



New information of the biodiversity of the nymphalid family (Insecta, Lepidoptera, Nymphalidae) species collected in Romania's fauna between 1887-1984

Cristina Stancă-Moise[‡], George Moise[‡], Tom Brereton[§], Mirela Stanciu[‡]

[‡] "Lucian Blaga" University of Sibiu, Sibiu, Romania

[§] Butterfly Conservation, Wareham, Dorset, United Kingdom

Corresponding author: Cristina Stancă-Moise (cristinamoise1@yahoo.com),

George Moise (georgemoise@yahoo.com)

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Abstract

Background

This paper complements the data published thus far about species of the nymphalid family with data collected in Romania's eight regions between 1887 and 1984 and elsewhere in Europe (Austria, Germany, Croatia, the Republic of Moldova, Serbia and Switzerland), including the date and the site of original collection. For the first time, this research presents the collecting information of the species held in the entomological collection of the Museum of Natural History in Sibiu. It identifies the species of the nymphalid family in six of the museum's lepidoptera collections. These collections are of extraordinary interest not least because they are associated with natural scientists of European renown, such as Daniel Czekelius, Eugen Worell, Viktor Weindel, Rolf Weirauch, Heinrich Hann von Hannenheim and Eckbert Schneider. The analysis, cataloguing, centralisation and updating of the nomenclature resulted in a number of 1,865 specimens from 49 species

and fifteen genera (of the 90 referenced in Romania's fauna): *Aglais*, *Apatura*, *Araschnia*, *Argynnis*, *Brenthis*, *Boloria*, *Euphydryas*, *Inachis*, *Issoria*, *Libythea*, *Limenitis*, *Melitaea*, *Neptis*, *Nymphalis* and *Polygonia*. Data published in a previous article add 101 specimens from the *Vanessa* genus.

New information

Most species originate regionally from the nine counties of Transylvania followed by Oltenia and Moldova (three counties each), Banat and Dobrogea (two counties each), Crişana, Satu Mare and Muntenia (one county each) and the capital of Romania, Bucharest. The species presented in this paper also include the extinct taxon *Polygonia egea* (Cramer, 1775), Eugen Worrell collection and three species that are endemic to Romania: *Melitaea retyezatica* Diöszeghy, 1930, *Argynnis pandora dacica* Hormuzaki, 1892, Daniel Czekelius collection and *Boloria pales* ([Denis & Schiffermüller], 1775) *carpathomeridionalis* Crosson et Popescu-Gorj, 1963, both in the Viktor Weindel collection.

Keywords

butterfly, conservation, collections, endemic, Museum of Natural History in Sibiu

Introduction

Tracing the historical evolution of butterflies from the nymphalid family requires updating the information on the species' long-term collection. Updating this information allows ascertaining in how far environmental and anthropogenic factors (Fox et al. 2019, Choi et al. 2021) have determined the temporal and spatial abundance and dominance of these species (Ştefanescu et al. 2021). In Romania, as in other European countries, the entomological material held at natural history museums is a valuable resource for researching declining or extinct populations of butterflies. In museums in Romania, data on butterfly species belonging to the nymphalid family have been collected over time from the whole country and the world and have been obtained through exchanges between specialists or from collectors. The data pertaining to specimens of the nymphalid family thus offer information about the collection sites (Popescu-Gorj 1960, Popescu-Gorj 1964, Popescu-Gorj and Drăhăia 1964, Ciocchia and Barbu 1980, Capuşe and Kovács 1987, Burnaz 2002, Marcu and Rákósy 2002, Stănescu 2005, Chimişliu 2006, Chimişliu 2010, Chimişliu 2011, Chimişliu 2012). Since the 19th century, fauna research in Transylvania has been indebted to the work of numerous professional and amateur entomologists with great love for nature. The following natural scientists founded the collections studied in this paper and analysed and determined the preserved material, thus bringing an important contribution to lepidopterological research: Daniel Czekelius (1856-1938, Sibiu); Arnold Müller (1884-1937, Sibiu); Eugen Worell (1884-1961, Sibiu), Viktor Weindel (1887-1966, Sibiu); Heinrich Hann von Hanneheim (1895-1971, Sibiu), Rolf Weirauch (1906-1984, Sibiu), Alexei Alexinschi (1899-1966, Iaşi); Hans Rebel (1861-1940, Vienna); László

Diószeghy (1877-1942, Arad); Aurelian Popescu-Gorj (1914-1997, București) and Eckbert Schneider (1927) (Székely 2008). The Natural History Museum opened to the public in 1895. Owing to its priceless holdings, the Museum can be currently considered as an archive of lepidoptera biodiversity in Transylvania. It, therefore, plays a significant role in Romanian and European entomological research.

The Museum was founded by German-speaking Transylvanian-Saxon entomologists who collected material in the city of Sibiu, its surroundings, neighbouring regions and other Transylvanian locations (Czekelius 1897, Czekelius 1898, Worell 1951, Székely 1996, Székely 2003, Székely 2004), as well as in other geographical regions of Romania. Throughout time, several generations of natural scientists have evaluated and continue to evaluate the data held in these collections (Caradja 1931, Niculescu 1965, Schneider 1984, Chimișliu 1989, Schneider 1996, Rákósy et al. 2003, Moise 2011a, Moise 2011b, Moise 2011c, Rákósy 2013, Rakosy and Goia 2021). The Lepidoptera collections are of central importance to the Natural History Museum's patrimony. To date, partial collecting data of the species have been published for the Daniel Czekelius, Eugen Worell, Viktor Weindel, Rolf Weirauch, Heinrich Hann von Hannenheim and Eckbert Schneider collections (Czekelius 1898, Rákósy et al. 2003, Török and Cuzepan 2014, Stancă-Moise 2017, Stancă-Moise 2018, Stancă-Moise 2019, Stancă-Moise 2020, Stancă-Moise 2021, Stancă-Moise 2022). The current paper evaluates unpublished data of specimens from the nymphalid family in order to assess this family's historical distribution in Romanian and European fauna.

Materials and methods

The material evaluated in this paper consists of specimens collected in Romania's eight regions between 1887 and 1984. The analysis has also identified specimens collected in Austria, Germany, Croatia, Switzerland, the Republic of Moldova and Serbia. The species' nomenclature was reviewed by using the actual identification keys as following (Rákósy et al. 2003, Székely 2008, Rákósy 2013, Rákósy et al. 2021) in conformity with the Fauna Europaea taxonomic system (Lampert 1923, Karsholt and Razowski 1996, Van Swaay and Warren 1999, Rakosy and Goia 2021). Each species is listed, indicating the examined material, collecting data (in the chronological order of years, months and days), number of specimens, collection sites (including the Romanian county and region), the conservation status (Rákósy et al. 2021) and name of the collector. Question marks are used in cases where information is missing, incomplete or the writing could not be deciphered. All data originate from museum labels; Romanian place names originally listed in German have been replaced with contemporary Romanian ones.

Abbreviations:

Collectors: Daniel Czekelius (DC), Eugen Worell (EW), Viktor Weindel (VW), Rolf Weirauch (RW), Heinrich Hann von Hannenheim (HH), Eckbert Schneider (ES).

Romanian regions: Banat (BT), Crișana (CR), Oltenia (OT), Muntenia (MT), Moldova (MD), Dobrogea (DB), Satu Mare (SM), Transilvania (TR)

Romania's counties: Arad (AR), Alba (AB), Bistrița-Năsăud (BN), Brașov (BV), Caraș-Severin (CS), Cluj (CJ), Constanța (CT), Covasna (Cv), Galați (GL), Gorj (GJ), Harghita (HR), Hunedoara (HD), Ilfov (IF), Maramureș (MM), Mehedinți (MH), Mureș (MS), Neamț (NT), Satu Mare (SM), Sibiu (SB), Timiș (TM), Tulcea (TL), Vâlcea (VL), Vrancea (VN), București (B).

European countries: Austria (AU), Croația (HR), Germany (GE), Republic of Moldova (RMO), Serbia (RS), Switzerland (CH).

The conservation status: Extinct (EX), Critically endangered (CR), Endangered (EN), Vulnerable (VU), Near threatened (NT), Least concern (LC), Endemic (EN).

Nymphalidae collected in Romania's fauna between 1887 and 1984

***Libythea celtis* (Laicharting, 1782)**

Conservation status: EN

Distribution: RO

Notes: ES

***Argynnis paphia* (Linnaeus, 1758)**

Conservation status: NT

Distribution: RO, AU, RMO

Notes: DC, EW, VW, ES

***Argynnis paphia f. valensina* [Esper, 1798]**

Conservation status: NT

Distribution: RO, AU

Notes: EW

***Argynnis pandora* ([Denis & Schiffermüller], 1775)**

Conservation status: VU

Distribution: RO

Notes: DC, EW, VW, RW, ES

***Argynnis pandora* subsp. *dacica* Hormuzaki, 1892**

Conservation status: Endemic

Distribution: RO

Notes: EW

***Argynnis (Speyeria) aglaja* (Linnaeus, 1758)**

Conservation status: LC

Distribution: RO

Notes: DC, EW, VW, RW

***Argynnis adippe* (Denis & Schiffermüller, 1775)**

Conservation status: NT

Distribution: RO

Notes: DC, EW, VW

***Argynnis (Fabriciana) niobe* f. *cleodoxa* Esper 1789**

Conservation status: NT

Distribution: RO

Notes: VW

***Argynnis (Fabriciana) niobe* (Linnaeus, 1758)**

Conservation status: NT

Distribution: RO, AU

Notes: DC, EW, VW, ES

***Argynnis (Fabriciana) niobe* var. *pelopia* Borkhausen, 1788**

Conservation status: NT

Distribution: RO

Notes: DC

***Argynnis laodice* (Pallas, 1771)**

Conservation status: OUG 57/2007: 4B; IUCN: LC (Murariu and Maican 2021)

Distribution: RO

Notes: DC, EW, VW

***Argynnis latonia* var. *hungarica* Aigner-Abafi, 1906**

Conservation status: LC

Distribution: RO

Notes: DC

***Issoria lathonia* (Linnaeus, 1758)**

Conservation status: LC

Distribution: RO

Notes: DC, VW, HH, ES

***Brenthis ino* Rottemburg, 1775**

Conservation status: VU

Distribution: RO

Notes: DC, VW

***Brenthis daphne* ([Denis & Schiffermüller], 1775)**

Conservation status: VU

Distribution: RO

Notes: DC, VW, ES

***Brenthis hecate* ([Denis & Schiffermüller], 1775)**

Conservation status: VU

Distribution: RO

Notes: VW, HH, ES

***Boloria euphrosyne* (Linnaeus, 1758)**

Conservation status: VU

Distribution: RO

Notes: DC, VW, HH, ES

***Boloria selene* ([Denis & Schiffermüller], 1775)**

Conservation status: NT

Distribution: RO

Notes: DC, VW, HH, ES

***Boloria dia* (Linnaeus, 1767)**

Conservation status: LC

Distribution: RO

Notes: DC, VW, HH, ES

***Boloria pales* subsp. *carpathomeridionalis* ([Denis & Schiffermüller], 1775) Crosson & Popescu-Gorj, 1963**

Conservation status: Endemic

Distribution: RO

Notes: VW, HH

***Inachis (Aglais) io* (Linnaeus, 1758)**

Conservation status: LC

Distribution: RO, RMO

Notes: DC, EW, VW, HH, RW, ES

***Aglais urticae* (Linnaeus, 1758)**

Conservation status: NT

Distribution: RO, RMO

Notes: DC, EW, VW, RW, ES

***Polygonia c-album* (Linnaeus, 1758)**

Conservation status: NT

Distribution: RO, RMO

Notes: DC, EW, VW, HH, RW, ES

***Polygonia egea* (Cramer, 1775)**

Conservation status: EX

Distribution: HR

Notes: EW

***Araschnia levana* (Linnaeus, 1758)**

Conservation status: NT

Distribution: RO, GE

Notes: DC, EW, VW, HH, RW, ES

***Araschnia levana f. porima* Ochseneheimer, 1807**

Conservation status: NT

Distribution: RO

Notes: DC

***Araschnia levana f. prorsa* Linnaeus, 1758**

Conservation status: NT

Distribution: RO

Notes: DC, EW, VW

***Araschnia levana f. intermedia* Stichel, 1906**

Conservation status: NT

Distribution: RO

Notes: DC

***Nymphalis antiopa* (Linnaeus, 1758)**

Conservation status: VU

Distribution: RO

Notes: DC, EW, VW, HH, RW, ES

***Nymphalis polychloros* (Linnaeus, 1758)**

Conservation status: EN

Distribution: RO

Notes: DC, EW, VW, RW, ES

***Nymphalis xanthomelas* ([Denis & (Schifferrmüller), 1775)**

Conservation status: IUCN: LC (Murariu and Maican 2021)

Distribution: Ro

Notes: DC, EW, VW, RW

***Nymphalis vaualbum* ([Denis & Schifferrmüller], 1775)**

Conservation status: ONG 57/2007: 3, 4A, DH: II, IV; IUCN: LC (Murariu and Maican 2021)

Distribution: RO

Notes: DC, VW, RW

***Euphydryas maturna* (Linnaeus, 1758)**

Conservation status: ONG 57/2007: 3, 4A, DH: II, IV; IUCN: DD (Murariu and Maican 2021)

Distribution: RO

Notes: DC, EW, ES

***Euphydryas orientalis* (Herrich-Schaffer, [1851])**

Conservation status: CR

Distribution: RO

Notes: RW

***Euphydryas aurinia* (Rottemburg, 1775)**

Conservation status: ONG 57/2007: 3, 4A, DH: II (Murariu and Maican 2021)

Distribution: RO

Notes: DC, EW, VW, ES

***Melitaea cinxia* (Linnaeus, 1758)**

Conservation status: NT

Distribution: RO

Notes: DC, EW, VW, HH, RW, ES

***Melitaea phoebe* ([Denis & Schiffermüller], 1775)**

Conservation status: NT

Distribution: RO, RMO

Notes: DC, EW, VW, RW, ES

***Melitaea trivia* ([Denis & Schiffermüller], 1775)**

Conservation status: NT

Distribution: RO, RMO

Notes: DC, EW, VW, ES

***Melitaea didyma* (Esper, 1778)**

Conservation status: LC

Distribution: RO, AU

Notes: DC, EW, VW, HH, RW

***Melitaea didyma* subsp. *alpina* Staudinger, 1861**

Conservation status: VU

Distribution: RO

Notes: EW

***Melitaea didyma* subsp. *occidentalis* Staudinger, 1861**

Conservation status: VU

Distribution: RO

Notes: RW

***Melitaea didyma* subsp. *meridionalis* Staudinger, 1870**

Conservation status: VU

Distribution: RO

Notes: EW

***Melitaea didymoides* Eversmann, 1847**

Conservation status: VU

Distribution: RMO

Notes: EW

***Melitaea dictynna* Esper, 1778**

Conservation status: VU

Distribution: RO

Notes: DC, EW, RW

***Melitaea aurelia* Nickerl, 1850**

Conservation status: VU

Distribution: RO, RS

Notes: DC, EW, VW, HH, RW, ES

***Melitaea athalia* (Rottemburg, 1775)**

Conservation status: NT

Distribution: RO, RMO

Notes: DC, EW, VW, HH, RW, ES

***Melitaea athalia* subsp. *mehadiensis* Gerhard, 1822**

Conservation status: NT

Distribution: RO

Notes: EW, RW

***Melitaea britomartis* Assmann, 1847**

Conservation status: NT

Distribution: RO

Notes: RW

***Melitaea diamina* subsp. *alpestris* Fruhstorfer, 1917**

Conservation status: NT

Distribution: RO

Notes: DC

***Melitaea nana* Rehfons, 1910**

Conservation status: VU

Distribution: RO

Notes: DC

***Melitaea parthenoides* Keferstein, 1851**

Conservation status: VU

Distribution: RO

Notes: DC, EW

***Melitaea parthenie* var. *varia* Meyer-Dür, 1851**

Conservation status: VU

Distribution: AU

Notes: EW

***Melitaea retyezatica* Diöszeghy, 1930**

Conservation status: Endemic

Distribution: RO

Notes: DC

***Melitaea asteria* Freyer, 1828**

Conservation status: VU

Distribution: RO

Notes: EW

***Melitaea athalia* subsp. *dictynnoides* Hormuzaki, 1898**

Conservation status: NT

Distribution: RO

Notes: DC

***Limenitis populi* (Linnaeus, 1758)**

Conservation status: VU

Distribution: RO

Notes: DC, EW, VW, HH, RW

***Limenitis populi* var. *tremulae* Esper, 1800**

Conservation status: VU

Distribution: RO

Notes: DC, EW, VW, RW

***Limenitis camilla* (Linnaeus, 1764)**

Conservation status: VU

Distribution: RO

Notes: VW, RW

***Limenitis sibilla (camilla)* Linnaeus, 176**

Conservation status: VU

Distribution: RO, CH

Notes: DC, EW,

***Limenitis reducta* subsp. *reducta* Staudinger, 1901**

Conservation status: EN

Distribution: RO

Notes: RW

***Neptis aceris* sensu Lhomme, 1924**

Conservation status: VU

Distribution: RO

Notes: DC, HH

***Neptis rivularis* (Scopoli, 1763)**

Conservation status: NT

Distribution: RO

Notes: EW, VW, RW, ES

***Neptis rivularis* subsp. *ludmila* Nordmann, 1851**

Conservation status: NT

Distribution: RO

Notes: VW

***Neptis sappho* Pallas, 1771**

Conservation status: VU

Distribution: RO

Notes: VW, RW, ES

***Neptis lucilla* ([Denis & Schiffermüller], 1775)**

Conservation status: NT

Distribution: RO

Notes: DC, EW, HH, RW, ES

***Apatura ilia* ([Denis & Schiffermüller], 1775)**

Conservation status: VU

Distribution: RO

Notes: DC, EW, VW, RW

***Apatura clytie* ([Denis & Schiffermüller], 1775)**

Conservation status: VU

Distribution: RO

Notes: DC, VW, RW

***Apatura ilia* var. *eos* Rossi, 1794**

Conservation status: VU

Distribution: RO

Notes: DC, EW, HH, ES

***Apatura iris* (Linnaeus, 1758)**

Conservation status: VU

Distribution: RO

Notes: DC, EW, VW, HH, ES

***Apatura metis* Freyer, 1829**

Conservation status: VU

Distribution: RO

Notes: EW

Discussion

The analysis of the six collections of lepidoptera under scrutiny in this article focused on 1,865 specimens collected between 1887 and 1984 and identified 49 species and subspecies of the 90 mentioned in Romania's fauna (Rákosy 2013, Rakosy and Goia 2021). Earlier data regarding the *Vanessa* genus are based on 101 specimens, 52 specimens of *V. atalanta* and 49 specimens of *V. cardui* (Stancă-Moise 2022). The species' listing for each collection (Fig. 1) includes the following results: Daniel Czekelius's collection, with 271 specimens, 14 genera and 49 (Table 1), Eugen Worrell's collection, 11 genera and 41 species (Table 2), Viktor Weindel's collection, 14 genera and 40 species (Table 3), Heinrich Hann von Hanneheim's collection, 11 genera, 19 species (Table 4), Rolf Weyrauch's collection, 11 genera and 28 species (Table 5) and Eckbert Schneider's collection with 14 genera and 30 species (Table 6). The oldest specimens are *Boloria selene* ([Denis & Schiffermüller], 1775) and *Nymphalis polychloros* (Linnaeus, 1758) and were collected 135 years ago. The collectors specified on the labels are Daniel Czekelius, Béla Kiss, Arnold Müller, László Diószeghy, Friedrich Deubel, Paul Tiltscher, Miklos Tütscher, Kimakowics, Adalbert Prall, Karl Alberti, Karl Petri and Vincenz Kollar.

Table 1.

Daniel DC's collection.

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
<i>Argynnis</i> Fabricius, 1807	<i>Argynnis paphia</i> (Linnaeus, 1758)	1911-1930	Braşov, Cisnădioara, Hodod, Păltiniş, Porumbacu, Retezat Mountain, Sibiu	DC, Diószeghy, Kiss, Prall	BV, SM, SB, Southern Carpathians	SM, TR	16	NT
	<i>Argynnis pandora</i> ([Denis & Schiffermüller], 1775)	no data	Cisnădioara, Porumbacu, Sibiu	DC, Prall	SB	TR	4	VU
	<i>Argynnis (Speyeria)</i> <i>aglaja</i> (Linnaeus, 1758)	1911-1930	Borsec, Colibiţa, Păltiniş	DC, Müller	BN, HR, SB	TR	7	LC
	<i>Argynnis adippe</i> ([Denis & Schiffermüller], 1775)	1906-1909	Bistriţa, Braşov, Cisnădioara, Fedeleş, Hohod, Păltiniş, Mureş, Rodna, Sibiu	DC, Kiss	BN, BV, MS, SB	TR	14	NT
	<i>Argynnis (</i> <i>Fabriciana) niobe</i> (Linnaeus, 1758)	1904-1921	Borsec, Turnu Roşu	DC	HR, SB	TR	3	NT
	<i>Argynnis niobe</i> ab. <i>pelopia</i> Borkhausen, 1788	no data	Sibiu	DC	SB	TR	1	NT

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
	<i>Argynnis laodice</i> (Pallas, 1771)	1908	Cibin, Hodod, Micăsasa	DC	SM, SB	SM, TR	4	EN
	<i>Argynnis eris</i> Meigen, 1829	1921	Bazna	DC	SB	TR	5	EN
	<i>Argynnis latonia</i> ab. hungarica Aigner-Abafi, 1906	no data	Sibiu	DC	SB	TR	1	LC
<i>Issoria</i> Hübner, 1819	<i>Issoria lathonia</i> (Linnaeus, 1758)	1911-1934	Borsec, Sibiu, Retezat Mountain, Tâlmaciu, Hodod	DC, Kiss	HR, SM, SB	SM, TR	6	LC
<i>Brenthis</i> , Hübner, 1819	<i>Brenthis ino</i> Rottemburg, 1775	1912-1928	Sfântu Gheorghe, Pleeshortalg (?)	DC, Tiltsdur	CV	TR	2	VU
	<i>Brenthis daphne</i> ([Denis & Schiffermüller], 1775)	no data	Hodod	Kiss	SM	SM	3	VU
<i>Boloria</i> Moore, 1900 (Clossiana), Moore, 1900	<i>Boloria euphrosyne</i> (Linnaeus, 1758)	1908-1911	Braşov, Fedeleş, Vâlcele, Borsec	DC, Deubel	BV, HR, Eastern Carpathians	TR	7	VU
	<i>Boloria selene</i> ([Denis & Schiffermüller], 1775)	1887-1911		DC, Kiss	SB	TR	5	NT
	<i>Boloria dia</i> (Linnaeus, 1767)	1910-1922	Bazna, Sibiu, Şura Mică, Tâlmaciu	DC, Kiss	SB	TR	6	LC
<i>Inachis</i> Hübner, 1819	<i>Inachis (Aglaïs) io</i> (Linnaeus, 1758)	no data	Păltiniş, Sibiu	DC, Kiss	SB	TR	4	LC
<i>Aglaïs</i> Dalman, 1816	<i>Aglaïs urticae</i> (Linnaeus, 1758)	1891-1932	Fedeleş, Hodod, Sibiu, Retezat Mountain	DC, Kimakowics, Kiss	BV, SM, SB	SM, TR	12	NT
<i>Polygonia</i> Hübner, [1819]	<i>Polygonia c-album</i> (Linnaeus, 1758)	1908-1927	Hodod, Micăsasa, Sibiu, Retezat Mountain, Braşov	DC, Deubel, Dioszeghy, Kiss, Prall	SB, BV, SM, Southern Carpathians	SM, TR	16	NT
<i>Araschnia</i> Hübner, 1819	<i>Araschnia levana</i> (Linnaeus, 1758)	1922	Coşa Mică, Sibiu	DC	SB	TR	3	NT
	<i>Araschnia levana</i> f. <i>porima</i> Ochseneimer, 1807	1912	Sfântu Gheorghe	Miklos Tütscher	CV	TR	1	NT

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
	<i>Araschnia levana</i> f. <i>prorsa</i> Linnaeus, 1758	1908	Konzeshova (?)	DC	no data	no data	2	NT
	<i>Araschnia levana</i> f. <i>intermedia</i> Stichel, 1906	1908	Braşov, Sibiu	DC	SB, BV	TR	3	NT
<i>Nymphalis</i> Kluk, 1802	<i>Nymphalis antiopa</i> (Linnaeus, 1758)	1909	Festebesch (?)	no data	no data	no data	2	VU
	<i>Nymphalis polychloros</i> (Linnaeus, 1758)	1887-1923	Sibiu	DC, Kiss, Borz3 N (?)	SB	TR	6	EN
	<i>Nymphalis xanthomelas</i> ([Denis & Schiffermüller], 1775)	no data	Păltiniş, Sibiu	DC	SB	TR	3	CR
	<i>Nymphalis vaualbum</i> ([Denis & Schiffermüller], 1775)	1912	Sibiu	DC	SB	TR	3	CR
<i>Euphydryas</i> , Scudder, 1872	<i>Euphydryas maturna</i> (Linnaeus, 1758)	no data	Hodod, Sibiu	Deuber, Kiss	SM, SB	SM, TR	4	VU
	<i>Euphydryas aurinia</i> (Rottemburg, 1775)	no data	Sibiu, Şura Mică	DC	SB	TR	3	EN
<i>Melitaea</i> Fabricius, 1807	<i>Melitaea cinxia</i> (Linnaeus, 1758)	1907	Cluj, Hodod, Ocna Sibiului, Sibiu	DC, Kiss, Müller, Prall	CJ, SM, SB	SM, TR	8	NT
	<i>Melitaea phoebe</i> ([Denis & Schiffermüller], 1775)	1911	Bistriţa, Borsec, Sibiu, Ocna Sibiului	Alberti, DC, Kiss	BN, HR, SB	TR	9	NT
	<i>Melitaea trivialis</i> ([Denis & Schiffermüller], 1775)	no data	Ocna Sibiului, Sâmbăta, Sibiu	DC, Kiss	BV, SB	TR	4	NT
	<i>Melitaea didyma</i> (Esper, 1778)	1909-1912	Bălea, Cluj-Napoca, Hodod, Râşinari, Braşov, Sibiu	DC, Kiss, Müller	BV, CJ, SM, SB	SM, TR	17	LC
	<i>Melitaea dictynna</i> Esper, 1778	1901-1928	Sibiu, Plecska (?)	DC	SB	TR	4	VU
	<i>Melitaea aurelia</i> Nickerl, 1850	1911-1930	Bazna, Borsec, Braşov, Ocna Sibiului, Sibiu	DC	BV, HR, SB	TR	12	VU
	<i>Melitaea athalia</i> (Rottemburg, 1775)	1904-1934	Bălea, Braşov, Guşteriţa, Hodod, Sibiu	DC, Kiss	BV, SM, SB	SM, TR	26	NT
	<i>Melitaea diamina alpestris</i> Fruhstorfer, 1917	no data	Hodod, Arpaş	DC, Kiss	SM, SB	SM, TR	3	NT

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
	<i>Melitaea nana</i> Rehfs, 1910 sin. <i>Euphydryas aurinia</i> (Rottemburg, 1775)	no data	Lands (?), Sibiu	DC	SB	TR	2	VU
	<i>Melitaea parthenie</i> Godart, 1822 sin. <i>Melitaea</i> <i>parthenoides</i> Keferstein, 1851	no data	Hodod	Kiss	SM	SM	1	VU
	<i>Melitaea athalia</i> (Rottemburg, 1775) f. <i>Melitaea</i> <i>retezatica</i> Diöszeghy, 1930	1919-1922	Retezat Mountain	Diöszeghy	Southern Carpathians	TR	9	Endemic
	<i>Melitaea athalia</i> <i>dictynnoides</i> Hormuzaki, 1898	no data	Sibiu	DC	SB	TR	4	NT
<i>Limnitis</i> Fabricius, 1807	<i>Limnitis populi</i> , (Linnaeus, 1758)	no data	Păltiniș	DC	SB	TR	2	VU
	<i>Limnitis</i> ab. <i>tremulae</i> Esper, 1800	1922	Păltiniș, Retezat Mountain	DC	SB, Southern Carpathians	TR	2	VU
	<i>Limnitis camilla</i> Linnaeus, 1764	1915	Păltiniș, Cheile Turzii	DC, Müller	SB, CJ	TR	2	VU
<i>Neptis</i> Fabricius, 1807	<i>Neptis aceris</i> sensu Lhomme, 1924	1911-1929	Bran, Șura Mare, Retezat Mountain, Sibiu, Tâlmaciu, Hodod	DC, Diöszeghy, Kiss	BV, SM, SB, Southern Carpathians	SM, TR	10	VU
	<i>Neptis lucilla</i> ([Denis & Schiffmüller], 1775) sin. <i>Neptis</i> <i>rivularis</i> (Scopoli, 1763)	1915-1924	Borsec, Păltiniș, Slimnic	DC, Müller	HR, SB	TR	4	NT
<i>Apatura</i> Fabricius, 1807	<i>Apatura ilia</i> ([Denis & Schiffmüller], 1775)	1928-1929	Grelieseii (?), Cluj	Peterfi	CJ	TR	2	VU
	<i>Apatura v. clytie</i> ([Denis & Schiffmüller], 1775)	1909-1933	Gușterița, Hodod, Sibiu	DC, Kiss	SM, SB	SM, TR	4	VU
	<i>Apatura</i> ab. <i>eos</i> <i>rossi</i> Rossi, 1794	no data	Sibiu	DC	SB	TR	2	VU
	<i>Apatura iris</i> (Linnaeus, 1758)	1925-1926	Păltiniș, Hodod, Râu Sadului, Sibiu	DC, Kiss	SM, SB	SM, TR	5	VU

Table 2.

Eugen Worell's collection.

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
<i>Argynnis</i> Fabricius, 1807	<i>Argynnis paphia</i> (Linnaeus, 1758)	1932-1957	Carinthia Plocken, Chişinău, Sibiu, Lintz	Kolar EW	SB, Chişinău, Tirol	TR, RMO, AU	4	NT
	<i>Argynnis paphia</i> f. <i>valensina</i> [Esper, 1798]	1932-1953	Carinthia, Cozia, Eforie Sud, Ocna Sibiului, Sibiu	EW Kolar	CT, SB	DB, TR, AU	23	NT
	<i>Argynnis pandora</i> ([Denis & Schiffermüller], 1775)	1948	Cozia Mountain	EW	VL	OT	7	VU
	<i>Argynnis pandora</i> <i>dacica</i> Hormuzaki, 1892	1930-1931	Tecuci, Retezat Mountain	Alexinschi Dioszegy	GL, Southern Carpathians	MD	3	VU
	<i>Argynnis (Speyeria)</i> <i>aglaja</i> (Linnaeus, 1758)	1935-1953	Băile Herculane, Păltiniş, Sibiu	EW	CS, SB	BT, TR	13	LC
	<i>Argynnis (Fabriciana)</i> <i>adippe</i> ([Denis & Schiffermüller], 1775)	1933-1952	Braşov, Cisnădioara, Măgura Cisnădiei, Guşteriţa, Sibiu	EW	BV, SB	TR	18	NT
	<i>Argynnis niobe</i> (Linnaeus, 1758)	1921-1948	Bazna, Păltiniş Sibiu, Salsburg, Schlenken	EW	SB	TR, AU	12	NT
	<i>Argynnis laodice</i> (Pallas, 1771)	1938-1953	Sibiu	EW	SB	TR	17	EN
<i>Inachis</i> Hübner, 1819	<i>Inachis (Aglais) io</i> (Linnaeus, 1758)	1936-1953	Chişinău	EW	Chişinău	RMO	11	LC
<i>Aglais</i> Dalman, 1816	<i>Aglais urticae</i> (Linnaeus, 1758)	1937	Chişinău	EW	Chişinău	RMO	13	NT
<i>Polygonia</i> Hübner, [1819]	<i>Polygonia c-album</i> (Linnaeus, 1758)	1936-1952	Chişinău, Ocna Sibiului, Sibiu	EW	SB, Chişinău	RMO	17	NT
	<i>Polygonia egea</i> (Cramer, 1775)	1910	Pola Istrien	EW	-	HR	3	EX
<i>Araschnia</i> Hübner, 1819	<i>Araschnia levana</i> (Linnaeus, 1758)	1930	Salisberg	EW	-	GE	2	NT
	<i>Araschnia prorsa</i> Linnaeus, 1758	1924-1957	Sibiu, Sighişoara	EW	SB, MS	TR	11	NT
<i>Nymphalis</i> Kluk, 1802	<i>Nymphalis antiopa</i> (Linnaeus, 1758)	1934-1955	Cisnădioara, Sibiu, Turnişor Sibiu	EW	SB	TR	14	VU
	<i>Nymphalis polychloros</i> (Linnaeus, 1758)	1888-1953	Sibiu	Umgebung EW	SB	TR	13	EN

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
	<i>Nymphalis xanthomelas</i> ([Denis & Schiffermüller], 1775)	1939	Sibiu	EW	SB	TR	3	CR
<i>Euphydryas</i> , Scudder, 1872	<i>Euphydryas maturna</i> (Linnaeus, 1758)	1935-1942	Băile Herculane	EW	CS	BT	5	VU
	<i>Euphydryas aurinia</i> (Rottemburg, 1775)	1905	Râșnov	EW	BV	TR	3	EN
<i>Melitaea</i> Fabricius, 1807	<i>Melitaea cinxia</i> (Linnaeus, 1758)	1936-1983	Sibiu, Băile Herculane, Cernica	EW	CS, IF, SB	BT, MT, TR	15	NT
	<i>Melitaea phoebe</i> ([Denis & Schiffermüller], 1775)	1931-1939	Eforie Sud, Techirgiol, Sighișoara, Chișinău, Sibiu, Gușterița	EW	Chișinău, CT, MS, SB	DB, TR, RMO	11	NT
	<i>Melitaea trivia</i> ([Denis & Schiffermüller], 1775)	1935-1954	Gușterița, Sibiu, Chișinău	EW	SB, Chișinău	TR, RMO	34	NT
	<i>Melitaea didyma</i> (Esper, 1778)	1938-1939	Gușterița, Sibiu	EW	SB	TR	2	LC
	<i>Melitaea didyma alpina</i> Staudinger, 1861	1938-1957	Sibiu	EW	SB	TR	10	VU
	<i>Melitaea didyma meridionalis</i> Staudinger, 1870	1945-1953	Sibiu	EW	SB	TR	10	VU
	<i>Melitaea aurelia</i> Nieckerl, 1850	1920-1956	Sibiu, Sighișoara	DC, EW	SB, MS	TR	7	VU
	<i>Melitaea athalia</i> (Rottemburg, 1775)	1927-1953	Bularda, Păltiniș, Sibiu	EW Alexinschi	SB, Chișinău	TR, RMO	24	NT
	<i>Melitaea athalia mehadiensis</i> Gerhard, 1822	1938-1942	Băile Herculane	EW	CS	BT	4	NT
	<i>Melitaea didymoides</i> Eversmann, 1847 sin. <i>Melitaea didyma</i> (Esper, 1778)	1934-1939	Buciumeni, Bularda	EW	GL, Chișinău	RMO, MD	4	VU
	<i>Melitaea dictynna</i> Esper, 1778 sin. <i>Melitaea diamina</i> (Lang, 1789)	1930-1956	Sibiu, Sighișoara, Tismana	EW	GJ, MS, SB	OT TR	10	VU
	<i>Melitaea parthenie</i> Godart, 1822 sin. <i>Melitaea parthenoides</i> Keferstein, 1851	1926-1953	Sibiu, Kaiserstuhl (?)	EW	SB	TR	2	VU
	<i>Melitaea parthenie</i> var. <i>varia</i> Meyer-Dür, 1851	1927-1930	Tirol Rotmoostal, Tirol Gaisbergatal	Holik	Tirol	AU	2	VU
<i>Melitaea asteria</i> Freyer, 1828	1938-1958	Sibiu	EW	SB	TR	9	VU	

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
<i>Limnitis</i> Fabricius, 1807	<i>Limnitis populi</i> , (Linnaeus, 1958)	1950	Sibiu	EW	SB	TR	2	VU
	<i>Limnitis</i> ab. <i>tremulae</i> Esper, 1800	1962	Băile Herculane	EW	CS	BT	2	VU
	<i>Limnitis camilla</i> Linnaeus, 1764	1905-1939	Băile Herculane, Sibiu, Pontresina	EW	CS	BT, TR CH	7	VU
<i>Neptis</i> Fabricius, 1807	<i>Neptis rivularis</i> (Scopoli, 1763)	1936	Băile Herculane	EW	CS	BT	6	NT
	<i>Neptis lucilla</i> ([Denis & Schiffermüller], 1775)	1936-1952	Băile Herculane, Sibiu	EW	CS	BT, TR	26	NT
<i>Apatura</i> Fabricius, 1807	<i>Apatura metis</i> Freyer, 1829	no data	no data	no data	no data	no data	2	VU
	<i>Apatura ilia</i> ([Denis & Schiffermüller], 1775)	1939-1959	Sibiu	EW	SB	TR	6	VU
	<i>Apatura ilia eos</i> Rossi, 1794	1938	Sibiu	EW	SB	TR	2	VU
	<i>Apatura iris</i> (Linnaeus, 1958)	1927-1956	Palamea, Sibiu, Șercaia	EW	BV, SB	TR	5	VU

Table 3.

Viktor Veindel's collection.

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
<i>Argynnis</i> Fabricius, 1807	<i>Argynnis paphia</i> (Linnaeus, 1758)	1903-1956	Cisnădie, Borsec, Cheile Bicazului, Ghiorghieni, Râu Vadului	VW	SB, HR, NT	TR	17	NT
	<i>Argynnis pandora</i> ([Denis & Schiffermüller], 1775)	1904-1955-	Cisnădioara, Sibiu, Râu Vadului, Cozia	VW	SB, VL	OT, TR	4	VU
	<i>Argynnis (Speyeria) aglaja</i> (Linnaeus, 1758)	1903-1954	Borsec, Cisnădioara, Colibița, Gușterița, Sibiu	VW	BN, HR, SB	TR	14	LC
	<i>Argynnis (Fabriciana) adippe</i> ([Denis & Schiffermüller], 1775)	1903-1956	Cisnădie, Gușterița, Sibiu	VW	SB	TR	7	NT
	<i>Argynnis adippe f. cleodoxa</i> Ochsenheimer, 1816	1906-1956	Cisnădie, Gușterița, Sibiu	VW	SB	TR	8	NT
	<i>Argynnis (Fabriciana) niobe</i> (Linnaeus, 1758)	1904-1922	Cârțișoara, Sibiu	VW	SB	TR	4	NT
	<i>Argynnis laodice</i> (Pallas, 1771)	1907-1921	Cisnădioara, Gușterița, Saschiz	VW	SB	TR	3	EN

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
<i>Issoria</i> Hübner, 1819	<i>Issoria lathonia</i> (Linnaeus, 1758)	1903-1958	Gușterița, Borsec, Cisnădie, Păltiniș, Cozia, Paltin, Râu Vadului	VW	SB	TR	14	LC
<i>Brenthis</i> Hübner, 1819	<i>Brenthis ino</i> Rottemburg, 1775	1921	Borsec	VW	HR	TR	4	VU
	<i>Brenthis daphne</i> ([Denis & Schiffmüller], 1775)	1954-1956	Păltiniș, Râu Vadului	VW	SB	TR	2	VU
	<i>Brenthis hecate</i> ([Denis & Schiffmüller], 1775)	1920-1956	Gușterița, Saschiz	VW	SB	TR	6	VU
<i>Boloria</i> Moore, 1900	<i>Boloria euphrosyne</i> (Linnaeus, 1758)	1904-1956	Cisnădie, Șura Mică, Sibiu	VW	SB	TR	10	VU
	<i>Boloria selene</i> ([Denis & Schiffmüller], 1775)	1903-1956	Cisnădioara, Gușterița, Șura Mică	VW	SB	TR	12	NT
	<i>Boloria dia</i> (Linnaeus, 1767)	1904-1958	Borsec, Cisnădioara, Gușterița, Păltiniș, Șura Mică, Râu Vadului	VW	SB	TR	23	LC
	<i>Boloria pales</i> ([Denis & Schiffmüller], 1775) <i>carpathomeridionalis</i> Crosson et Popescu-Gorj, 1963	1957	Suru	VW	Făgăraș Mountain	TR	5	VU Endemic
<i>Inachis</i> Hübner, 1819	<i>Inachis (Aglais) io</i> (Linnaeus, 1758)	1904-1952	Cisnădie, Sibiu	VW	SB	TR	14	LC
<i>Aglais</i> Dalman, 1816	<i>Aglais urticae</i> (Linnaeus, 1758)	1903-1930	Gușterița, Păltiniș, Sibiu	VW	SB	TR	10	NT
<i>Polygonia</i> Hübner, [1819]	<i>Polygonia c-album</i> (Linnaeus, 1758)	1904-1956	Borsec, Cisnădie, Cisnădioara, Cozia, Gușterița, Păltiniș, Sadu, Râu Vadului	VW	HR, VL, SB	OT, TR	20	NT
<i>Araschnia</i> Hübner, 1819	<i>Araschnia levana</i> (Linnaeus, 1758)	-	Sibiu	VW	SB	TR	2	NT
	<i>Araschnia levana</i> f. <i>prorsa</i> (Linnaeus, 1758)	1903-1958	Borsec, Colibița, Ghiorghieni, Păltiniș, Sibiu, Râu Sadului	VW	BN, HR, SB	TR	14	NT
<i>Nymphalis</i> Kluk, 1802	<i>Nymphalis antiopa</i> (Linnaeus, 1758)	1905-1955	Cisnădioara, Gușterița, Păltiniș, Sibiu	VW	VL, SB	OT, TR	24	VU
	<i>Nymphalis polychloros</i> (Linnaeus, 1758)	1903-1952	Gușterița, Păltiniș, Sibiu	VW	SB	TR	10	EN

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
	<i>Nymphalis xanthomelas</i> ([Denis & Schiffermüller], 1775)	1904	Sibiu	VW	SB	TR	2	CR
	<i>Nymphalis vaualbum</i> ([Denis & Schiffermüller], 1775)	1908-1922	Cisnădie, Păltiniș	VW	SB	TR	2	CR
<i>Euphydryas</i> Scudder, 1872	<i>Euphydryas aurinia</i> (Rottemburg, 1775)	1920	Saschiz	VW	SB	TR	2	EN
<i>Melitaea</i> Fabricius, 1807	<i>Melitaea cinxia</i> (Linnaeus, 1758)	1956	Șura Mică, Târnăvioara	VW	SB	TR	5	NT
	<i>Melitaea phoebe</i> ([Denis & Schiffermüller], 1775)	1903-1956	Gușterița, Sebeș, Sibiu	VW	AB, SB	TR	8	NT
	<i>Melitaea trivialis</i> ([Denis & Schiffermüller], 1775)	1920-1958	Gușterița, Prislop, Tâlmăciu, Târnăvioara	VW	SB	TR	14	NT
	<i>Melitaea didyma</i> (Esper, 1778)	1903-1956	Cisnădioara, Cisnădie, Gușterița, Paltin, Turnu Roșu, Râul Vadului, Tâmpa	DC VW	BV, SB	TR	33	LC
	<i>Melitaea athalia</i> (Rottemburg, 1775)	1903-1956	Borsec, Cisnădie, Cisnădioara, Colibița, Cozia, Cheile Bicazului, Șura Mică	DC VW	BN, HR, NT, SB, VL	MD, OT, TR, RS	37	NT
	<i>Melitaea aurelia</i> Nickerl, 1850	1907-1955	Gușterița, Viile Sibiului, Polja	DC VW	SB	TR, RS	13	VU
	<i>Melitaea didyma</i> (Esper, 1778)	1903-1956	Cisnădioara, Cisnădie, Gușterița, Paltin, Turnu Roșu, Râul Vadului, Tâmpa	DC VW	BV, SB	TR	33	LC
<i>Limenitis</i> Fabricius, 1807	<i>Limenitis populi</i> , (Linnaeus, 1758)	1904-1954	Cheile Bicazului, Sibiu	VW	HR, NT, SB	TR	5	VU
	<i>Limenitis populi</i> f. <i>tremulae</i> Esper, 1798	no data	no data	no data	no data	no data	1	VU
	<i>Limenitis camilla</i> (Linnaeus, 1764)	1954	Cheile Bicazului, Colibița	VW	BN, HR, NT	TR	7	VU
<i>Neptis</i> Fabricius, 1807	<i>Neptis rivularis</i> (Scopoli, 1763)	1904-1957	Făgăraș, Sibiu	VW	BV, SB	TR	6	NT
	<i>Neptis rivularis ludmila</i> Nordmann, 1851	1921-1954	Borsec, Tușnad	VW	HR, NT	TR	3	NT
	<i>Neptis sappho</i> Pallas, 1771	1907-1956	Gușterița, Șura Mică, Râul Vadului	VW	SB	TR	6	VU
<i>Apatura</i> Fabricius, 1807	<i>Apatura ilia</i> ([Denis & Schiffermüller], 1775)	1904	Sibiu	VW	SB	TR	2	VU
	<i>Apatura clytie</i> ([Denis & Schiffermüller], 1775)	1904-1905	Cisnădioara, Sibiu	VW	SB	TR	3	VU

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
	<i>Apatura iris</i> (Linnaeus, 1958)	1904-1954	Cisnădie, Colibița, Gheorghieni, Păltiniș, Sibiu	VW	BN, HR, SB	TR	9	VU

Table 4.

Heinrich Hann von Hanneheim's collection.

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
<i>Issoria</i> Hübner, 1819	<i>Issoria lathonia</i> (Linnaeus, 1758)	1955-1963	Apoldul de Sus, Bărcaciu, Cisnădioara, Tâlmaciu, Sibiu, Șopa	HH	SB	TR	6	LC
<i>Brenthis</i> Hübner, 1819	<i>Brenthis hecate</i> ([Denis & Schiffermüller], 1775)	1928-1956	Galeș, Gușterița, Cluj, Sibiu	HH	CJ, SB	TR	5	VU
<i>Boloria</i> Moore, 1900	<i>Boloria euphrosyne</i> (Linnaeus, 1758)	1954-1964	Gușterița, Băile Herculane, Sibiu, Șopa	HH	CS, SB	BT, TR	6	VU
	<i>Boloria selene</i> ([Denis & Schiffermüller], 1775) sin. <i>Boloria selenis</i> (Eversmann, 1837)	1954-1964	Bungard, Gușterița, Sibiu	HH	SB	TR	8	NT
	<i>Boloria dia</i> (Linnaeus, 1767)	1954-1963	Gușterița, Obreja, Slimnic, Sibiu, Tâlmaciu	HH	SB	TR	10	LC
	<i>Boloria pales</i> ([Denis & Schiffermüller], 1775) <i>carpathomeridionalis</i> Crosson et Popescu-Gorj, 1963	1963	Chica Pietrilor	HH	BV	TR	3	VU
<i>Inachis</i> Hübner, 1819	<i>Inachis (Aglais) io</i> (Linnaeus, 1758)	1955-1957	Păltiniș, Sâmbata, Sibiu	HH	BV, SB	TR	4	LC
<i>Polygonia</i> Hübner, [1819]	<i>Polygonia c-album</i> (Linnaeus, 1758)	1954-1957	Gușterița, Păltiniș, Sebeș, Sibiu, Tâlmaciu	HH	AB, SB	DB, TR	13	NT
<i>Araschnia</i> Hübner, 1819	<i>Araschnia levana</i> (Linnaeus, 1758)	1954-1964	Gușterița, Slimnic, Sebeș, Sibiu	HH	AB, SB	TR	9	NT
<i>Nymphalis</i> Klук, 1802	<i>Nymphalis antiopa</i> (Linnaeus, 1758)	1954-1955	Păltiniș	HH	SB	TR	3	VU
<i>Melitaea</i> Fabricius, 1807	<i>Melitaea cinxia</i> (Linnaeus, 1758)	1955-1957	Cisnădioara, Gușterița, Slimnic	HH	SB	TR	3	NT
	<i>Melitaea didyma</i> (Esper, 1778)	1955-1962	Apoldul de Sus, Sibiu, Tâlmaciu	HH	SB	TR	8	LC
	<i>Melitaea aurelia</i> Nickerl, 1850	1956-1965	Ocna Sibiului, Gușterița	HH	SB	TR	6	VU

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
	<i>Melitaea athalia</i> (Rottemburg, 1775)	1954-1958	Apoldul de Sus, Gușterița, Sibiu, Tâlmăciu	HH	SB	TR	10	NT
<i>Limnitis</i> Fabricius, 1807	<i>Limnitis populi</i> (Linnaeus, 1958)	1963-1964	Sibiu	HH	SB	TR	3	VU
<i>Neptis</i> Fabricius, 1807	<i>Neptis aceris</i> sensu Lhomme, 1924	1956-1958	Sibiu, Tâlmăciu	HH	SB	TR	4	VU
	<i>Neptis lucilla</i> ([Denis & Schiffermüller], 1775)	1954-1964	Sibiu, Sâmbata	HH	BV, SB	TR	5	NT
<i>Apatura</i> Fabricius, 1807	<i>Apatura ilia</i> ([Denis & Schiffermüller], 1775)	1954-1964	Prejmer, Sâmbata, Tușnad	HH	BV, HR, SB	TR	3	VU
	<i>Apatura iris</i> (Linnaeus, 1958)	1954-1964	Măgura Cisnădiei, Păltiniș, Sâmbata, Tușnad	HH	BV, HR, SB	TR	8	VU

Table 5.

Rolf Wehrauch's collection.

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
<i>Argynnis</i> Fabricius, 1807	<i>Argynnis pandora</i> ([Denis & Schiffermüller], 1775)	1965-1978	Băile Herculane, Băneasa, Canaraua Fetii, Cozia, Hagieni, Iormac, Sibiu	RW	CS, CT, VL, B, SB	DB, OT, TR	15	VU
<i>Inachis</i> Hübner, 1819	<i>Inachis (Aglais) io</i> (Linnaeus, 1758)	1955-1971	Colibița, Cozia, Iormac, Praid, Sibiu, Vlădeasa	RW	BN, CT, HR, SB, VL	DB, OT, TR	9	LC
<i>Aglais</i> Dalman, 1816	<i>Aglais urticae</i> (Linnaeus, 1758)	1954-1977	Băile Herculane, Păltiniș, Someș, Tușnad, Vlădeasa	RW	CS, HR, SB	BT, TR, Western Carpathians	8	NT
<i>Polygonia</i> Hübner, [1819]	<i>Polygonia c-album</i> (Linnaeus, 1758)	1954-1977	Covasna, Gârbova, Domogled, Păltiniș, Sibiu	RW	CS, CT, CV, GL, SB	DB, OT, MD, TR	16	NT
<i>Araschnia</i> Hübner, 1819	<i>Araschnia levana</i> (Linnaeus, 1758)	1954-1975	Băile Herculane, Covasna, Gușterița, Lugoș, Porumbacu, Tușnad, Negoi, Sibiu	RW	CS, CV, HR, SB, TM	BT, TR	31	NT
<i>Nymphalis</i> Kluk, 1802	<i>Nymphalis antiopa</i> (Linnaeus, 1758)	1951-1970	Colibița, Cozia, Covasna, Lotru, Păltiniș	RW	BN, CV, HR, VL, SB	DB, OT, TR	10	VU
	<i>Nymphalis polychloros</i> (Linnaeus, 1758)	1954-1971	Canaraua Fetii, Sibiu	RW	CT, SB	DB, TR	7	EN

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
	<i>Nymphalis xanthomelas</i> ([Denis & Schiffermüller], 1775)	1956	Domogled	RW	CS	BT	4	CR
	<i>Nymphalis vaualbum</i> ([Denis & Schiffermüller], 1775)	1942-1970	Căprioara, Poiana Mărului	Pelits, RW, Teleki	BV, CS	BT, TR	3	CR
<i>Euphydryas</i> , Scudder, 1872	<i>Euphydryas orientalis</i> (Herrich-Schaffer, [1851]) sin. <i>Euphydryas aurinia</i> (Rottemburg, 1775)	1922	Batnita (?)	no data	no data	no data	2	CR
<i>Melitaea</i> Fabricius, 1807	<i>Melitaea cinxia</i> (Linnaeus, 1758)	1954-1975	Băile Herculane, Canaraua Fetii, Domogled, Gâneasa, Retezat Mountain	RW	CS, CT, IF, Southern Carpathians	DB, MT	15	NT
	<i>Melitaea phoebe</i> ([Denis & Schiffermüller], 1775)	1954-1978	Băile Herculane, Domogled, Hagieni, Galați	RW	CS, CT, GL, MH, GJ	BT, DB, OT, MD	24	NT
	<i>Melitaea didyma</i> Esper, 1778	1954-1971	Băile Herculane, Domogled, Gușterița, Retezat Mountain, Sibiu, Tușnad	RW	CS, MH, GJ, SB	BT, OT, TR	18	LC
	<i>Melitaea didyma occidentalis</i> Staudinger, 1861	1943-1962	UlrichSberg Kärnten/Karintia	Thurner	-	AU	2	VU
	<i>Melitaea dictynna</i> Esper, 1778 sin. <i>Melitaea diamina</i> (Lang, 1789)]	1955-1977	Sadu, Someșu Rece	RW	CJ, SB	TR	4	VU
	<i>Melitaea aurelia</i> Nickerl, 1850	1952-1963	Băile Herculane	RW	CS	BT	5	VU
	<i>Melitaea britomartis</i> Assmann, 1847	1956-1974	Băile Herculane	RW	CS	BT	6	NT
	<i>Melitaea athalia</i> (Rottemburg, 1775)	1950-1977	Avrig, Băile Herculane, Buila Vânturarița, Hagieni, Praid, Tușnad, Valea Vinului, Gioagiu, Someșul Rece	RW	BN, CS, CJ, CT, HR, HD, VL	BT, DB, OT, TR	12	NT
	<i>Melitaea nevadensis</i> Oberthür, 1904	1956-1967	Băile Herculane, Domogled	RW	CS, MH, GJ	BT, OT	15	NT

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
<i>Limenitis</i> Fabricius, 1807	<i>Limenitis populi</i> (Linnaeus, 1958)	1954-1964	Ceahlău, Hoghilag, Obreja, Tuşnad	RW	CS, HR, SB	BT, TR, Eastern Carpathians	4	VU
	<i>Limenitis populi</i> f. <i>tremulae</i> Esper, 1798	1964-1976	Băile Herculane, Domogled	RW	CS, MH, GJ	BT, OT	4	VU
	<i>Limenitis camilla</i> (Linnaeus, 1764)	1954-1967	Domogle, Tuşnad	RW	CS, HR, GJ, MH	BT, OT, TR	7	VU
	<i>Limenitis reducta</i> Staudinger, 1901	1961-1971	Domogled, Miercurea Băi	RW	CS, MH, GJ, SB	BT, OT, TR	4	EN
<i>Neptis</i> Fabricius, 1807	<i>Neptis sappho</i> [Pallas, 1771]	1963-1969	Băile Herculane, Domogled, Sibiu	RW	CS, MH, GJ, SB	BT, OT, TR	6	VU
	<i>Neptis rivularis</i> (Scopoli, 1763)	1954-1974	Guşteriţa, Domogled, Someş	RW	CS, CJ, GJ, MH, SB	BT, OT, TR	9	NT
	<i>Neptis lucilla</i> ([Denis & Schiffmüller], 1775) syn. <i>Neptis</i> <i>rivularis</i> (Scopoli, 1763)]	1962-1974	Guşteriţa, Domogled, Someş	RW	CS, CJ, GJ, MH, SB	BT, OT, TR	9	NT
<i>Apatura</i> Fabricius, 1807	<i>Apatura ilia</i> ([Denis & Schiffmüller], 1775)	1971	Canaraua Fetii	RW	CT	DB	1	VU
	<i>Apatura clytie</i> ([Denis & Schiffmüller], 1775)	1953-1963	Băile Herculane, Tuşnad	RW	CS, HR	BT, TR	8	VU

Table 6.

Eckbert Schneider's collection.

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
<i>Libythea</i> Fabricius, 1807	<i>Libythea celtis</i> (Laicharting, 1782)	1949	Băile Herculane	ES	CS	BT	1	EN
<i>Argynnis</i> Fabricius, 1807	<i>Argynnis paphia</i> (Linnaeus, 1758)	1952-1978	Agnita, Lotrioara, Laita, Hamba, Mailat, Sighişoara, Sibiel, Sibiu, Zarand	ES	AR, BV, MS, SB, Western Carpathians	BT, CR, TR	13	NT
	<i>Argynnis pandora</i> ([Denis & Schiffmüller], 1775)	1954- 1979	Bestepe, Bruiu, Măcin, Hagieni, CA Rosetti, Sibiu	ES	CT, SB, TL	DB, TR	8	VU
	<i>Argynnis (Speyeria)</i> <i>aglaja</i> (Linnaeus, 1758)	1973-1982	Hamba, Şura Mare, Cerna, Laita, Porumbacu	ES	BV, CS, MH, GJ, SB	BT, OT, TR	7	LC

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
	<i>Argynnis (Fabriciana) niobe</i> , (Linnaeus, 1758)	1952-1984	Agnita, Cisnădie, Gușterița, Tomnatic, Beja, Șura Mare, Slimnic, Sighișoara, Tâlmăciu, Zarand	ES	SB, HD, MS, TM, Western Carpathians	BT, TR	16	NT
<i>Issoria</i> Hübner, 1819	<i>Issoria lathonia</i> (Linnaeus, 1758)	1955-1967	Iortmac, Slimnic, Șiria, Sibiu, Turda	ES	AR, CJ, CT, SB	CR, DB, TR	12	LC
<i>Brenthis</i> Hübner, 1819	<i>Brenthis daphne</i> ([Denis & Schiffermüller], 1775)	1956-1960	Sibiu, Zarandului Mountain	ES	Western Carpathians	TR	8	VU
	<i>Brenthis hecate</i> ([Denis & Schiffermüller], 1775)	1949-1976	Agârbiciu, Buia, Bruiu, Nocrich, Făget, Cincu, Gușterița, Șeica Mare, Șura Mare, Târnava	ES	CJ, SB	TR	16	VU
<i>Boloria</i> Moore, 1900	<i>Boloria euphrosyne</i> (Linnaeus, 1758)	1955-1969	Cozia, Rodna	ES	BN, VL, Eastern Carpathians	OT, TR	4	VU
	<i>Boloria selene</i> ([Denis & Schiffermüller], 1775)	1955-1984	Axente Sever, Bruiu, Cincu, Cisnădie, Coșșa Mică, Hamba, Podu Olt, Porumbacu, Nocrich, Chiș-Chiș, Șura Mare, Slimnic, Rusciori, Porumbacu	ES	BV, SB	TR	27	NT
	<i>Boloria dia</i> (Linnaeus, 1767)	1952-1984	Agârbiciu, Avrig, Cincu, Clopotiva, Cluj Napoca, Coșșa Mică, Gușterița, Făget, Hagieni, Podu Olt, Râu Vadului, Slimnic, Sibiu, Șiria, Șura Mare, Veseud	ES	AR, CJ, CT, HD, VL, SB,	CR, DB, OT, TR	36	LC
<i>Inachis</i> Hübner, 1819	<i>Inachis (Aglais) io</i> (Linnaeus, 1758)	1960-1976	Gușterița, Zarand	ES	SB, Western Carpathians	TR	2	LC
<i>Aglais</i> Dalman, 1816	<i>Aglais urticae</i> (Linnaeus, 1758)	1964-1974	Hamba, Sibiu, Vrancea	ES	SB, VN	MD, TR	4	NT
<i>Polygonia</i> Hübner, [1819]	<i>Polygonia c-album</i> (Linnaeus, 1758)	1963-1975	Brașov, Cincu, Cisnădie, Gușterița, Hamba, Rusciori	ES	BV, SB	TR	7	NT

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
<i>Araschnia</i> Hübner, 1819	<i>Araschnia levana</i> (Linnaeus, 1758)	1967-1981	Făgăraș, Gușterița, Podu Olt, Sighișoara, Slimnic, Veștem	ES	BV, MS, SB	TR	11	NT
<i>Nymphalis</i> Klук, 1802	<i>Nymphalis antiopa</i> (Linnaeus, 1758)	1953	Sibiu	ES	SB	TR	2	VU
	<i>Nymphalis polychloros</i> (Linnaeus, 1758)	1953-1983	Cașolț, Cornățel, Sibiu	ES	SB	TR	3	EN
<i>Euphydryas</i> Scudder, 1872	<i>Euphydryas maturna</i> (Linnaeus, 1758)	1960	Chiș-Chiș	ES			4	VU
	<i>Euphydryas aurinia</i> (Rottemburg, 1775)	1960-1982	Gherdeal, Șercaia	ES	BV, VL	OT, TR	5	EN
<i>Melitaea</i> Fabricius, 1807	<i>Melitaea cinxia</i> (Linnaeus, 1758)	1954-1983	Cincu, Cornățel, Gușterița, Nocrich, Făget, Roșia, Șiria, Șura Mare, Slimnic, Sibiu, Saschiz	ES	AR, CJ, MS, SB	CR, TR	29	NT
	<i>Melitaea phoebe</i> ([Denis & Schiffermüller], 1775)	1952-1975	Axente Sever, Sibiu, Viile Sibiului, Nocrich, Făget, Gușterița, Hagieni, Hamba, Clopotiva, Chiș-Chiș, Cincu, Merghindeal, Podu Olt, Zarand	ES	CT, SB	DB, TR, Southern Carpathians	44	NT
	<i>Melitaea trivialis</i> ([Denis & Schiffermüller], 1775)	1970-1976	Axente Sever, Băile Herculane, Gușterița, Hagieni, Nocrich, Orlat, Sibiel, Sibiu, Slimnic, Șura Mare, Veștem	ES	CS, CT, SB	BT, DB, TR	20	NT
	<i>Melitaea didyma</i> (Esper, 1778)	1952-1980	Agnita, Băile Herculane, Cenade, Cornățel, Făget, Gușterița, Hamba, Lotrioara, Orlat, Orșova, Podu Olt, Șiria, Slimnic, Șeica Mare, Șura Mare, Veștem	ES	AB, AR, CS, CJ, MH, VL, SB	BT, CR, OT, TR	55	NT
	<i>Melitaea aurelia</i> Nickerl, 1850	1954-1984	Aiud, Axente Sever, Cenade, Clopotiva, Bruuiu, Gușterița, Făget, Moșna, Rău Vadului, Roșia, Șiria, Scărița Belioara, Nocrich, Șura Mare, Șeica Mare, Șercaia	ES	AB, AR, CJ, BV, HD, VL, SB, Western Carpathians	CR, OT, TR	55	VU

Genus	Species	Collection period	Collection site	Legit	County	Region	Specimens	Status
	<i>Melitaea athalia</i> (Rottemburg, 1775)	1954-1982	Băile Herculane, Cincu, Chiș-Chiș, Feldioara, Fărget, Gusu, Gușterița, Hamba, Mohu, Nocrich, Poplaca, Șercaia	ES	BV, CS, CJ, SB	BT, TR	23	NT
<i>Neptis</i> Fabricius, 1807	<i>Neptis rivularis</i> (Scopoli, 1763)	1974-1982	Arpășel, Făgăraș, Sibiu	ES	BV, SB	TR	8	NT
	<i>Neptis lucilla</i> ([Denis & Schiffermüller], 1775)	1958-1974	Bejan, Gușterița, Șiria	ES	AR, HD, SB	CR TR	8	NT
	<i>Neptis sappho</i> Pallas, 1771	1970-1975	Bejan, Șeica Mare, Veștem	ES	HD, SB	TR	6	VU
<i>Apatura</i> Fabricius, 1807	<i>Apatura ilia</i> ([Denis & Schiffermüller], 1775)	1968-1970	Sibiu, Șeica Mare	ES	SB	TR	2	VU
	<i>Apatura iris</i> (Linnaeus, 1758)	1959-1982	Băile Herculane, Păltiniș, Șeica Mare	ES	CS, SB	BT, TR	4	VU

Table 1

Daniel Czekelius's collection of lepidoptera is the oldest with specimens collected between 1887 and 1934 in the regions SM and TR, Sibiu County and nearby locations. This collection consists of 14 genera and 49 species represented by a number of 271 specimens (Fig. 1) and is, thus, the most complex collection regarding the species' biodiversity (Table 1). This collection also includes an endemic species, *Melitaea retyezatica* Diószeghy, 1930 from *Melitaea athalia* (Rottemburg, 1775), represented by twenty-six specimens collected by László Diószeghy in the Retezat Mountains (Southern Carpathians) between 1919 and 1922. The species in this collection represent the following conservation status: 18 taxa VU- 36.74%, 18 taxa NT- 36.74%, six taxa LC- 12.24%, four taxa EN-8.16%, two taxa CR-4.08% and one endemic taxon, 2.04%.

Eugen Worell's collection consists of 394 specimens of 11 genera and 42 species collected between 1888 and 1959 (Fig. 1). The species originate from Romania's five regions (BT, DB, OT, MD, MT and TR) and other European countries (Austria, Croatia, Germany, the Republic of Moldova and Switzerland). The oldest specimen is the *Nymphalis polychloros* (Linnaeus, 1758) species and was collected in 1888. The collectors listed on the labels are Eugen Worell, Daniel Czekelius, László Diószeghy and Alexei Alexinschi. Considering their conservation status, these species are grouped as following: one species EX-2.38%, *Polygonia egea* (Cramer, 1775), from the site Pula, Istria, Croatia, one species CR-2.38%, three species EN-7.15%, 19 species VU-45.23%, 15 species NT-35.71% and three species LC-7.15% (Table 2).

Viktor Weindel's collection contains 385 specimens of 14 genera and 40 species of butterflies of the nymphalid family (Fig. 1). They were collected in OT and TR regions

between 1903 and 1958, from various sites in Sibiu County and the Făgăraș Mountains. The oldest specimen *Argynnis paphia* (Linnaeus, 1758) was collected in 1903. The collection also contains an endemic species, *Boloria pales* ([Denis & Schiffermüller], 1775) *carpathomeridionalis* Crosson et Popescu-Gorj, 1963 that was collected in the Făgăraș Mountains. Viktor Weindel is the collector listed on the labels. The endangerment level of the specimens is the following: two species CR-5%, three species EN-7.5%, 15 species VU-37.5%, 15 species NT-37.5% and five species LC-12.5% (Table 3).

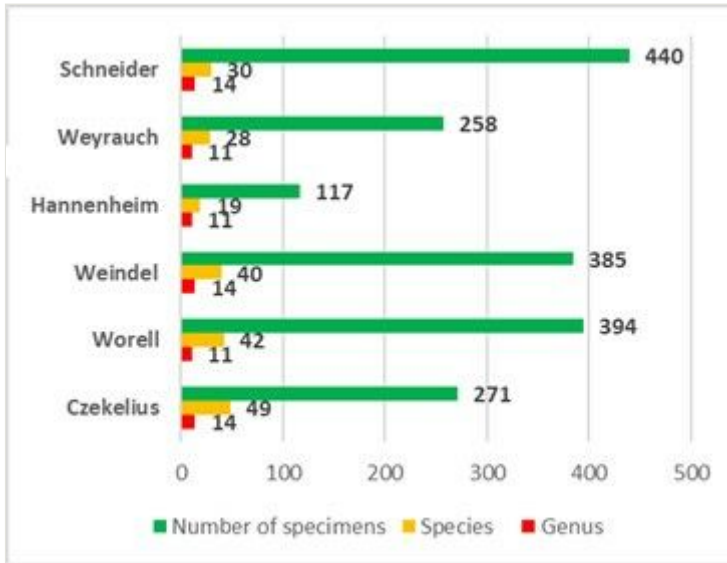


Figure 1. [doi](#)

Systematic representation of the six collections by genera, species and number of specimens.

The fewest specimens are found in Heinrich Hann von Hannenheim's collection consisting of 117 specimens (distributed in 11 genera and 19 species (Fig. 1). The oldest specimen is *Brentis hecates* ([Denis & Schiffermüller], 1775) collected in 1928. The species were collected in BT, DB and TR and were determined by the collector himself whose name can be found on all labels. Conservation status is as follows: nine species VU-47.37%, six species NT-31.58% and four species LC-21.05% (Table 4).

Rolf Weihrach's collection contains 258 specimens distributed in 11 genera and 28 species (Figure 1) collected from 1922 to 1978. The oldest specimen is *Euphydryas orientalis* (Herrich-Schaffer, [1851]) sin. *Euphydryas aurinia* (Rottemburg, 1775) collected in 1922. The information on the labels is unreadable. The species were collected in BT, DB, OT, MD, MT and TR from the Southern Carpathians, as well as in Austria. All species were determined by the collector whose name appears on all labels. The analysis of their endangerment level is as follows: three taxa CR-10.7%, two taxa EN-7.14%, 11 taxa VU-39.28%, 10 taxa NT-35.73% and two taxa LC-7.14% (Table 5).

The newest is Eckbert Schneider's collection. It contains 440 specimens of 14 genera and 30 species (Fig. 1) collected between 1949 and 1984 in BT, CR, DB, OT, MD and TR, as well as the Western Carpathians. The oldest specimen was collected in 1949 and is the only *Lybetea celsis* (Laicharting, 1782) species held by the Museum. The endangerment level of the collection's specimens is as follows: three specimens EN-10%, 10 specimens VU-33.33%, 12 specimens NT-40% and five specimens LC-16.67% (Table 6).

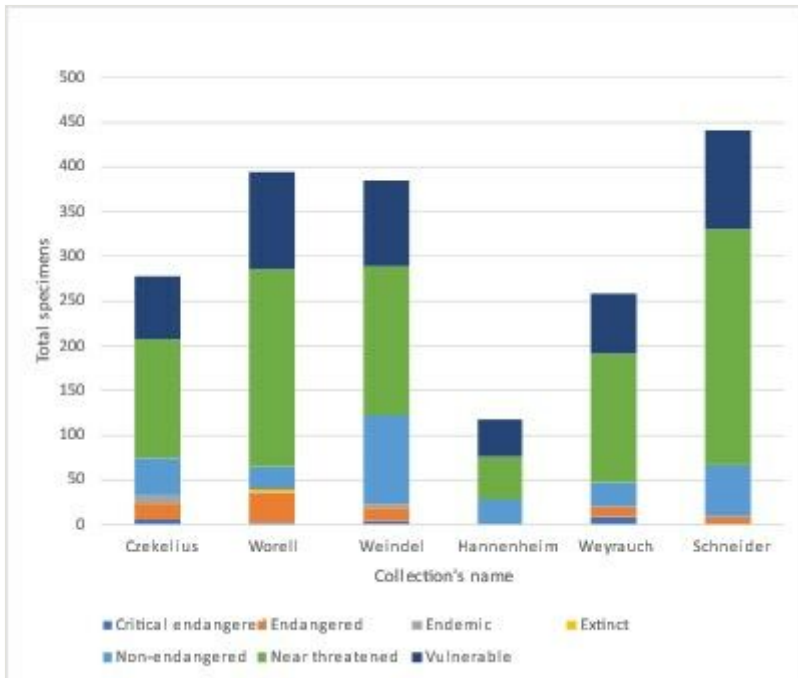


Figure 2. [doi](#)

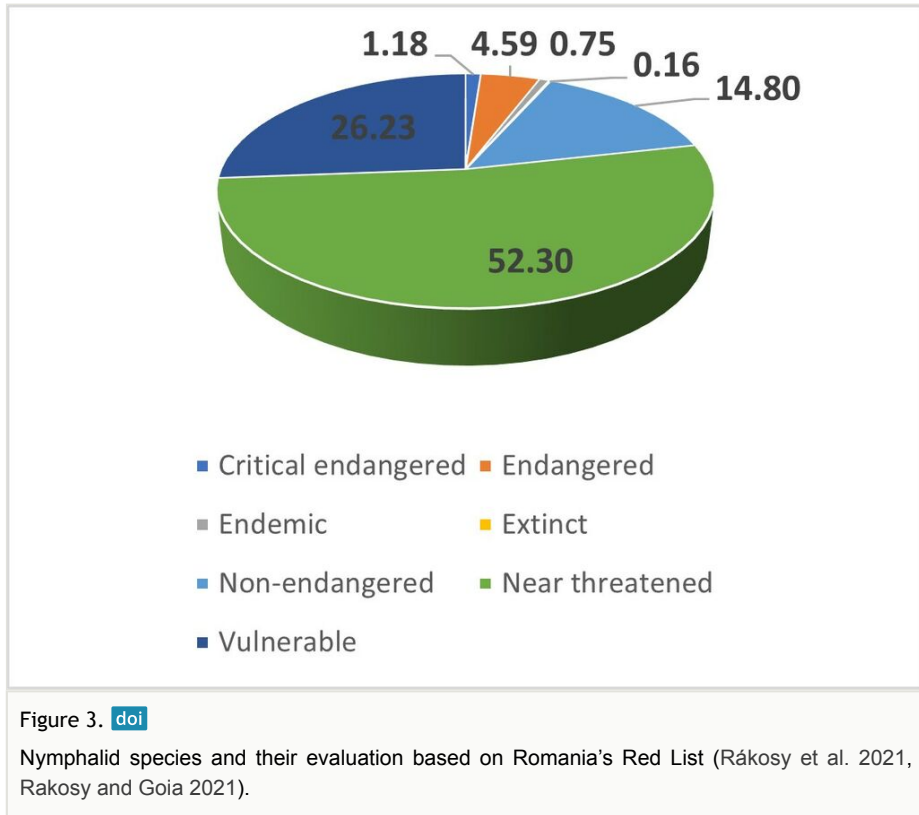
The distribution of species from the collections by IUCN categories.

We present data pertaining to genus diversity, species and existing specimen number present in each collection (Fig. 1). The oldest collection (DC) displays the highest diversity of species. This collection contains 14 genera and 49 species. It is followed in chronological order by EW with 42 species and VW with 40, confirming that, at that time, natural scientists were interested in learning more about and studying the biodiversity of butterflies in SB, the neighbouring localities, as well as in other TR sites and Romanian regions. The species from the more recent collections (HH and RW) contain a lesser number of genera and species, but include more specimens from the DB region. The newest collection (ES) re-confirms the presence of 30 butterfly species of the Nymphalid family captured in six Romanian regions (TR, BT, CR, MD, DB and OT) that are also represented by the largest number of collected specimens.

To facilitate national and international comparison, we present data referring to the distribution of species considering the IUCN conservation categories in Fig. 2 (Rákósy 2013,

Rakosy and Goia 2021), revealing that the majority of the species of all six collections are potentially endangered taxa (NT) followed by non-endangered (LC), vulnerable (VU), critically endangered (EN) extinct (EX) and endemic taxa.

We also present the percentages of the Nymphalid family's zoological categories in (Fig. 3). The highest value (52.30%) pertains to potentially endangered taxa, followed by critically endangered (26.23%), non-endangered (14.80), endangered (4.59%), vulnerable 1.18%, as well as extinct (0.16%) taxa.



By synthesising the data referring to the six lepidoptera collections (DC, EW, VW, RW, HH and ES), we identified 157 sites where the butterflies of the nymphalid family were collected between 1887 and 1984. The species were collected in all of Romania's eight regions, from 23 counties and the capital of Bucharest, i.e. on 56.1% of Romania's territory. I designed a map based on these data that reflects the distribution of species in eight regions whose counties are listed by collector: (1-DC), seven counties, BN, BV, CJ, CV, HR, MS, SB, all in the TR and SM regions, (2-EW), nine counties, BV, CS, CT, GL, GJ, IF, MS, VL, SB, from five of Romania's regions: BT, DB, OT, MD si TR; (3-VW), seven counties, AB, BN, BV, HR, NT, VL, SB, from three regions: MD, OT, and TR; (4-RW), 16 counties, BN, BV, CJ, CS, CT, CV, GL, GJ, HR, HD, IF, MH, VL, SB, TM and Bucharest, from six of Romania's regions: BT, DB, MD, MT, OT, TR and Bucharest; (5-HH), six

counties, AB, BV, CS, CJ, HR, SB, from two of Romania's regions: BT and TR; (6-ES), 16 counties, AB, AR, BN, BV, CS, CJ, CT, GJ, HD, MH, MS, VL, SB, TM, TL, VN, from six of Romania's regions: BT, CR, DB, OT, MD, TR (Fig. 4).

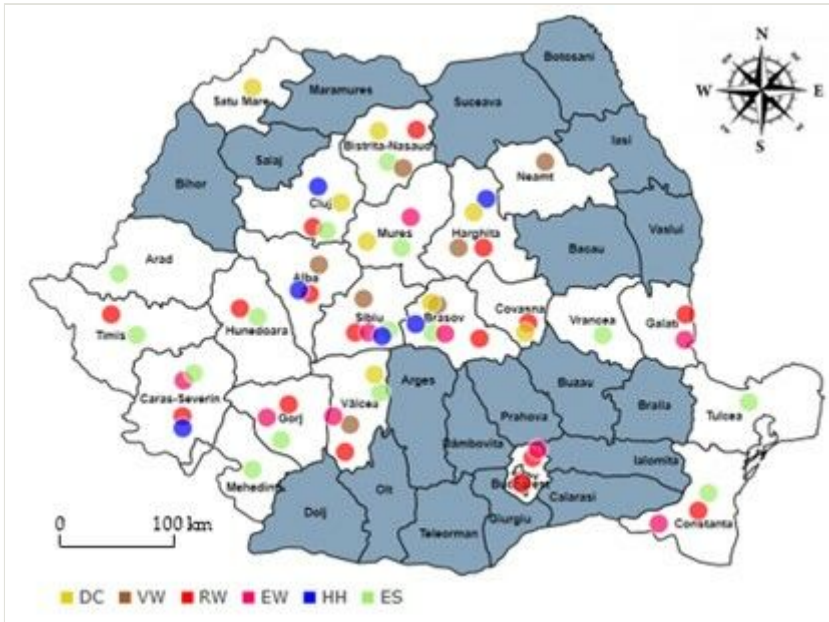


Figure 4. [doi](#)

Geographical representation of Romania and the sites of collectors (red bullet - represents RW, blue bullet - represents HH, yellow bullet - represents DC, brown bullet - represents VW, green bullet - represents ES and pink bullet - represents EW).

The species collected in other European countries (Austria, Croatia, Switzerland, Germany, the Republic of Moldova and Serbia) were also graphically represented in Fig. 5.

Conclusions

Romania's territory has a surface of 237,500 km² that comprises a variety of geographic forms, from Alpine meadows to the Danube Delta's hydrological profile. They are populated by a diverse fauna of lepidoptera containing over 200 diurnal butterfly species. Romania's South, especially the South-East and South-West (BT and DB) is the region with the highest diversity of lepidoptera in the country (Székely 2008) and, at the same time, the northern limit of the distribution of their Balkan species in Europe (Ștefanescu et al. 2013, Wildman et al. 2022). The Danube's gorge connects the Carpathian and Balkan Mountains. This geological formation has facilitated the entry of Balkan-type mountainous-subalpine elements into Romania, as far as the Retezat Mountains, for instance *Melitaea retyezatica* Diöszeghy, 1930. Given that the Carpathian Mountains do not exceed 2,500 m in height, their butterfly fauna is characterised mostly by subalpine, boreo-alpine and boreo-montane species (Székely 2008). Most endemic species have formed in the isolated, high regions of the Carpathian Mountains. They were analysed and included in

the collections as follows: *Melitaea retyezatica* Diöszeghy, 1930, *Argynnis pandora dacica* Hormuzaki, 1892 and *Boloria pales* ([Denis & Schiffermüller], 1775) *carpathomeridionalis* Crosson et Popescu-Gorj, 1963. The Romanian Catalogue of Lepidoptera records the presence of 90 species of which the Nymphalids are distributed as follows: BT (78 species), CR (60 species), TR (78 species), SM (66 species), OT (73 species), MT (77 species), MD (68 species) and DB (62 species) (Rakosy and Goia 2021). I have identified 49 species in the collections, which represent 54.44% of the species in Romania's fauna. These species are distributed by counties as follows: BT with the counties (CS and TM); CR (AR); DB (CT and TL), MD (GL, NT, and VR); MT (IF); OT (GJ, MH, and VL); SM (SM), TR (AB, BN, BV, CV, CJ, HR, HD, MS, SB) and the capital Bucharest. Based on synthesising the collection data and on previously published data on species of this family (Stancă-Moise 2022), the present article presents 16 genera and 1966 specimens of the Nymphalid family collected in Romania since 137 years ago.



Figure 5. [doi](#)

The species collected in other European countries are graphically represented.

The article illustrates the biodiversity of the nymphalid family and their historical evolution in Romania and Europe, thus bringing an important historical, scientific and biogeographic "Council Directive (1992)" contribution to the study of butterflies. With the earliest data from 1887, my research complements current research on the presence, diversity and distribution of the nymphalid family in Romania until 1984. Alongside other rare, extinct or endangered species, the presence of nymphalid species with various endangerment levels in the patrimony of the Natural History Museum Sibiu enhances the scientific value of the museum's collections and confirms their significance for ascertaining the biodiversity and distribution of the species throughout time. Future research will include digitising the

Museum's butterfly collection to facilitate the access to the collected specimens for specialists searching for historical data on the species.

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