

BASELINE MONITORING OF MACROLEPIDOPTERA IN HIGH GRASSLANDS AROUND SIBIEL, ROMANIA

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ABSTRACT: A study of diurnal Lepidoptera (Rhopalocera) populations was completed in 2015 in meadows cut for hay around the village of Sibiel, located 22 km from Sibiu, central Romania. From a combination of field survey and literature review the following meta and species trait data was acquired for each of the species collected: (1) Biogeographic region association; (2) Broad habitat type(s) preferred by adults, (3) National status (4) Altitudinal range (5) Flight period (6) IUCN Conservation status. (7) Larval food plants (8) Overwintering stage (9) Migratory status and (10) No. specimens collected (and location). There were 59 species collected from six families: *Hesperioidea* (7 species), *Papilionidae* (1 species), *Pieridae* (10 species), *Lycaenidae* (14 species), *Nymphalidae* (17 species) and *Satyrinae* (10 species). Butterflies respond rapidly to environmental changes and are important indicators of the health of biodiversity and the wider environment. This study has generated an important new baseline on the status of butterflies in the region, from which future changes can be measured and the impacts of anthropogenic pressures, such as climate change and agricultural intensification evaluated.

Keywords: faunistics; ecology; zoogeography; Macrolepidoptera; Rhopalocera; Sibiel, biodiversity indicators.

INTRODUCTION:

Sibiel village is as an old tourism settlement situated 22 km from Sibiu, central Romania. The village is located in the Cibin basin bordered by Bărcu Roșu Hill at an altitude of 1400m. It is bordered in the south and southeast by the Orlățelului springs, creeks which flow gather on the left side that spring from them Cacova forests and then discharged into the river Orlat a total length of 15 km. In the west, NV triangle bounded by the river right branch of Sibiel river whose headwaters are and where the Red Bărcu reep streams: Scorșet, Săroaia Fortress Valley, Uții Valley.

Climate elements of the collecting area are given by the dispersion of the relief in the opening stag advantaging the run of the northwest Atlantic air masses. The climate can be characterized as temperate continental which is characteristic of central Europe, with regional differences depending on altitude and landforms.

Annual air temperature exerts a great influence on the number of generations per year in Lepidoptera, depending mostly on global radiation. The average annual temperature ranges between 7 and 10°C, whilst the average temperature in July is between 17 and 22°C, and in January between -2 and -4°C. The average date of first frost is September 20th and the last frost around April 20th [Bucșa (2011)].

The natural vegetation is dominated by mesophilic elements due to climatic and soil factors, though this has been heavily modified by human activity. Vegetation relief arrangement closely follows the storied steps from an altitude of 499 m (CFR Halta Sibiel) to 1400 m in the Crinț (hut). Typical grassland species of the region include *Deschamsia flexuosa*, *Homogyne alpine*, *Oxalis acetosella*, *Hypericum soiled*. Due to waterlogged soils, meso-hydrophilic species predominate, with characteristic grass and herb species including: *Festuca rubra*, *Dactylis glomerata*, *Plantago lanceolata*, *Lotus corniculatus*, *Centaurea*

pannonica and *Ranunculus acer*. Tree and shrub species commonly occurring include *Alunus that*, *Rosa canina*, *Sambucus spp.*, *Salix caprea*, *Salix purpurea* and *Populus tremula*, which create a structurally varied mosaic habitat highly attractive to day-flying butterflies. At higher altitudes from climbing to halt Sibiel and Fantanele Cabana the composition of the forest is made of *Quercus petraea*, *Carpinus betulus* and *Fagus sylvatica*, the latter of which is usually found in sheltered, less sunny slopes. Alongside *Fagus sylvatica*, other species occurring include *Acer pseudoplatanus*, *Sorbus aucuparia* and *Betula verrucosa*. Coniferous forests appear in the high areas [Schneider-Binder (1973)]. All these flora elements provide a superb habitat for an abundance of butterflies, making the area even more beautiful and interesting to eco-tourists. [Much of the area in the immediate vicinity of the village is occupied by arable crops, meadows and orchards with apple the predominant species [Antofie et. al., (2015); Stancă-Moise (2014); Stancă-Moise (2015)]. The presence of so many different types of plants are attractive to a variety of lepidopterofauna. Although the majority of lepidoptera species present are characteristic of central Europe, more southerly distributed also occur due to the favourable (warming) Transylvania climate.

The study of lepidoptera in Transylvania has a long history [Stancă-Moise (2005c,b,c,d,e,f); Stancă-Moise (2006a,b); Stancă-Moise (2007a,b,c); Moise (2011a,b,c,d,e); Stancă-Moise (2012a,b); Moise&Sand (2012); Stancă-Moise (2014); Stancă-Moise (2015a,b,c,d); Stancă-Moise (2016a,b); Székely (2014)]. Since the middle of the last century, a whole host of renowned specialists or simply collectors have contributed to the knowledge base [Moise (2011); Moise (2014); Niculescu (1961); Schneider (1971); Schneider (1996); Stancă-Moise (2002); Stancă-Moise (2003a,b)]. Daniel Czeckelius [Antonie (2015); Bucșa&Tăușan (2011); Ciochia&Stancă-Moise (2002);

Czekelius (1897); Czekelius (1917); Moise (2011a,b), Eugen Worel [Moise (2011c), Victor Weidel [Moise (2011d); Schneider (1984)], are authors of collections around Sibiu, Dumbrava Sibiu and Sibiel. More recent Lepidoptera studies have included in 2003 [Stancă-Moise (2003c)] and also in 2015; focussing on lepidoptera pests of fruit and vegetable gardens [Antofie (2015a,b); Stancă-Moise (2014); Stancă-Moise (2015c), Stancă-Moise (2016a)], using pheromone traps [Stancă-Moise (2016b)] and use of pheromone traps [Stancă-Moise (2016b)]. This article contributes to this impressive history, providing up-to-date information on the current status and distribution of day-flying Romanian Lepidoptera species, in the context of ecological meta-data and nature conservation.

MATERIALS AND METHODS:

The collection sites were located in Sibiel grassland, over the periode April to October 2015. Search were made throughout this period, with more intensive effort during the summer months. Specific survey areas where specimens were collected included: North Sibiel village: Valea Cetății, Calea Nouă, Schit Sibiel, Colibi, Gura Morii, in the South-East: Bărcul Roșu (Fig. 1A), Subpărățel Forest (Fig. 1B.), Luncă (Fig. 1C), Vadul (Fig. 1D), in the South-West: grassland Vii (Fig. 1E), Locuri Rele (Fig. 1F). Note these are local place names, which have been used for hundreds of years.

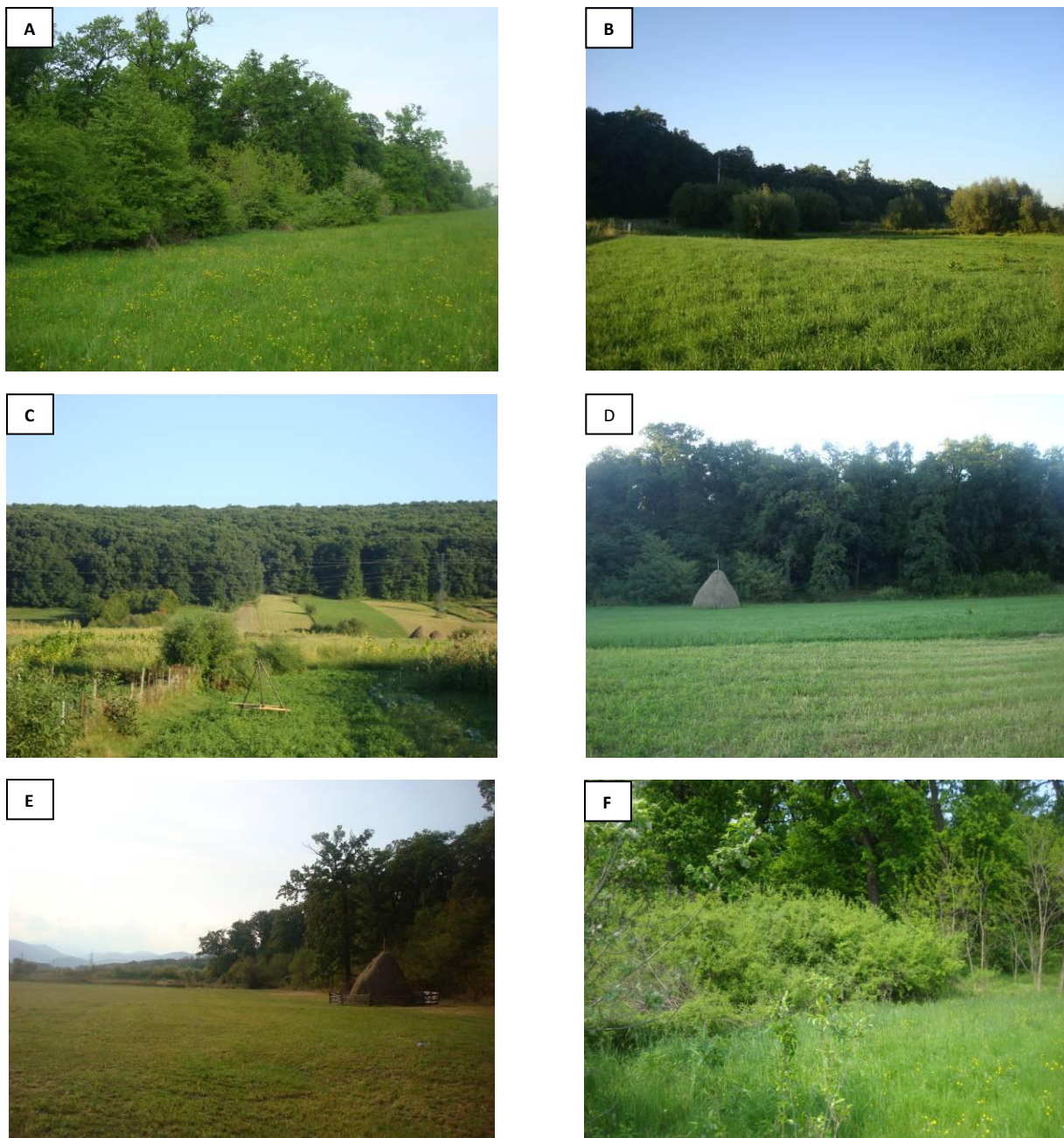


Fig. 1. Forest edge from Sibiel village-Bărcu Roșu , Subpărățel, Vad, Vii and Locuri Rele (foto. orig.)

Effort were made to capture and collect a sample of the species and groups present in the region, by use of a butterfly. Specimens captured included: Hesperioidea (7 species), Papilionidae (1 species), Pieridae (10 species), Lycaenidae (14 species), Nymphalidae (17 species) and Satyrinae (10 species). The collected material was then displayed, labeled, determined using determinators Niculescu (1961); Niculescu (1963); Niculescu (1965); Niculescu&König (1970)] and subsequently stored as a single collection [Antofie (2015a,b); Stancă-Moise (2014); Stancă-Moise (2015c), Stancă-Moise (2016a), Stancă-Moise (2016b)].

Lepidoptera species were identified using several identification keys: [Karsholt& Razowski (1996); Karsholt et al. (2011); Koch (1991); Popescu-Gorj (1970); Popescu-Gorj (1980); Székely (2004); Székely (2008)]. The red list was made following the ones proposed by 2003 [Stancă-Moise (2003c)] for butterflies and by Rákósy et al. [Rákósy et al. (2003)] for butterflies and by [Rákósy (1996); Rákósy (1997); Rákósy (2002)] for the so called Macroheterocera, which points out the conservation status of Lepidoptera species in Romania IUCN (1994, 2001, 2003)].

We present below the identified species, summary ecological information, together with collection dates and locations.

SYSTEMATIC LIST OF THE LEPIDOPTERA SPECIES IDENTIFIED IN GRASSLAND FROM SIBIEL VILLAGE (SIBIU, ROMANIA)

1. *Erynnis tages tages* (Linnaeus, 1758)

Biogeographic region: Euro-Siberian. Found in all provinces of Romania. **Habitat type:** Found in all habitat types, except subalpine, alpine regions. **Status:** very common. **Altitude:** 0-1600 m. **Flight period:** mid IV – mid VI (G1), VII – mid IX (G2). **Protection status:** Least concern. **Larval food plants:** *Eryngium sp.*, *Lotus corniculatus*, *L. uliginosus*, *Hippocrepis comosa*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 4 specs., May 16, 2015, (Gura Morii).

2. *Carcharosus alceae alceae* (Esper, 1780)

Biogeographic region: Holomediterranean. Found in all provinces of Romania. **Habitat type(s):** wet meadows, forest edges, swampy meadows, bush areas. **Status:** common, **Altitude:** 0-1600 m. **Flight period:** mid V - VI (G1), mid VII – mid IX (G2). **Protection status:** Least concern. **Larval food plants:** *Malva sylvestris*, *M. neglecta*, *M. moschata*, *M. pusilla*, *Alcea rosea*, *Chrozophora hierosolymitana*, *Hibiscus sp.*, *Althea sp.*, *Lavatera sp.*, **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 4 specs., May 16, 2015, (Gura Morii).

3. *Pyrgus (P) malvae malvae* (Linnaeus, 1758)

Biogeographic region: Euro-Siberian. Found in all provinces of Romania. **Habitat type(s):** Found in all habitat types, except, subalpine, alpine regions. **Status:** common and very common, **Altitude:** 0-1800 m. **Flight period:** mid IV -VI (G1), mid VII - mid IX. **Protection status:** Least concern. **Larval food plants:** *Fragaria vesca*, *Agrimonia eupatoria*, *Rubus*

fruticosus, *Potentilla recta*, *P. pedata*, *P. palustris*, *P. erecta*, *P. argentea*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, May 5, 2015, (Valea Cetății).

4. *Thymelicus lineola lineola* (Ochsenheimer, 1808)

Biogeographic region: Euro-Siberian. Found in all provinces of Romania. **Habitat type(s):** grasslands, meadows, forest edges, steppe meadows. **Status:** common and rare **Altitude:** 0-1400 m. **Flight period:** VI-VII. **Protection status:** Least concern. **Larval food plants:** *Triticum aestivum*, *Dactylis glomerata*, *Poa sp.*, *Festuca sp.*, *Aira sp.*, *Agrotis capillaris*, *Brachypodium pinnatum*, *B. sylvaticum*, *Elymus repens*, *Phalaris arudinacea*, *Lolium perene*, *Carex acutiformis*, *Holcus mollis*, *Calamagrostis epigejos*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 3 specs. July 12, 2015 (Bărcu Roșu), 2 specs. 28 July, 2015, (Subpărățel).

5. *Thymelicus sylvestris sylvestris* (Poda, 1761)

Biogeographic region: Euro-Siberian. Found in all provinces of Romania. **Habitat type(s):** grasslands, meadows, forest edges, sylvan clearings, bush areas. **Status:** common. **Altitude:** 0-1600 m. **Flight period:** mid VI - mid VIII. **Protection status:** Least concern. **Larval food plants:** *Triticum sp.*, *Poa sp.*, *Agrotis capillaris*, *Brachypodium sylvaticum*, *Lolium sp.*, *Holcus mollis*, *H. lanatus*, *Phleum pratense*, *Arrhenaterum sp.*, *Cynosurus sp.* **Overwintering stage:** larva. **Migratory status:** non migratory.

No. specimens collected: 5 specs. July 13,19,28, 2015, (Vad).

6. *Hesperia comma comma* (Linnaeus, 1758)

Biogeographic region: Euro-Siberian. Found in all provinces of Romania, except subalpine, alpine regions. **Status:** localized, rare and common. **Altitude:** 0-1400 m. **Flight period:** mid VI - mid VIII. **Protection status:** Least concern. **Larval food plants:** *Festuca ovina*, *Lotus corniculatus*, *lolium perenne*, *Ornithopus persusillus*, *Coronilla varia*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 2 specs. July 28, (Bărcul Roșu).

7. *Ochlodes sylvanus sylvanus* (Esper, 1777)

Biogeographic region: Holo-Palearctic. Found in all provinces of Romania, except subalpine, alpine regions. **Status:** very common and common. **Altitude:** 0-1600 m. **Flight period:** mid V-mid VII (G1), mid VII-mid IX (G2). **Protection status:** Least concern. **Larval food plants:** *Dactylis glomerata*, *Brachypodium pinnatum*, *B. sylvaticum*, *Poa pratensis*, *Festuca arudinacea*, *Molinia caerulea*, *Luzula pilosa*, *Holcus lanatus*, *Calamagrostis epigejos*, *Elymus repens*, *Juncus effusus*, *Phleum pratense*, *Bromus erectus*. **Overwintering stage:** larva. **Migratory status:** non migratory.

No. specimens collected: 2 specs. May 15, 2015, (Luncă) and 3 specs. September 12, 2015, (Subpărățel).

FAMILY PAPILIONIDAE

8. *Iphiclides podalirius podalirius* (Linnaeus, 1758)

Biogeographic region: Ponto-Mediterranean. Found in all provinces of Romania. **Habitat type(s):**

wooded steppe, orchards, gardens, parks, steppe meadows, forest edges, limestone areas, bush areas, ruderal habitats near village. **Status:** common. **Altitude:** 0-1200 m. **Flight period:** IV-mid VI (G1), VII-VIII (G2). **Protection status:** vulnerable, near threated. **Larval food plants:** *Prunus spinosa*, *P. amygdalus*, *P. avium*, *P. domestica*, *P. armeniaca*, *P. mahaleb*, *P. padus*, *Pyrus communis* [36]. **Overwintering stage:** larva. **Migratory status:** migratory. **No. specimens collected:** 3 specs., May 5, 2015, (Vii), August 22, 2015, (Valea Râului), August 28, 2015, (Gura Morii).

FAMILY PIERIDAE

9. *Leptidea sinapis sinapis* Linnaeus, 1758

Biogeographic region: Mediterranean-west-Asian.

Found in all provinces of Romania. **Habitat type(s):** forest edges, sylvan clearings, bush areas, meadows, grasslands. **Status:** common. **Altitude:** 0-1800 m. **Flight period:** mid IV-IX. **Protection status:** Least concern. **Larval food plants:** *Lathyrus pratensis*, *L. grandifloras*, *L. tuberosus*, *L. montanus*, *L. vernus*, *L. niger*, *L. aphaca*, *Lotus uliginosus*, *L. corniculatus*. **Overwintering stage:** pupa. **Migratory status:** non migratory. **No. specimens collected:** 2 specs. May 9, 15, 2015, (Gura Morii), 2 specs. July 17, 2015, (Valea Cetății), 1 specimen, August 28, 2015, (Subpărățel), 3 specs. September 18, 2015, (Bărcul Roșu).

10. *Anthocaris cardamines meridionalis* Verity, 1908

Biogeographic region: Euro-Siberian. Found in all

provinces of Romania. **Habitat type(s):** forest edges, grasslands, mountain meadows, bush areas, debris slopes, sub-alpine rock slopes, sub-alpine meadows. **Status:** common and very common. **Altitude:** 0-1800 m. **Flight period:** IV-mid VII. **Protection status:** Least concern. **Larval food plants:** *Lunaria annua*, *Arabis turria*, *Alliaria petiolata*, *Cardamine pratense*. **Overwintering stage:** pupa. **Migratory status:** non migratory. **No. specimens collected:** 3 specs. May 12, 28, 2015, (Bărcul Roșu), 1 specimen June 18, 2015 (Valea Râului), July 12, 2015, (grassland Vii).

11. *Aporia crataegi crataegi* (Linnaeus, 1758)

Biogeographic region: Euro-Siberian. Found in all

provinces of Romania, except Danube Delta. **Habitat type(s):** ruderal habitats near towns and villages, forest edges, bush areas, orchards, gardens. **Status:** localized and common. **Altitude:** 0-1200 m. **Flight period:** mid V-mid VII. **Protection status:** Endangered, Near threatened, Least concern. **Larval food plants:** *Crataegus monogyna*, *C. laciniata*, *Prunus spinosa*, *P. domestica*, *P. avium*, *P. padus*, *P. armeniaca*, *P. amygdalus*, *Amygdalus communis*, *A. dilcis*, *Pyrus communis*, *Malus domestica*, *Sorbus aucuparia*. **Overwintering stage:** larva. **Migratory status:** migratory. **No. specimens collected:** 2 specs. July 12, 2015, (Valea Cetății).

12. *Pieris brassicae brassicae* (Linnaeus, 1758)

Biogeographic region: Holarctic. Found in all

provinces of Romania. **Habitat type(s):** gardens, grasslands, farm lands, bush areas, meadows, Found in all habitat types. **Status:** very common and common.

Altitude: 0-1800 m. **Flight period:** mid IV-mid X. **Protection status:** Near threatened, Least concern. **Larval food plants:** *Tropaeolum majus*, *Capparis spinosa* and *Brassicaceae* spp. **Overwintering stage:** pupa. **Migratory status:** non migratory. **No. specimens collected:** 3 specs. May 5, 18, 28, 2015 (Luncă), 5 specs. July 19, 27, 2015 (Subpărățel), 4 specs. September 18, 2015, (Vad).

13. *Pieris rapae rapae* (Linnaeus, 1758)

Biogeographic region: Euro-Siberian. Found in all provinces of Romania. **Habitat type(s):** Found in all habitat types, except alpine regions. **Status:** very common and common. **Altitude:** 0-2000 m. **Flight period:** IV-XI. **Protection status:** Least concern. **Larval food plants:** *Atriplex sp.*, *Tropaeolum majus*, *Capparis spinosa* and *Brassicaceae* spp. **Overwintering stage:** pupa. **Migratory status:** migratory. **No. specimens collected:** 2 specs. May 5, 28, 2015 (Luncă), 4 specs. July 19, 27, 2015 (Subpărățel), 2 specs. September 18, 30, 2015, (Vad).

FAMILY HESPERIOIDEA

14. *Pieris napi napi* (Linnaeus, 1758)

Biogeographic region: Holarctic. Found in all provinces of Romania. **Habitat type(s):** located in all habitat types, except alpine regions (2000-2500 m). **Status:** very common and common. **Altitude:** 0-2000 m. **Flight period:** III-XI. **Protection status:** Least concern. **Larval food plants:** *Brassicaceae*, *Cardamine pratensis*, *C. amara*, *C. palustris*, *Nasturtium officinale*, *Lunaria rediviva*, *Hesperia matronalis*, *Arabis turrita*, *A. glabra*, *A. hirsute*, *Alliaria petiolata*, *Sinapis arvensis*, *Alyssum sextatile*, *Barbarea vulgaris*, *Cheiranthus cheiri*. pupa stage. **Migratory status:** migratory.

No. specimens collected: 2 specs. May 18, 28, 2015 (Luncă), 4 specs. July 19, 27, 30 2015 (Subpărățel), 3 specs. September 5, 18, 30, 2015, (Vad).

15. *Colias erate erate* (Esper, 1803)

Biogeographic region: South-west-Siberian. Found in all provinces of Romania. **Habitat type(s):** steppe meadows, farms lands, meadows grasslands, alfalfa culture, wastelands, sandy wastelands, antropized habitats near villages and towns. **Status:** very common and common. **Altitude:** 0-1000 m. **Flight period:** V-XI. **Protection status:** Vulnerable, Near threatened. **Larval food plants:** *Coronilla varia*, *Medicago sativa*. **Overwintering stage:** pupa. **Migratory status:** migratory. **No. specimens collected:** 3 specs. July 19, 30, 2015 (Gura Morii), 2 specs. August, 20, 27, 2015 (Valea Râului), 3 specs. September 5, 18, 30, 2015, (Bărcul Roșu).

16. *Colias hyale hyale* (Linnaeus, 1758)

Biogeographic region: South-west-Siberian. Found in all provinces of Romania. **Habitat type(s):** grasslands, meadows, alfalfa culture, ruderal habitats near village, found in all habitat types, except, subalpine and alpine regions. **Status:** very common and common. **Altitude:** 0-1600 m. **Flight period:** V-mid XI. **Protection status:** Least concern. **Larval food plants:** *Medicago sativa*, *M. lupulina*, *Lotus corniculatus*, *trifolium pratense*, *Hippocrepis comosa*,

Segurigera varia, *Vicia cracca*. larva. **Migratory status:** migratory.

No. specimens collected: 2 specs. May 18,28, 2015 (Luncă), 3 specs. July 19,27, 30, 2015 (Subpărățel), 2 specs. September 18, 30, 2015, (Gura Morii).

17. *Colias alfacariensis alfacariensis* Ribbe, 1905

Biogeographic region: Holomediterranean. Present in all provinces of Romania. **Habitat type(s):** grasslands, meadows, bush areas, sandy wastelands, karstic canyons, limestone areas, steppe meadows. **Status:** rare and common. **Altitude:** 0-1200 m. **Flight period:** mid V-mid XI. **Protection status:** Near threatened. **Larval food plants:** *Coronilla varia*, *Hippocrepis comosa*. **Overwintering stage:** larva. **Migratory status:** migratory. **No. specimens collected:** 2 specs. May 5,28, 2015 (Luncă), 2 specs. July 12,29, 2015 (Gura Morii), 4 specs. September 18, 2015, (Valea Râului).

18. *Gonepteryx rhamni rhamni* (Linnaeus, 1758)

Biogeographic region: Euro-Siberian. Present in all provinces of Romania. **Habitat type(s):** bush areas, forest edges, parks, sylvan clearings, ruderal habitats near villages. **Status:** very common and common. **Altitude:** 0-2100 m. **Flight period:** III-mid V (G1), mid VII- mid IX. **Protection status:** Least concern. **Larval food plants:** *Rhamnus catharticus*, *Frangula alnus*. **Overwintering stage:** adult. **Migratory status:** migratory. **No. specimens collected:** 3 specs. April 15, 30, 2015 (Luncă, Fig. 2), 3 specs. May 5, 18, 2015, (Gura Morii), July 19,30, 2015 (Bărcul Roșu), 2 specs. September 18, 30, 2015, (Locuri Rele).

FAMILY LYCAENIDAE

19. *Lycaena phlaeas phlaeas* (Linnaeus, 1761)

Biogeographic region: Holarctic. Present in all provinces of Romania. **Habitat type(s):** found in all habitat types, except: subalpine, alpine regions. **Status:** rare and common. **Altitude:** 0-1600 m. **Flight period:** IV- XI. **Protection status:** Least concern. **Larval food plants:** *Rumex acetosa*, *R. acetosella*, *R. hydrolapathum*, *R. scutatus*, *Polygonum aviculare*. **Overwintering stage:** larva. **Migratory status:** migratory. **No. specimens collected:** 1 specimen, May 5, 2015 (Locuri Rele), 2 specs. June 17,23, 2015 (Gura Morii), August 18,25, 2015, (grassland Vii), September 12, 28, 2015, (Bărcul Roșu), October 14, 2015 (Subpărățel).

20. *Lycaena dispar rutila* (Werneburg, 1864)

Biogeographic region: Euro-Siberian. Present in all provinces of Romania. **Habitat type(s):** wet meadows, swampy meadows, moorlands, flood areas, lakesides. **Status:** localized and common. **Altitude:** 200-1200 m. **Flight period:** mid V- mid IX. **Protection status:** critically endangered, vulnerable, near threatened. **Larval food plants:** *Rumex hydrolapathum*, *R. aquaticus*, *R. crispus*, *R. obtusifolius*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, May 18, 2015 (Locuri Rele), 2 specs. June 17,23, 2015 (Gura Morii), 2 specs., August 18,25, 2015, (grassland Vii), 2 specs., September 5, 12, 2015, (Bărcul Roșu).

21. *Lycaena thersamon thersamon* (Esper, 1784)

Biogeographic region: Ponto-Caspian-Siberian.

Range is expanding: The Transylvanian Plain, Banate, Crișana, Moldavia, Muntenia, Dobrudja, Danube Delta. **Habitat type(s):** sandy wastelands, meadows, grasslands, karst areas, ssp. meadows. **Status:** localized and common. **Altitude:** 0-800 m. **Flight period:** V-mid XI. **Protection status:** critically endangered, vulnerable. **Larval food plants:** *Polygonum aviculare*, *P. persicaria*, *P. hydropiper*, *Rumex acetosallae*, *Cytisus scoparius*, *Chamaecytisus hirsutus*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, May 15, 2015 (Locuri Rele), 2 specs. June 17,23, 2015 (Gura Morii), 2 specs., August 18,25, 2015, (grassland Vii), 4 specs., September 12, 28, 2015, (Bărcul Roșu), 2 specs., October 17, 29, 2015 (Subpărățel).

22. *Neozephyrus quercus quercus* (Linnaeus, 1758)

Biogeographic region: Holomediterranean. Present in all provinces of Romania. **Habitat type(s):** meadows, bush area, forest edges, karst areas, limestone areas, anthropized areas (gardens), sylvan clearings. **Status:** common. **Altitude:** 0-1800 m. **Flight period:** midV- midVI (G1), midVII- midIX. **Protection status:** vulnerable, near threatened. **Larval food plants:** *Quercus cerris*, *Q. pubescens*. **Overwintering stage:** egg. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, May 18, 2015 (Bărcul Roșu), 2 specs. July 18,30, 2015 (Valea Râului), 1 specimen, August 25, 2015, (Calea Nouă), 2 specs., September 12, 28, 2015, (Bărcul Roșu), 1 specimen, October 14, 2015 (Subpărățel).

23. *Callophrys rubi rubi* (Linnaeus, 1758)

Biogeographic region: Euro-Siberian. Found in all provinces of Romania. **Habitat type(s):** oak forests, bush area, forest edges, parks, sylvan glades. **Status:** localized and common. **Altitude:** 0-1000 m. **Flight period:** V-VIII. **Protection status:** Least concern. **Larval food plants:** *Genista tinctoria*, *G. germanica*, *Cytisus scoparius*, *C. nigricans*, *C. villosus*, *Helianthemum nummularium*, *Rhamnus sp.*, *Fragula sp.*, *Cornus sp.*, *Rubus sp.*, *Hedysarum sp.*, *Vaccinium sp.* **Overwintering stage:** pupa. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, May 15, 2015 (Bărcul Roșu), 2 specs. June 17,23, 2015 (Gura Morii), August 18,25, 2015, (grassland Vii).

24. *Satyrium pruni pruni* (Linnaeus, 1758)

Biogeographic region: Euro-Siberian. Range is increasing: Transylvania, Banate, Crișana, North-Moldavia, North-Oltenia, Muntenia, Dobrudja. **Habitat type(s):** bush area, forest edges, orchards, gardens, parks, sylvan clearings. **Status:** localized and rare. **Altitude:** 0-1400 m. **Flight period:** VI-VII. **Protection status:** near threatened. **Larval food plants:** *Prunus spinosa*, *Prunus domestica*. **Overwintering stage:** egg. **Migratory status:** non migratory. **No. specimens collected:** 2 specs. June 17,23, 2015 (grassland Vii), 1 specimen, July 14, 2015 (Subpărățel).

25. *Satyrium spini spini* ([Denis&Schiffermüller], 1775)

Biogeographic region: Holomediterranean. Range is increasing: Transylvania, Banate, Crișana, Moldavia, Oltenia, Muntenia, Dobrudja. **Habitat type(s):** bush

area, forest edges, sylvan glades. **Status:** localized and rare. **Altitude:** 100-800 m. **Flight period:** VI-VII. **Protection status:** near threatened. **Larval food plants:** *Rhamnus catharticus*, *Paliurus spina-christi*. Myrmecophile species. **Overwintering stage:** egg. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, June 19, 2015 (Locuri Rele), 2 specs. July 17,23, 2015 (Gura Morii).

26. *Satyrium acaciae acacia* (Fabricius, 1787)

Biogeographic region: Mediterranean-west-Asian. Range is increasing: Transylvania, Banate, Crișana, Moldavia, Dobruđja. **Habitat type(s):** oak forests, forest edges, karst areas, wooded steppe, limestone gorges. **Status:** localized, common and very common. **Altitude:** 0-800 m. **Flight period:** mid V- mid VII. **Protection status:** endangered, vulnerable and near threatened. **Larval food plants:** *Prunus spinosa*. **Overwintering stage:** egg. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, May 18, 2015 (Bărcul Roșu), 2 specs. June 17,23, 2015 (Subpărățel).

27. *Maculinea arion arion* (Linnaeus, 1758)

Biogeographic region: Ponto-Caspian-south-Siberian. Range is increasing: Transylvania, Banate, North-Moldavia, North-Oltenia, North-Muntenia. **Habitat type(s):** grasslands, meadows, bush areas, dry plains, rock slopes. **Status:** localized, rare and common. **Altitude:** 200-1600 m. **Flight period:** mid V-VII. **Protection status:** endangered, vulnerable and near threatened. **Larval food plants:** *Thymus serpyllum*, *T. paracox*, Myrmecophile species. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, May 19, 2015 (Valea Cetății), 2 specs. June 17,23, 2015 (Gura Morii), July 18,25, 2015, (Bărcul Roșu).

28. *Plebeius argus argus* (Linnaeus, 1758)

Biogeographic region: Euro-Siberian. Present in all provinces of Romania. **Habitat type(s):** found in all habitat types. **Status:** common and very common. **Altitude:** 0-1600 m. **Flight period:** mid V- mid VI (G1), mid VII-VIII. **Protection status:** Least concern. **Larval food plants:** *Hippocrepis comosa*, *Lotus corniculatus*, *Coronilla varia*, *Cytisus sp.*, *Helianthemum sp.*, *Genista sp.*, *Colutea sp.*, *Astragalus sp.*, *Ononis sp.*, *Medicago sp.*, *Galega sp.*, *Erica sp.*, *Calluna vulgaris*. Myrmecophile species. **Overwintering stage:** egg. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, May 18, 2015 (Locuri Rele), 2 specs. June 17,23, 2015 (Gura Morii), August 18,25, 2015, (grassland Vii).

29. *Plebeius argyrognomon argyrognomon* (Bergsträsser, 1779)

Biogeographic region: Euro-Siberian. Range is increasing: Transylvania, Crișana, Banate, North-Moldavia, Dobruđja. **Habitat type(s):** grasslands, meadows, bush areas, limestone areas. **Status:** common. **Altitude:** 0-1200 m. **Flight period:** V-VI (G1), midVII- midIX (G2). **Protection status:** near threatened and Least concern. **Larval food plants:** *Astragalus glycyphyllos*, *Coronilla varia*. Myrmecophile species. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 2 specs, May 5, 2015 (Subpărățel), 2 specs.

June 17,23, 2015 (Gura Morii), 3 specs., August 18,25, 2015, (grassland Vii), 2 specs., September 12, 28, 2015, (Bărcul Roșu).

30. *Aricia agestis agestis* ([Denis&Schiffermüller], 1775)

Biogeographic region: Mediterranean-west-Asian. Present in all provinces of Romania. **Habitat type(s):** found in all habitat types. **Status:** common and very common. **Altitude:** 0-1700 m. **Flight period:** mid IV-XI. **Protection status:** Least concern. **Larval food plants:** *Geranium pratense*, *Helianthemum nummularium*, *Eredium sp.*, *Geranium sp.* Myrmecophile species. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 2 specs. June 17,23, 2015 (Gura Morii), 3 specs. August 12,25, 30, 2015, (grassland Vii), 2 specs., September 12, 28, 2015, (Bărcul Roșu), 1 specimen October 27, 2015 (Subpărățel).

31. *Polyommatus icarus icarus* (Rottemburg, 1775)

Biogeographic region: Euro-Siberian. Present in all provinces of Romania. **Habitat type(s):** found in all habitat types. **Status:** very common. **Altitude:** 0-2200 m. **Flight period:** mid IV-XI. **Protection status:** Least concern. **Larval food plants:** *Medicago lupulina*, *M. sativa*, *Onobrychis sp.*, *Galega sp.*, *Lotus sp.*, *Ononis sp.*, *Trifolium sp.*, *Melilotus sp.*, *Genista sp.*, *Astragalus sp.*, *Anthyllis sp.*, *Ceronilla sp.* Myrmecophile species. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, April 19, 2015 (Subpărățel), 2 specs. June 17,23, 2015 (Bărcul Roșu), 2 specs., August 18,25, 2015, (grassland Vii), 2 specs., September 12, 28, 2015, (Gura Morii), 1 specimen, October 29, 2015 (Locuri Rele).

32. *Polyommatus daphnis daphnis* ([Denis&Schiffermüller], 1775)

Biogeographic region: Ponto-Mediterranean. Range is expanding: Transylvania, South-Banate, Moldavia, North-Oltenia, Muntenia, Dobruđja. **Habitat type(s):** limestone areas, karst canyons, rock slopes, loess wastelands, steppe meadows, limestone gorges. **Status:** common and very common. **Altitude:** 0-1600 m. **Flight period:** mid VI- mid IX. **Protection status:** Least concern. **Larval food plants:** *Ceronilla varia*, *Astragalus slycyphyllos*. Myrmecophile species. **Overwintering stage:** egg. **Migratory status:** non migratory. **No. specimens collected:** 2 specs. June 17,23, 2015 (Gura Morii), August 18,25, 2015, (Valea Cetății), September 12, 28, 2015, (Bărcul Roșu).

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

Biogeographic region: Euro-Siberian. Located in all provinces of Romania, except the Danube Delta. **Habitat type(s):** forest edges, bush areas, grasslands, meadows. **Status:** common and very common. **Altitude:** 0-1800 m. **Flight period:** VI-IX. **Protection status:** near threatened and least concern. **Larval food plants:** *Viola canina*, *V. reichenbachiana*, *V. odonatan*, *V. riviana*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 2 specs. June 17,23, 2015 (Lunca Rîului), 2 specs.,

August 18,25, 2015, (Valea Cetății), 3 specs., September 12, 28, 2015, (Colibi), 1 specimen, October 14, 2015 (Subpărățel).

34. *Argynnis adippe adippe* ([Denis & Schiffermüller], 1775)

Biogeographic region: Euro-Siberian. Expanding in range: Transylvania, Banate, Crișana, North-Moldavia, North-Dobrudja. **Habitat type(s):** forest edges, sylvan glades, clearings, grasslands, meadows, limestone areas. **Status:** rare and common. **Altitude:** 100-1600 m. **Flight period:** mid VI-VIII. **Protection status:** near threatened and least concern. **Larval food plants:** *Viola reichenbachiana*, *V.tricolor*. **Overwintering stage:** egg. **Migratory status:** non migratory.

No. specimens collected: 1 specimen, June 23, 2015 (Gura Morii), 2 specs., August 18,25, 2015, (Valea Cetății).

35. *Argynnis niobe niobe* (Linnaeus, 1758)

Biogeographic region: Euro-Siberian. Found in all provinces of Romania, except: Muntenia, South Oltenia, South Dobrudja, the Danube Delta. **Habitat type(s):** sylvan glades, forest edges, bush areas, grasslands, meadows. **Status:** common and very common. **Altitude:** 0-1800 m. **Flight period:** VI-IX. **Protection status:** rare and common. **Larval food plants:** *Viola canina*, *V. odonatan*, *V. riviana*. **Overwintering stage:** egg. **Migratory status:** non migratory.

No. specimens collected: 2 specs. June 17, 23, 2015 (Valea Cetății), 2 specs., August 18,25, 2015, (Colibi), 2 specs., September 12, 28, 2015, (Bărcul Roșu).

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

Biogeographic region: Euro-Siberian. Present in all provinces of Romania. **Habitat type(s):** found in all habitat types, except, alpine regions **Status:** common and very common. **Altitude:** 0-2000 m. **Flight period:** IV-XI. **Protection status:** Least concern. **Larval food plants:** *Viola tricolor*, *V. hirta*, *V. arvensis*, *V. biflora*, *V. calcarata*, *V. odonata*. **Overwintering stage:** egg, larva, pupa or adult. **Migratory status:** migratory. **No. specimens collected:** 1 specimen, May 5, 2015 (Locuri Rele), 3 specs. June 17,23, 2015 (Gura Morii), 2 specs., August 18,25, 2015, (grassland Vii), 3 specs., September 12, 28, 2015, (Bărcul Roșu), 2 specs., October 14,30, 2015 (Subpărățel).

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

Biogeographic region: Euro-Siberian. Present in all provinces of Romania, except the Danube Delta. **Habitat type(s):** grasslands, meadows, forest edges, bush areas, limestone areas. **Status:** common and very common. **Altitude:** 0-1600 m. **Flight period:** mid IV-VI (G1), VII-IX (G2). **Protection status:** Least concern. **Larval food plants:** *Viola odonatan*, *V. hirta*, *V. canina*, *V. reichenbachiana*, *V. tricolor*. **Overwintering stage:** larva. **Migratory status:** non migratory.

No. specimens collected: 1 specimen, May 5, 2015 (Bărcul Roșu), 2 specs. June 17,23, 2015 (Gura Morii), 3 specs., August 18,25, 2015, (Locuri Rele), 2 specs., September 12, 28, 2015, (Subpărățel).

38. *Vanessa atalanta atalanta* (Linnaeus, 1758)

Biogeographic region: Holomediterranean-west-Asian. Found in all provinces of Romania. **Habitat type(s):** found in all habitat types, nettle bushes. **Status:** common. **Altitude:** 0-2400 m. **Flight period:** mid III-mid V (G1), mid VII-X (G2). **Protection status:** Least concern. **Larval food plants:** *Urtica dioica*, *U. urens*, *Parietaria officinalis*. **Migratory status:** migratory. **Overwintering stage:** adult. **Migratory status:** migratory. **No. specimens collected:** 1 specimen, April 5, 2015 (Locuri Rele), 2 specs., May 17, 23, 2015 (Gura Morii), 2 specs., August 18,25, 2015, (grassland Vii), 3 specs., September 12, 28, 2015, (Bărcul Roșu).

39. *Vanessa cardui cardui* (Linnaeus, 1758)

Biogeographic region: Cosmopolitan. Found in all provinces of Romania. **Habitat type(s):** found in all habitat types. **Status:** common and very common. **Altitude:** 0-2500 m. **Flight period:** mid IV-XI. **Protection status:** Least concern. **Larval food plants:** *Carduus acanthoides*, *Cirsium arvense*, *Onopordum acanthium*, *Tussilago farfara*, *Arctium lappa*, *Urtica dioica*. **Migratory status:** migratory. **Overwintering stage:** adult. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, April 18, 2015 (Luncă, Fig. 2), May 5, 2015 (Locuri Rele), 3 specs. June 17,23, 2015 (Gura Morii), 2 specs., August 18,25, 2015, (grassland Vii), 3 specs., September 12, 28, 2015, (Bărcul Roșu), 2 specs., October 14,30, 2015 (Subpărățel).

40. *Inachis io io* (Linnaeus, 1758)

Biogeographic region: Euro-Siberian. Found in all provinces of Romania. **Habitat type(s):** found in all habitat types, nettle bushes. **Status:** common. **Altitude:** 0-2500 m. **Flight period:** II-IV (G1), mid VI-XI (G2). **Protection status:** Least concern. **Larval food plants:** *Urtica sp.*, *Inula salicina*. **Overwintering stage:** butterfly. **Migratory status:** partial migratory. **No. specimens collected:** 1 specimen, April 18, 2015 (Luncă), May 5, 2015 (Subpărățel), 2 specs. June 17,23, 2015 (Bărcul Roșu), 2 specs., August 18,25, 2015, (grassland Vii), 2 specs., September 12, 28, 2015, (Gura Morii), 3 specs., October 14,30, 2015 (Locuri Rele).

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

Biogeographic region: Euro-Siberian. Present in all provinces of Romania, except the Danube Delta. **Habitat type(s):** found in all habitat types, nettle bushes. **Status:** common. **Altitude:** 0-2500 m. **Flight period:** III-V (G1), mid VI-X (G2). **Protection status:** Least concern. **Larval food plants:** *Urtica dioica*, *U. urens*. **Migratory status:** migratory. **Overwintering stage:** butterfly. **Migratory status:** partial migratory.

No. specimens collected: 1 specimen, April 5, 2015 (grassland Vii), May 5, 2015 (Locuri Rele), 3 specs. June 17,23, 2015 (Subpărățel), 2 specs., August 18,25, 2015, (Luncă, Fig. 2), 3 specs., September 12, 28, 2015, (Bărcul Roșu), 2 specs., October 14,30, 2015 (Gura Morii).

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

Biogeographic region: Euro-Siberian. Present in all provinces of Romania, except the Danube Delta. **Habitat type(s):** bush areas, sylvan glades, forest edges, gallery forest, located in all habitat types. **Status:** common and very common. **Altitude:** 0-2000 m. **Flight period:** II-IV (G1), mid V-XI (G2).

Protection status: Least concern. **Larval food plants:** *Ribes grossularia*, *R. uva-crispa*, *R. nigrum*, *R. rubrum*, *Urtica dioica*, *Salix caprea*, *S. alba*, *Humulus lupulus*, *Corylus avellana*, *Ulmus glabra*, *U. minor*, *U. procera*, *U. laevis*, *Parietaria officinalis*. Migratory. **Overwintering stage:** adult. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, March 29, 2015 (Luncă), May 19, 2015 (grassland Vii), 3 specs. June 17,23, 2015 (Bărcul Roșu), 2 specs., August 18,25, 2015, (Subpărățel), 3 specs., September 12, 28, 2015, (Gura Morii), 2 specs., October 14,28, 2015 (Locuri Rele).

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

Biogeographic region: Euro-Siberian. Present in all provinces of Romania, except the Danube Delta. **Habitat type(s):** bush areas, forest edges, gallery forest, clearings, nettle bushes, grasslands, meadows. **Status:** localized, common and very common. **Altitude:** 0-1600 m. **Flight period:** IV-VI (G1), VII-IX (G2). **Protection status:** Least concern. **Larval food plants:** *Urtica dioica*, *U. ures*. **Overwintering stage:** pupa. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, April 30, 2015 (Luncă), May 5, 2015 (Locuri Rele), 5 specs. June 17,23, 2015 (Gura Morii), 2 specs., August 18,25, 2015, (grassland Vii), 4 specs., September 12, 28, 2015, (Bărcul Roșu).

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

Biogeographic region: Mediterranean-west-Asian. Widespread in Romania, except in the Danube Delta region. **Habitat type(s):** grasslands, meadows, wet meadows, moorland meadows. **Status:** localized, common. **Altitude:** 0-1000 m. **Flight period:** mid V-mid VII. **Protection status:** Least concern. **Larval food plants:** *Plantago lanceolata*, *P. media*, *P. major*, *P. argentea*, *P. cynops*, *Hieracium pilosella*, *Veronica urticifolia*, *V. teucrium*, *Centaurea sp.*, *Viola sp.* **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, May 5, 2015 (Locuri Rele), 3 specs. June 17,23, 2015 (Gura Morii), 2 specs., July 18,25, 2015, (Bărcul Roșu).

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

Biogeographic region: Mediterranean-west-Asian. Present in all provinces of Romania, except the Danube Delta. **Habitat type(s):** grasslands, meadows, rock slopes, steppe meadows, deforested areas, bush areas, forest edges. **Status:** common. **Altitude:** 0-1200 m. **Flight period:** mid V-VIII. **Protection status:** Least concern. **Larval food plants:** *Primula veris*, *Plantago lanceolata*, *P. major*, *Veronica teucrium*, *V. chamaedris*, *Digitalis grandiflora*, *Valeriana officinalis*, *V. montana*, *V. persica*, *Verbascum nigrum*, *V. Thapsus*, *Rhinantus serotinus*, *Centaurea scabiosa*, *Linaria vulgaris*, *L. alpina*, *Antirrhium arantium*, *Stachys recta*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, May 19, 2015 (Luncă), 3 specs. June 17,23, 2015 (Calea Nouă), 2 specs., August 18,25, 2015, (Valea Cetății).

46. *Melitaea phoebe phoebe* ([Denis&Schifferrmüller], 1775)

Biogeographic region: South-west-Siberian. Found in all provinces of Romania, except the Danube

Delta. **Habitat type(s):** bush areas, grasslands, meadows, rock slopes, dry debris slopes, limestone areas. **Status:** localized, common and very common. **Altitude:** 0-1000 m. **Flight period:** mid IV- mid VI (G1), mid VII- mid IX (G2). **Protection status:** Least concern. **Larval food plants:** *Scabiosa columbaria*, *Cirsium arvense*, *C. vulgare*, *Serratula tinctoria*, *Plantago sp.* **Overwintering stage:** larva. **Migratory status:** non migratory.

No. specimens collected: 1 specimen, April 20, 2015 (grassland Vii), May 5, 2015 (Locuri Rele), 2 specs. June 17,23, 2015 (Gura Morii), 2 specs., August 18,25, 2015, (Luncă), 2 specs., September 12, 28, 2015, (Subpărățel), 3 specs., October 14,30, 2015 (Bărcul Roșu).

47. *Melitaea athalia athalia* (Rottenburg, 1775)

Biogeographic region: Euro-Siberian. Found in all provinces of Romania, except the Danube Delta. **Habitat type(s):** grasslands, meadows, deforestations, forest plantations, steppe areas, bush areas. **Status:** common and very common. **Altitude:** 0-1400 m. **Flight period:** mid V-IX. **Protection status:** Least concern. **Larval food plants:** *Plantago lanceolata*, *Linaria vulgaris*, *Veronica officinalis*, *Melampyrum sylvaticum*, *M. nemorosum*, *M. pratense*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 2 specs., May 15, 30, 2015 (Valea Cetății), 3 specs. June 17,23, 2015 (Gura Morii), 2 specs., August 18,25, 2015, (grassland Vii, Fig. 5), 3 specs., September 12, 28, 2015, (Bărcul Roșu), 2 specs., October 30, 2015 (Subpărățel).

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

Biogeographic region: South-west-Siberian. Expanding in range: Transylvania, Banate, Crișana, North-Oltenia, North-Muntenia, West-Moldavia. **Habitat type(s):** forest edges, bush areas, sylvan glades, parks. **Status:** common and very common. **Altitude:** 200-1600 m. **Flight period:** mid V-VIII. **Protection status:** near threatened and least concern. **Larval food plants:** *Aruncus dioecus*, *Flipendula ulmaria*, *Spiraea chamaedryfolia*, *S. salicifolia*, *S. x-vanheutei*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, May 18, 2015 (Locuri Rele), 2 specs. June 17,23, 2015 (Gura Morii), August 18,25, 2015, (grassland Vii).

49. *Apatura ilia ilia* ([Denis&Schifferrmüller], 1775)

Biogeographic region: European-east-Asian-disjoint. Expanding in range: Transylvania, Banate, Crișana, Moldavia, North-Oltenia, Muntenia. **Habitat type(s):** sylvan clearings, deforestations, forest edges, sylvan roads, parks. **Status:** rare and common. **Altitude:** 200-1400 m. **Flight period:** mid V-VIII. **Protection status:** endangered, near threatened and vulnerable. **Larval food plants:** *Populus tremula*, *P. alba*, *P. nigra*, *Salix alba*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 1 specimen, May 15, 2015 (Locuri Rele), 2 specs. June 17,23, 2015 (Gura Morii), 2 specs., August 18,25, 2015, (Valea Cetății).

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 50. *Pararge aegeria tircis* Butler, 1867

Biogeographic region: Holomediterranean. Present in all provinces of Romania, except the Danube Delta. **Habitat type(s):** sylvan glades, clearings, deforestations, forest edges, orchards, gardens, bush areas. **Status:** common. **Altitude:** 0-1800 m. **Flight period:** mid IV-VI (G1), VII- midIX. **Protection status:** least concern. **Larval food plants:** *Brachypodium sylvaticum*, *B. pinnatum*, *Holcus lanatus*, *Cynodon dactylon*, *Agrotis gigantea*, *Dactylis glomerata*, *Elymus repens* [36]. **Overwintering stage:** pupa. **Migratory status:** non migratory. **No. specimens collected:** 2 specs., May 15, 30, 2015 (Lunca Râului), 3 specs. June 17,23, 2015 (Gura Morii), 2 specs., August 18,25, 2015, (Valea Cetății), 3 specs., September 12, 28, 2015, (Colibi), 2 specs., October 30, 2015 (Bărcul Roșu).

 51. *Lisimmata megera megera* (Linnaeus, 1767)

Biogeographic region: Holomediterranean. Present in all provinces of Romania, except the Danube Delta. **Habitat type(s):** found in all habitat types, alpine regions. **Status:** rare and common. **Altitude:** 0-2000 m. **Flight period:** IV-X. **Protection status:** least concern. **Larval food plants:** *Bromus erectus*, *Festuca ovina*, *Dactylis glomerata*, *Agrostis tenuis*, *A. gigantea*, *A. capillaris*, *Deschampsia flexuosa*, *Holcus lanatus*, *Brachypodium sylvaticum*, *B. pinnatum*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 2 specs., May 15, 29, 2015 (Bărcul Roșu), 3 specs. June 17,23, 2015 (Vadul Morii), 2 specs., August 18,25, 2015, (Luncă), 3 specs., September 12, 28, 2015, (Valea Cetății).

 52. *Lisimmata maera maera* (Linnaeus, 1758)

Biogeographic region: Euro-Siberian. Found in all provinces of Romania. **Habitat type(s):** forest edges, sylvan glades, bush areas, grasslands, meadows. **Status:** rare and common. **Altitude:** 0-2000 m. **Flight period:** V-X. **Protection status:** least concern. **Larval food plants:** *Festuca ovina*, *F. rubra*, *Calamagrotis varia*, *C. epigejos*, *C. arundinacea*, *Glyceria fluitans*, *Deschampsia flexuosa*, *Nardus stricta*, *Hordeum marinum*, *Agrostis capillaris*, *Luzula luzuloides*, *Holcus mollis*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 2 specs., May 15, 30, 2015 (Vadul Morii), 3 specs. June 17,23, 2015 (Subpărățel), 2 specs., August 18,29, 2015, (grassland VII, Fig. 5), 2 specs., September 17, 30, 2015, (Bărcul Roșu), 2 specs., October 17, 2015 (Gura Morii).

 53. *Caenonympha arcania arcania* (Linnaeus, 176)

Biogeographic region: Holomediterranean. Present in all provinces of Romania, except the Danube Delta. **Habitat type(s):** grasslands, meadows, sylvan glades. **Status:** common and very common. **Altitude:** 0-1400 m. **Flight period:** V-VIII. **Protection status:** least concern. **Larval food plants:** *Poa pratensis*, *Melica ciliate*, *Holcus lanatus*. **Overwintering stage:** larva. **Migratory status:** non migratory.

No. specimens collected: 2 specs., May 18, 27, 2015 (Subpărățel), 3 specs. June 17,23, 2015 (Gura Morii), 2 specs., August 18,25, 2015, (Bărcul Roșu).

 54. *Caenonympha glycerion glycerion* (Borkhausen, 1788)

Biogeographic region: Euro-Siberian. Found in all provinces of Romania, except the Danube Delta. **Habitat type(s):** grasslands, meadows, wet grasslands, bush areas. **Status:** common. **Altitude:** 0-1200 m. **Flight period:** mid V- mid IX. **Protection status:** least concern. **Larval food plants:** *Briza media*, *Melica ciliate*, *Cynosurus cristatus*, *Brachypodium sylvaticum*, *Bromus erectus*, *B. hordaceus*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 2 specs., May 17, 29, 2015 (Valea Cetății), 3 specs., September 12, 28, 2015, (Bărcul Roșu).

 55. *Coenonympha pamphilus pamphilus* (Linnaeus, 1758)

Biogeographic region: Euro-Siberian. Present in all provinces of Romania. **Habitat type(s):** found in all habitat types. **Status:** common and very common. **Altitude:** 0-2200 m. **Flight period:** mid IV- mid XI. **Protection status:** least concern. **Larval food plants:** *Festuca ovina*, *F. rubra*, *Poa annula*, *Anthoxanthum odoratum*, *Cynosurus cristatus*, *Dactylis glomerata*, *Nardus stricta*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 2 specs., May 15, 30, 2015 (Bărcul Roșu), 3 specs. June 17,23, 2015 (Gura Morii), 2 specs., August 18,25, 2015, (Subpărățel), 3 specs., September 12, 28, 2015, (Valea Cetății), 2 specs., October 30, 2015 (Luncă).

 56. *Maniola jurtina jurtina* (Linnaeus, 1758)

Biogeographic region: Holomediterranean. Found in all provinces of Romania. **Habitat type(s):** found in all habitat types, except alpine regions. **Status:** common and very common. **Altitude:** 0-1800 m. **Flight period:** VI- mid IX. **Protection status:** least concern. **Larval food plants:** *Poa pratensis*, *Lolium pratensis*, *Festuca ovina*, *F. rubra*, *F. arundinacea*, *Agrostis stolonifera*, *A. canina*, *Bromus erecta*, *Brachypodium pinnatum*, *Holcus lanatus*, *Avenula pubescens*, *Alopecurus pratensis*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 3 specs. June 17,23, 2015 (Valea Cetății), 3 specs., August 18,25, 2015, (Colibi), 4 specs., September 12, 28, 2015, (Calea Nouă), 3 specs., October 30, 2015 (Subpărățel).

 57. *Erebia aethiops aethiops* (Esper, 1777)

Biogeographic region: Boreo-Continental. Expanding in range: Transylvania, Maramureș; South-Banate, West-Moldavia, North-Oltenia. **Habitat type(s):** mountain meadows, sylvan glades, clearings, grasslands, bush areas, limestone areas, sub-alpine lawns, juniperus areas. **Status:** localized and common. **Altitude:** 0-1800 m. **Flight period:** VII-VIII. **Protection status:** least concern. **Larval food plants:** *Bromus erectus*, *Poa trivialis*, *Briza media*, *Anthoxanthum odoratum*, *Dactylis glomerata*, *Carex sempervirens*, *Brachypodium pinnatum*. **Overwintering stage:** larva. **Migratory status:** non migratory. **No. specimens collected:** 3 specs. July 17,23, 2015 (Pădurea Colibii), 2 specs., August 18,25, 2015, (Valea Cetății).

 58. *Melanargia galathea satmia* (Fruhstorfer, 1971)

Biogeographic region: Adriato-Mediterranean.

Found in all provinces of Romania. **Habitat type(s):** found in all habitat types, except alpine regions.

Status: localized and common. **Altitude:** 0-1800 m.

Flight period: mid VI-VIII. **Protection status:** least concern. **Larval food plants:** *Bromus erectus*, *Brachypodium pinnatum*, *B. sylvaticum*, *Poa trivialis*, *Phleum pratense*, *Agrotis capillaris*, *Dactylis glomerata*, *Molinia caerulea*, *Avena pubescens*, *Festuca rubra*. **Overwintering stage:** larva.

Migratory status: non migratory.

No. specimens collected: 2 specs. July 17,23, 2015 (Pădurea Colibii), 3 specs., August 18,25, 2015, (Calea Nouă).

59. *Minois dryas dryas* (Scopoli, 1763)

Biogeographic region: South-west-Siberian.

Present in all provinces of Romania, excepts South-Banate, South-Oltenia. **Habitat type(s):** wet meadows, moorland meadows, lighted-scattered forests, flood plains, sylvan clearings, forest edges, bush areas.

Status: localized, common and very common. **Altitude:** 0-1200 m. **Flight period:** VI- mid IX.

Protection status: least concern. **Larval food plants:** *Molinia caerulea*. **Overwintering stage:** larva.

Migratory status: non migratory. **No. specimens collected:** 3 specs. June 17, 23, 2015 (Valea Cetății), 2 specs., July 27,30, 2015, (Colibi), 2 specs., August 18,25, 2015, (Luncă), 2 specs., September 12, 28, 2015, (Vadul Morii).

RESULTS AND DISCUSSION:

In the study area are some exceptions, given the common species of butterflies that have adapted to the natural environment and anthropogenic through large areas of land brought into agricultural use and the number of high pressure that took place over apple orchards and meadows another time (Fig.2). Because of this area plant species have changed. Large areas and fragmentation of the current distribution of species due to global climate changes, characterized by periodic cooling and heating [Moise (2011b,e); Moise&Sand (2012); Stancă-Moise (2016); Székely (2008)].

Zoogeographical analysis (Fig. 4) in the study of day-flying butterflies (Lepidoptera: Rhopalocera) (Fig.3.) from grassland Sibiel village, reveals a significant number, 59 species which represent 27,06 % of Romanian Rhopalocera (218 species) [Székely (2008)]. Lepidoptera population structure in terms of 2015 signaled the meadows around the village Sibiel vary considerably throughout the areas of distribution in most species. Similar studies were conducted by Torok in Medias area [Török (2012); Török (2014)] located near Sibiu. Fauna species listed in the list reveals that species studied: dominate the fauna elements with the Euro-Siberian 47,45%, Holomediterranean 13,5% and 8,47%: Mediterranean-west-Asian, South-west-Siberian complex. This highlights the striking continental character of the studied groups. Best represented are the species of: *Nymphalidae* (17 species), *Lycaenidae* (14 species), *Pieridae* (10 species), *Satyrinae* (10 species) and *Papilionidae* (1 species).

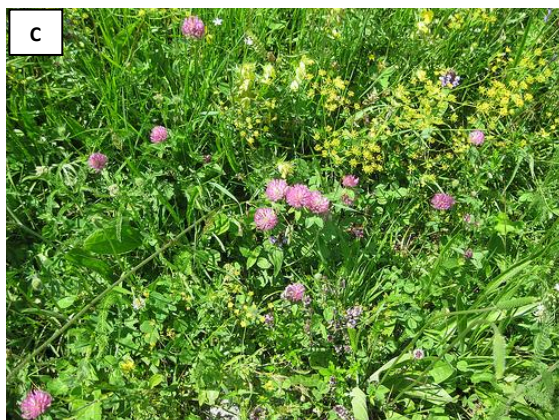


Fig. 2. Mezophilous grassland from Sibiel village (foto. orig.)

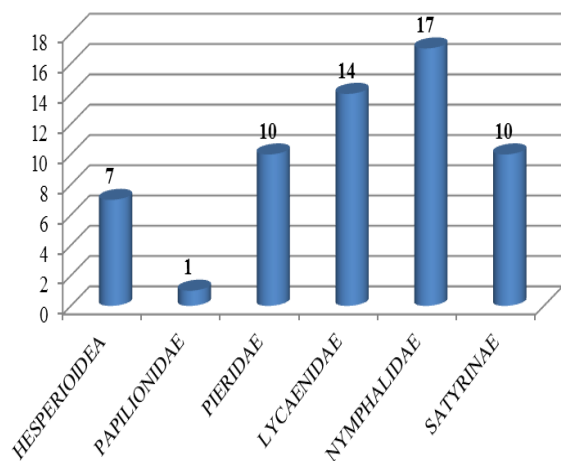


Fig. 3 The representation of the suborder Rhopalocera from Sibiel village (Sibiu, Romania)

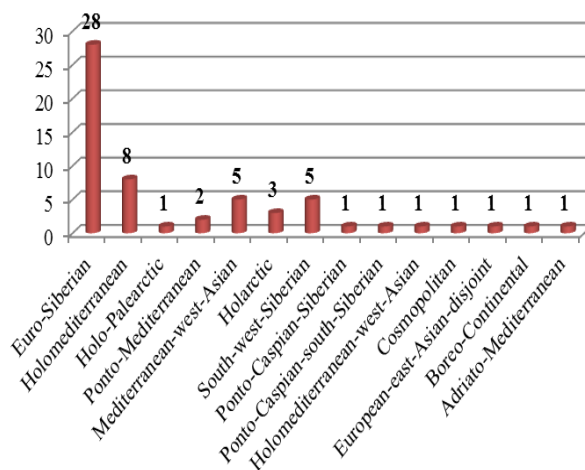


Fig. 4. Zoogeographical spectrum of the Lepidoptera species identified in Sibiel village (Sibiu, Romania)

CONCLUSIONS:

The countryside around Sibiel village is important for butterflies. Sampling in one season, found that the area supported a minimum of more than a quarter of all butterfly species known to regularly occur in Romania.

Butterflies have been shown to respond rapidly to environmental changes, such as agricultural intensification, pollution, land abandonment and climate change (<http://www.ukbms.org/butterflyandenvironmental.aspx>).

The environment in and around Sibiel village changes from year to year due to variations in annual weather, but also more substantively due to anthropogenic impacts, the majority of which are negative. Environmental pressures which may adversely impact on the regions' rich butterfly fauna include: urban development (including road building), climate change (general warming and an increased frequency of climatic extremes), agricultural intensification (including the trend towards higher stocking rates of sheep) and deforestation (including around Bărcul Roșu and Pădurea Subpărățel).

The present study has established a current baseline of species occurring in the region, which can be used to assess future changes in status. This is not only important because butterflies are iconic and popular species with a rich cultural history, but moreover because butterflies are widely regarded as indicators of ecosystem health (<http://www.ukbms.org/indicators.aspx>) and can therefore be used to measure changes in the health of the Romanian countryside. Testimony to this is that butterflies have been adopted by various European Governments as official biodiversity indicators.

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