamamai</i> (Guérin-Méneville, 1861)	29	76	105
DREPANIDAE	<i>Drepana curvatula</i> (Borkhausen, 1790)	22	8	30
	<i>Drepana falcataria</i> (Linnaeus, 1758)	13	12	25
	<i>Sabra harpagula</i> (Esper, 1786)	31	23	54
	<i>Watsonalla culttraria</i> (Fabricius, 1775)	93	76	169
	<i>Watsonalla binaria</i> (Hufnagel, 1767)	36	50	86
	<i>Thyatira batis</i> (Linnaeus, 1758)	88	150	238
THYATIRIDAE	<i>Tethea or</i> (Denis & Schiffermüller, 1775)	1	1	2
	<i>Tethea ocularis</i> (Linnaeus, 1767)		1	1
	<i>Ochropacha duplaris</i> (Linnaeus, 1761)	2	17	19
	<i>Habrosyne pyritoides</i> (Hufnagel, 1766)	71	141	212
	<i>Cymatophorima diluta</i> (Denis & Schiffermüller, 1775)	43	9	52
GEOMETRIDAE	<i>Geometra papilionaria</i> (Linnaeus, 1758)		1	1
	<i>Comibaena bajularia</i> (Denis & Schiffermüller 1775)		3	3
	<i>Hemistola chrysoprasaria</i> (Esper, 1795)	1	4	5
	<i>Jodis lactearia</i> (Linnaeus, 1758)	21	24	45
	<i>Hemitheia aestivaria</i> (Hübner, 1789)	14	51	65
	<i>Idaea muricata</i> (Hufnagel, 1767)	14	14	28
	<i>Idaea rusticata</i> (Denis & Schiffermüller, 1775)		1	1
	<i>Idaea dilutaria</i> (Hübner, 1799)	1		1
	<i>Idaea fuscovenosa</i> (Goeze, 1781)		1	1
	<i>Idaea humiliata</i> (Hufnagel, 1767)	1		1
	<i>Idaea politaria</i> (Hübner, 1799)	3	3	6
	<i>Idaea subsericeata</i> (Haworth, 1809)	1	5	6
	<i>Idaea dimidiata</i> (Hufnagel, 1767)	16	28	44
	<i>Idaea trigeminata</i> (Haworth, 1809)	8	5	13
	<i>Idaea biselata</i> (Hufnagel, 1767)	109	160	269
	<i>Idaea nitidata</i> (Herrich-Schäffer, 1861)	1		1
	<i>Idaea emarginata</i> (Linnaeus, 1758)	1		1
	<i>Idaea aversata</i> (Linnaeus, 1758)	44	77	121
	<i>Idaea degeneraria</i> (Hübner, 1799)	2	8	10

Family	Species	2019	2020	Total
	<i>Idaea straminata</i> (Borkhausen, 1794)	1	1	2
	<i>Idaea deversaria</i> (Herrich-Schäffer, 1847)	2		2
	<i>Scopula immorata</i> (Linnaeus, 1758)	10	1	11
	<i>Scopula caricaria</i> (Reutti, 1853)		20	20
	<i>Scopula umbelaria</i> (Hübner, 1813)	1		1
	<i>Scopula nigropunctata</i> (Hufnagel, 1767)	77	61	138
	<i>Scopula virgulata</i> (Denis & Schiffermüller, 1775)		6	6
	<i>Scopula incanata</i> (Linnaeus, 1758)	1	1	2
	<i>Scopula immutata</i> (Linnaeus, 1758)	4	3	7
	<i>Scopula floslactata</i> (Haworth, 1809)		6	6
	<i>Rhodostrophia vibicaria</i> (Clerck, 1759)		2	2
	<i>Timandra comae</i> Schmidt, 1931	70	37	107
	<i>Cyclophora pendularia</i> (Clerck, 1759)	1	1	2
	<i>Cyclophora annularia</i> (Fabricius, 1775)	603	807	1410
	<i>Cyclophora ruficiliaria</i> (Herrich-Schäffer, 1855)	191	380	571
	<i>Cyclophora quercimontaria</i> (Bastelberger, 1897)	34	1	35
	<i>Cyclophora porata</i> (Linnaeus, 1767)	5	2	7
	<i>Cyclophora punctaria</i> (Linnaeus, 1758)	127	160	287
	<i>Cyclophora subpunctaria</i> (Zeller, 1847)	3		3
	<i>Cyclophora linearia</i> (Hübner, 1799)	100	46	146
	<i>Xanthorhoe biriviata</i> (Borkhausen, 1794)	1		1
	<i>Xanthorhoe designata</i> (Hufnagel, 1767)	1	4	5
	<i>Xanthorhoe spadicearia</i> (Denis & Schiffermüller, 1775)	13	3	16
	<i>Xanthorhoe ferrugata</i> (Clerck, 1759)	60	23	83
	<i>Xanthorhoe quadrifasciata</i> (Clerck, 1759)	14	77	91
	<i>Xanthorhoe fluctuata</i> (Linnaeus, 1758)		14	14
	<i>Catarhoe rubidata</i> (Denis & Schiffermüller, 1775)	1		1
	<i>Catarhoe cuculata</i> (Hufnagel, 1767)		3	3
	<i>Epirrhoe alternata</i> (Müller, 1764)	70	124	194
	<i>Euphyia unangulata</i> (Haworth, 1809)	27	24	51
	<i>Euphyia biangulata</i> (Haworth, 1809)		2	2
	<i>Costaconvexa polygrammata</i> (Borkhausen, 1794)		1	1
	<i>Camptogramma bilineata</i> (Linnaeus, 1758)	20	17	37
	<i>Mesoleuca albicillata</i> (Linnaeus, 1758)		17	17
	<i>Cosmorhoe ocellata</i> (Linnaeus, 1758)	3	7	10
	<i>Eulithis pyraliata</i> (Denis & Schiffeller, 1775)	2	28	30
	<i>Ecliptopera silaceata</i> (Denis & Schiffermüller, 1775)	188	124	312
	<i>Chloroclysta siterata</i> (Hufnagel, 1767)	2	5	7

Family	Species	2019	2020	Total
	<i>Thera variata</i> (Denis & Schiffermüller, 1775)		1	1
	<i>Electrophaes corylata</i> (Thunberg, 1792)	1	3	4
	<i>Colostygia pectinataria</i> (Knoch, 1781)	25	22	47
	<i>Horisme vitalbata</i> (Denis & Schiffermüller, 1775)	1	2	3
	<i>Horisme corticata</i> (Treitschke, 1835)		3	3
	<i>Horisme tersata</i> (Denis & Schiffermüller, 1775)	1	10	11
	<i>Horisme radicularia</i> (De La Harpe [1855])	2	1	3
	<i>Melanthia procellata</i> (Denis & Schiffermüller, 1775)	21	58	79
	<i>Philereme transversata</i> (Hufnagel, 1767)		2	2
	<i>Epirrita dilutata</i> (Denis & Schiffermüller, 1775)	3	23	26
	<i>Perizoma alchemillata</i> (Linnaeus, 1758)	14	97	111
	<i>Perizoma lugdunaria</i> (Herrich-Schäffer, 1855)	3	11	14
	<i>Perizoma bifaciata</i> (Haworth, 1809)		2	2
	<i>Gymnoscelis rufifasciata</i> (Haworth, 1809)	14	5	19
	<i>Chloroclystis v-ata</i> (Haworth, 1809)	68	50	118
	<i>Eupithecia expallidata</i> Doubleday, 1856	5	4	9
	<i>Eupithecia linariata</i> (Denis & Schiffermüller, 1775)	1		1
	<i>Eupithecia assimilata</i> Doubleday, 1856		1	1
	<i>Eupithecia silenicolata</i> Mabille, 1867		1	1
	<i>Aplocera plagiata</i> (Linnaeus, 1758)	1	1	2
	<i>Aplocera efformata</i> (Guenée, 1857)	2		2
	<i>Euchoeca nebulata</i> (Scopoli, 1763)	53	85	138
	<i>Hydrelia flammeolaria</i> (Hufnagel, 1767)	4	6	10
	<i>Minoa murinata</i> (Scopoli, 1763)	1	1	2
	<i>Asthena albulata</i> (Hufnagel, 1767)	26	202	228
	<i>Asthena anseraria</i> (Herrich-Schäffer, 1855)		2	2
	<i>Abraxas sylvata</i> (Scopoli, 1763)		1	1
	<i>Lomaspilis marginata</i> (Linnaeus, 1758)	4	7	11
	<i>Ligdia adustata</i> (Denis & Schiffermüller, 1775)	72	224	296
	<i>Macaria alternata</i> (Denis & Schiffermüller, 1775)	32	28	60
	<i>Macaria notata</i> (Linnaeus, 1758)	30	11	41
	<i>Macaria liturata</i> (Clerck, 1759)	1	1	2
	<i>Chiasmia clathrata</i> (Linnaeus, 1758)	5	4	9
	<i>Cepphis advenaria</i> (Hübner, 1790)	3	8	11
	<i>Plagodis dolabraria</i> (Linnaeus, 1767)	120	149	269
	<i>Plagodis pulveraria</i> (Linnaeus, 1758)	14	41	55
	<i>Opisthograptis luteolata</i> (Linnaeus, 1758)	1	1	2
	<i>Epione repandaria</i> (Hufnagel, 1767)	1	5	6

Family	Species	2019	2020	Total
	<i>Apeira syringaria</i> (Linnaeus, 1758)	7	9	16
	<i>Ennomos quercinaria</i> (Hufnagel, 1767)	71	127	198
	<i>Ennomos fuscantaria</i> (Haworth, 1809)	3		3
	<i>Ennomos erosaria</i> (Denis & Schiffermüller, 1775)	5	9	14
	<i>Ennomos autumnaria</i> (Werneburg, 1859)	13	12	25
	<i>Selenia tetralunaria</i> (Hufnagel, 1767)	47	155	202
	<i>Selenia lunularia</i> (Hübner, 1788)	5	14	19
	<i>Selenia dentaria</i> (Fabricius, 1775)	6	33	39
	<i>Artiora evonymaria</i> (Denis & Schiffermüller, 1775)	2	2	4
	<i>Crocallis elinguaris</i> (Linnaeus, 1758)	1	1	2
	<i>Ourapteryx sambucaria</i> (Linnaeus, 1758)		1	1
	<i>Colotois pennaria</i> (Linnaeus, 1761)	9	28	37
	<i>Angerona prunaria</i> (Linnaeus, 1758)	75	66	141
	<i>Lycia hirtaria</i> (Clerck, 1759)	4		4
	<i>Biston betularia</i> (Linnaeus, 1758)	7	28	35
	<i>Peribatodes rhomboidaria</i> (Denis & Schiffermüller, 1775)	133	137	270
	<i>Alcis repandata</i> (Linnaeus, 1758)	3	2	5
	<i>Hypomecis punctinalis</i> (Scopoli, 1763)	315	955	1270
	<i>Hypomecis roboraria</i> (Denis & Schiffermüller, 1775)		12	12
	<i>Fagivorina arenaria</i> (Hufnagel, 1767)	10	15	25
	<i>Ascotis selenaria</i> (Denis & Schiffermüller, 1775)	7	2	9
	<i>Ectropis crepuscularia</i> (Denis & Schiffermüller, 1775)	152	234	386
	<i>Parectropis similaria</i> (Hufnagel, 1767)	64	81	145
	<i>Aethalura punctulata</i> (Denis & Schiffermüller, 1775)	2	14	16
	<i>Ematurga atomaria</i> (Linnaeus, 1758)	5	2	7
	<i>Cabera pusaria</i> (Linnaeus, 1758)	3	27	30
	<i>Cabera exanthemata</i> (Scopoli, 1763)	4	30	34
	<i>Lomographa temerata</i> (Denis & Schiffermüller, 1775)	2	7	9
	<i>Lomographa bimaculata</i> (Fabricius, 1775)	43	152	195
	<i>Campaea margaritata</i> (Linnaeus, 1767)	181	253	434
	<i>Siona lineata</i> (Scopoli, 1763)		1	1
	<i>Perconia strigillaria</i> (Hübner, 1787)	1		1
NOTODONTIDAE	<i>Harpyia milhauseri</i> (Fabricius, 1775)	1	5	6
	<i>Stauropus fagi</i> (Linnaeus, 1758)	23	80	103
	<i>Drymonia ruficornis</i> (Hufnagel, 1766)	38		38

Family	Species	2019	2020	Total
	<i>Drymonia dodonaea</i> (Denis & Schiffermüller, 1775)	12	14	26
	<i>Drymonia obliterata</i> ((Esper, 1785)	114	351	465
	<i>Drymonia velitaris</i> (Hufnagel, 1766)	9	8	17
	<i>Drymonia querna</i> (Denis & Schiffermüller, 1775)	16	20	36
	<i>Gluphisia crenata</i> (Esper, 1785)	3	3	6
	<i>Pterostoma palpina</i> (Clerck, 1759)	1	2	3
	<i>Spatalia argentina</i> (Denis & Schiffermüller, 1775)	20	82	102
	<i>Ptilodon cucullina</i> (Denis & Schiffermüller, 1775)	10	70	80
	<i>Ptilodon capucina</i> (Linnaeus, 1758)	12	84	96
	<i>Phalera bucephala</i> (Linnaeus, 1758)	22	41	63
	<i>Clostera pigra</i> (Hufnagel, 1766)	2	3	5
	<i>Clostera curtula</i> (Linnaeus, 1758)	1	2	3
EREBIDAE	<i>Calliteara pudibunda</i> (Linnaeus, 1758)	51	128	179
	<i>Euproctis similis</i> (Fuessly, 1775)	214	175	389
	<i>Lymantria monacha</i> (Linnaeus, 1758)	89	86	175
	<i>Lymantria dispar</i> (Linnaeus, 1758)	31	21	52
	<i>Arctornis l-nigrum</i> (Müller, 1764)	18	21	39
	<i>Orgyia antiqua</i> (Linnaeus, 1758)	1	9	10
	<i>Spilosoma lutea</i> (Hufnagel, 1766)	11	157	168
	<i>Spilosoma lubricipeda</i> (Linnaeus, 1758)	9	22	31
	<i>Hyphantria cunea</i> (Drury, 1773)		2	2
	<i>Phragmatobia fuliginosa</i> (Linnaeus, 1758)	20	7	27
	<i>Arctia caja</i> (Linnaeus, 1758)	1		1
	<i>Arctia villica</i> (Linnaeus, 1758)		1	1
	<i>Diacrisia sannio</i> (Linnaeus, 1758)	1		1
	<i>Callimorpha dominula</i> (Linnaeus, 1758)	1		1
	<i>Euplagia quadripunctaria</i> (Poda, 1761)	28	67	95
	<i>Tyria jacobaeae</i> (Linnaeus, 1758)		2	2
	<i>Miltochrista miniata</i> (Forster, 1771)	236	305	541
	<i>Thumatha senex</i> (Hübner, 1808)		3	3
	<i>Pelosia muscerda</i> (Hufnagel, 1766)	12	21	33
	<i>Lithosia quadra</i> (Linnaeus, 1758)	312	60	372
	<i>Eilema palliatella</i> (Scopoli, 1763)	12		12
	<i>Eilema depressa</i> (Esper, 1787)	79	41	120
	<i>Eilema lurideola</i> (Zincken, 1817)	581	209	790
	<i>Eilema griseola</i> (Hübner, 1803)	6	57	63
	<i>Eilema complana</i> (Linnaeus, 1758)	69	196	265
	<i>Dysauxes ancilla</i> (Linnaeus, 1767)	5	3	8

Family	Species	2019	2020	Total
	<i>Catephia alchymista</i> (Denis & Schiffermüller, 1775)		1	1
	<i>Dysgonia algira</i> (Linnaeus, 1767)		3	3
	<i>Euclidia glyphica</i> (Linnaeus, 1758)	1		1
	<i>Catocala promissa</i> (Denis & Schiffermüller, 1775)	6	12	18
	<i>Catocala nymphagoga</i> (Esper, 1787)	6		6
	<i>Catocala electa</i> (Vieweg, 1790)		1	1
	<i>Catocala elocata</i> (Esper, 1787)	1		1
	<i>Catocala hymenaea</i> (Denis & Schiffermüller, 1775)	1	1	2
	<i>Catocala fulminea</i> (Scopoli, 1763)		1	1
	<i>Catocala nupta</i> (Linnaeus, 1767)	2	5	7
	<i>Arytrura musculus</i> (Ménétriés, 1859)	2		2
	<i>Lygephila cracca</i> (Denis & Schiffermüller, 1775)	2	3	5
	<i>Eublemma purpurina</i> (Denis & Schiffermüller, 1775)		1	1
	<i>Colobochyla salicalis</i> (Denis & Schiffermüller, 1775)	2	5	7
	<i>Laspeyria flexula</i> (Denis & Schiffermüller, 1775)	22	27	49
	<i>Trisateles emortualis</i> (Denis & Schiffermüller, 1775)	88	72	160
	<i>Parascotia fuliginaria</i> (Linnaeus, 1761)	3	1	4
	<i>Schrankia costaestrigalis</i> (Stephens, 1834)	1		1
	<i>Rivula sericealis</i> (Scopoli, 1763)	85	30	115
	<i>Hypena rostralis</i> (Linnaeus, 1758)	6	4	10
	<i>Hypena proboscidalis</i> (Linnaeus, 1758)	207	361	568
	<i>Scoliopteryx libatrix</i> (Linnaeus, 1758)	2	1	3
	<i>Idia calvaria</i> (Denis & Schiffermüller, 1775)	3	1	4
	<i>Paracolax tristalis</i> (Fabricius, 1794)	365	817	1182
	<i>Herminia grisealis</i> (Denis & Schiffermüller, 1775)	112	299	411
	<i>Herminia tarsipennalis</i> (Treitschke, 1835)	10	40	50
	<i>Herminia tarsicrinalis</i> (Knoch, 1782)	492	213	705
	<i>Polypogon gryphalis</i> (Herrich-Schäffer, 1851)	17	78	95
	<i>Polypogon tentacularia</i> (Linnaeus, 1758)	6	13	19
	<i>Pechipogo strigilata</i> (Linnaeus, 1758)	18	36	54
	<i>Zanclognatha lunalis</i> (Scopoli, 1763)	108	180	288
NOCTUIDAE	<i>Abrostola triplasia</i> (Linnaeus, 1758)	43	46	89
	<i>Abrostola tripartita</i> (Hufnagel, 1766)		1	1
	<i>Macdunnoughia confusa</i> (Stephens, 1850)	9	6	15
	<i>Diachrysia chryson</i> (Esper, 1789)	4		4
	<i>Diachrysia chrysitis</i> (Linnaeus, 1758)	9	13	22

Family	Species	2019	2020	Total
	<i>Autographa gamma</i> (Linnaeus, 1758)	14	21	35
	<i>Protodeltote pygarga</i> (Hufnagel, 1766)	225	445	670
	<i>Deltote bankiana</i> (Fabricius, 1775)	1	3	4
	<i>Acontia lucida</i> (Hufnagel, 1766)		4	4
	<i>Aedia leucomelas</i> (Linnaeus, 1758)	1	1	2
	<i>Colocasia coryli</i> (Linnaeus, 1758)	217	1132	1349
	<i>Diloba caeruleocephala</i> (Linnaeus, 1758)	1	1	2
	<i>Craniophora ligustri</i> (Denis & Schiffermüller, 1775)	45	43	88
	<i>Acronicta rumicis</i> (Linnaeus, 1758)	7	8	15
	<i>Acronicta alni</i> (Linnaeus, 1767)		1	1
	<i>Acronicta cuspid</i> (Hübner, 1813)	1	2	3
	<i>Acronicta aceris</i> (Linnaeus, 1758)		7	7
	<i>Acronicta auricoma</i> (Denis & Schiffermüller, 1775)		2	2
	<i>Moma alpium</i> (Osbeck, 1778)	25	48	73
	<i>Tyta luctuosa</i> (Denis & Schiffermüller, 1775)		1	1
	<i>Calophasia lunula</i> (Hufnagel, 1766)		1	1
	<i>Amphipyra berbera</i> Rungs, 1949	1		1
	<i>Amphipyra pyramidea</i> (Linnaeus, 1758)	27	20	47
	<i>Amphipyra tragopoginis</i> (Clerck, 1759)	5		5
	<i>Amphipyra livida</i> (Denis & Schiffermüller, 1775)	1	7	8
	<i>Asteroscopus sphinx</i> (Hufnagel, 1766)	2	4	6
	<i>Allophyes oxyacanthae</i> (Linnaeus, 1758)	19	32	51
	<i>Eucarta amethystina</i> (Hübner, 1803)	11	19	30
	<i>Eucarta virgo</i> (Treitschke, 1835)	3	4	7
	<i>Pyrrhia umbra</i> (Hufnagel, 1766)	2	3	5
	<i>Heliothis peltigera</i> (Denis & Schiffermüller, 1775)	1		1
	<i>Helicoverpa armigera</i> (Hübner, 1808)	63	18	81
	<i>Cryphia algae</i> (Fabricius, 1775)	21	7	28
	<i>Pseudeustrotia candidula</i> (Denis & Schiffermüller, 1775)	4	11	15
	<i>Spodoptera exigua</i> (Hübner, 1808)	1		1
	<i>Elaphria venustula</i> (Hübner, 1790)	28	87	115
	<i>Caradrina morpheus</i> (Hufnagel, 1766)	10	22	32
	<i>Caradrina aspersa</i> (Donzel, 1837)		3	3
	<i>Caradrina kadenii</i> Freyer, 1836	1	1	2
	<i>Hoplodrina blanda</i> (Denis & Schiffermüller, 1775)	9	27	36
	<i>Hoplodrina octogenaria</i> (Goeze, 1781)	2	9	11
	<i>Hoplodrina superstes</i> (Ochsenheimer, 1816)	2		2

Family	Species	2019	2020	Total
	<i>Hoplodrina respersa</i> (Denis & Schiffermüller, 1775)	1		1
	<i>Hoplodrina ambigua</i> (Denis & Schiffermüller, 1775)	16	10	26
	<i>Charanyca trigrammica</i> (Hufnagel, 1766)	1	6	7
	<i>Rusina ferruginea</i> (Esper, 1785)	9	24	33
	<i>Athetis gluteosa</i> (Treitschke, 1835)		2	2
	<i>Proxenus lepigone</i> (Möschler, 1860)	2	1	3
	<i>Dypterygia scabriuscula</i> (Linnaeus, 1758)	2	34	36
	<i>Trachea atriplicis</i> (Linnaeus, 1758)	23	43	66
	<i>Polyphaenis sericata</i> (Esper, 1787)	3	29	32
	<i>Thalpophila matura</i> (Hufnagel, 1766)	2		2
	<i>Actinotia polyodon</i> (Clerck, 1759)	1	1	2
	<i>Phlogophora meticulosa</i> (Linnaeus, 1758)	1	4	5
	<i>Euplexia lucipara</i> (Linnaeus, 1758)	47	35	82
	<i>Auchmis detera</i> (Esper, 1787)	1		1
	<i>Hydraecia micacea</i> (Esper, 1789)		1	1
	<i>Globia sparganii</i> (Esper, 1790)		2	2
	<i>Eremobina pabulatricula</i> (Brahm, 1791)	1	2	3
	<i>Apamea monoglypha</i> (Hufnagel, 1766)		1	1
	<i>Apamea epomidion</i> (Haworth, 1809)		2	2
	<i>Apamea aquila</i> Donzel, 1837		2	2
	<i>Apamea scolopacina</i> (Esper, 1788)	16	11	27
	<i>Mesapamea secalis</i> (Linnaeus, 1758)	8	15	23
	<i>Mesoligia furuncula</i> (Denis & Schiffermüller, 1775)	1		1
	<i>Litoligia literosa</i> (Haworth, 1809)	4		4
	<i>Oligia latruncula</i> (Denis & Schiffermüller, 1775)	3		3
	<i>Oligia versicolor</i> (Borkhausen, 1792)		1	1
	<i>Oligia strigilis</i> (Linnaeus, 1758)		4	4
	<i>Episema tersa</i> (Denis & Schiffermüller, 1775)	1		1
	<i>Cleoceris scoriacea</i> (Esper, 1789)	1		1
	<i>Ipimorpha retusa</i> (Linnaeus, 1761)		1	1
	<i>Cosmia trapezina</i> (Linnaeus, 1758)	137	30	167
	<i>Cosmia affinis</i> (Linnaeus, 1767)		1	1
	<i>Cosmia pyralina</i> (Denis & Schiffermüller, 1775)	1		1
	<i>Tiliacea aurago</i> (Denis & Schiffermüller, 1775)	6	3	9
	<i>Tiliacea sulphurago</i> (Denis & Schiffermüller, 1775)	9	6	15
	<i>Tiliacea citrargo</i> (Linnaeus, 1758)	2	8	10
	<i>Lithophane ornitopus</i> (Hufnagel, 1766)	9	2	11
	<i>Eupsilia transversa</i> (Hufnagel, 1766)	1	5	6

Family	Species	2019	2020	Total
	<i>Conistra vaccinii</i> (Linnaeus, 1761)	7	50	57
	<i>Conistra rubiginea</i> (Denis & Schiffermüller, 1775)		2	2
	<i>Conistra erythrocephala</i> (Denis & Schiffermüller, 1775)		11	11
	<i>Agrochola circellaris</i> (Hufnagel, 1766)	4	44	48
	<i>Agrochola nitida</i> (Denis & Schiffermüller, 1775)	24	20	44
	<i>Agrochola macilenta</i> (Hübner, 1809)		1	1
	<i>Agrochola helvola</i> (Linnaeus, 1758)	1	2	3
	<i>Agrochola humilis</i> (Denis & Schiffermüller, 1775)	3		3
	<i>Agrochola litura</i> (Linnaeus, 1758)	2	3	5
	<i>Atypha pulmonaris</i> (Esper, 1790)	22	6	28
	<i>Dryobotodes eremita</i> (Fabricius, 1775)		1	1
	<i>Blepharita satura</i> (Denis & Schiffermüller, 1775)	39	43	82
	<i>Mesogona acetosellae</i> (Denis & Schiffermüller, 1775)		1	1
	<i>Mythimna turca</i> (Linnaeus, 1761)	42	62	104
	<i>Mythimna albipuncta</i> (Denis & Schiffermüller, 1775)	12	82	94
	<i>Mythimna ferrago</i> (Fabricius, 1787)	23	13	36
	<i>Mythimna vitellina</i> (Hübner, 1808)	3	4	7
	<i>Mythimna l-album</i> (Linnaeus, 1767)	3	6	9
	<i>Mythimna impura</i> (Hübner 1808)		1	1
	<i>Senta flammea</i> (Curtis, 1828)	1		1
	<i>Hadula trifolii</i> (Hufnagel, 1766)	1	1	2
	<i>Sideridis rivularis</i> (Fabricius, 1775)	3	3	6
	<i>Polia nebulosa</i> (Hufnagel, 1766)		2	2
	<i>Mamestra brassicae</i> (Linnaeus, 1758)	2	5	7
	<i>Melanchra persicariae</i> (Linnaeus, 1761)	9	29	38
	<i>Lacanobia thalassina</i> (Hufnagel, 1766)	2		2
	<i>Lacanobia oleracea</i> (Linnaeus, 1758)	14	18	32
	<i>Lacanobia w-latinum</i> (Hufnagel, 1766)		5	5
	<i>Hadena capsincola</i> (Denis & Schiffermüller, 1775)	5	3	8
	<i>Orthosia cerasi</i> (Fabricius, 1775)	11		11
	<i>Orthosia incerta</i> (Hufnagel, 1766)	2		2
	<i>Egira conspicularis</i> (Linnaeus, 1758)	4		4
	<i>Tholera decimalis</i> (Poda, 1761)	1	11	12
	<i>Euxoa segnilis</i> (Duponchel, 1836)		1	1
	<i>Agrotis exclamationis</i> (Linnaeus, 1758)	4	27	31
	<i>Agrotis ipsilon</i> (Hufnagel, 1766)	1		1
	<i>Agrotis segetum</i> (Denis & Schiffermüller, 1775)	10	15	25

Family	Species	2019	2020	Total
	<i>Axylia putris</i> (Linnaeus, 1761)	108	153	261
	<i>Ochropleura plecta</i> (Linnaeus, 1761)	23	25	48
	<i>Noctua pronuba</i> Linnaeus, 1758	62	128	190
	<i>Noctua orbona</i> (Hufnagel, 1766)	20	7	27
	<i>Noctua interposita</i> (Hübner, 1790)	104	26	130
	<i>Noctua comes</i> Hübner, 1813	4	6	10
	<i>Noctua fimbriata</i> (Schreber, 1759)	81	82	163
	<i>Noctua janthina</i> (Denis & Schiffermüller, 1775)	5	4	9
	<i>Noctua janthe</i> (Borkhausen, 1792)	10	17	27
	<i>Noctua interjecta</i> Hübner, 1803	1	11	12
	<i>Xestia c-nigrum</i> (Linnaeus, 1758)	55	26	81
	<i>Xestia triangulum</i> (Hufnagel, 1766)	15	52	67
	<i>Xestia ditrapezium</i> (Denis & Schiffermüller, 1775)	3		3
	<i>Xestia rhomboidea</i> (Esper, 1790)	29	10	39
	<i>Xestia xanthographa</i> (Denis & Schiffermüller, 1775)	4	8	12
	<i>Xestia baja</i> (Denis & Schiffermüller, 1775)	12	8	20
	<i>Xestia castanea</i> (Esper, 1798)	10	3	13
	<i>Eugnorisma depuncta</i> (Linnaeus, 1761)	47	69	116
	<i>Naenia typica</i> (Linnaeus, 1758)		1	1
NOLIDAE	<i>Meganola kolbi</i> (Daniel, 1935)	1	1	2
	<i>Meganola albula</i> (Denis & Schiffermüller, 1775)	47	27	74
	<i>Meganola strigula</i> (Denis & Schiffermüller, 1775)	5	13	18
	<i>Nola aerugula</i> (Hübner, 1793)	3	18	21
	<i>Nola confusalis</i> (Herrich-Schäffer, 1847)	9	6	15
	<i>Nola cristatula</i> (Hübner, 1793)	4	55	59
	<i>Nola chlamitulalis</i> (Hübner, 1813)	5		5
	<i>Bena bicolorana</i> (Fuessly, 1775)	1		1
	<i>Pseudoips prasinana</i> (Linnaeus, 1758)	18	44	62
	<i>Nycteola asiatica</i> (Krulikovsky, 1904)	1	2	3
	<i>Nycteola siculana</i> (Fuchs, 1899)		1	1
No of specimens:		9761	14738	24499

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