

NEW DATA TO THE KNOWLEDGE OF THE LEPIDOPTERA FAUNA OF THE SĂLAJ-REGION, TRANSYLVANIA, ROMANIA (ARTHROPODA: INSECTA)

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ABSTRACT: 96 Lepidoptera species have been recorded, nine species (*Calyptra thalictri*, *Coleophora medelichensis*, *Cydalima perspectalis*, *Dichagyris forcipula*, *Eupithecia millefoliata*, *Heliomata glarearia*, *Marumba quercus*, *Phalera bucephaloides*, *Pyrgus sidae*) are new to the Satu Mare-Maramureş region plus 21 species turned to be new to our Sălaj County project. The occurrence of the invasive Microlepidoptera species *Cydalima perspectalis* in the region is the most northern record for Romania.

Key words: Distribution, faunistics, new records

INTRODUCTION:

In our former publications (Bálint *et al.* 2016, Szabóky *et al.* 2016) we recorded the occurrence of 446 species from the territory of the Sălaj region, which were collected or observed during eleven field-work events conducted in the years 2014-2015 (Gubányi 2015). However, the interesting Lepidoptera material of the collecting event no. 252 was put into our disposal after the publications of the results. Moreover, checking our field notes we have found further interesting records remained unpublished. Finally, between 23-26th of May 2016, there was a possibility to continue our survey and having field works in hitherto seldomly or not-at-all visited localities. The aim of the present paper is to publish all the data we have collected and gathered supplementing our knowledge of the Lepidoptera fauna of the region.

MATERIAL AND METHODS:

All collecting sites and observation points are shown in figure 1.

The list of collecting events is presented in temporal sequence. First the locality with its official Romanian name (in brackets with Hungarian equivalents) and then the geographical coordinates and dates are given; after the semicolon the collecting methods and the collector names are listed. Day-active moths were collected by using butterfly net or were simply hand-collected. Night active moths were captured by semi-automatic light traps.

Families and species names are according to Szabóky *et al.* (2002) and Varga *et al.* (2004). Nomenclature also reflects the mentioned checklist. Every species name is followed by a dash when the reference numbers of the collecting sites are given.

Species marked with an exclamation mark (!) was not recorded by us during our field works.

Species marked with an asterisk (*) are briefly discussed. These were not indicated to occur in the region Maramureş-Satu-Mare of the checklist Rákósy *et al.* (2003). Although in this publication Sălaj County is regarded as belonging to the region Transylvania, in the figure provided (Rákósy *et al.* 2003, fig. 1) it is obvious the Sălaj County was regarded as part of the region Maramureş-Satu-Mare. That makes more sense,

consequently we followed the figure. Voucher specimens are deposited in Lepidoptera collections of the Hungarian Natural History Museum (HNHM).

Further abbreviations used: (l) = larva, (o) = observed, (p) = pupa, (s) = sack.

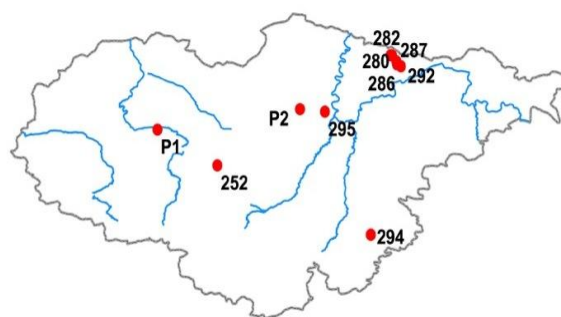


Fig. 1: The overview of Lepidoptera collecting and observation sites of the Hungarian Natural History Museum in 2014, 2015 and 2016, providing the records of the present paper (by A. Gubányi).

COLLECTING SITES AND EVENTS:

- P1 – Dealurile Crasnei (Krasznamenti-dombság), Pericei (Szilágyperecsen) 20.05.2014. N47,228092°, E22,847582° leg. Zs. Bálint & G. Katona.
- P2 – Dealurile Sălajului (Szilágymenti-dombság), Cuceu (Kucsó) 01.06.2015, mesoxerophilous grassland, leg. K. Karácsonyi & G. Negrean.
- 252 – Dealurile Crasnei (Krasznamenti-dombság), Aghireş (Egrespatak), dry sward with loess wall and abandoned orchard, 16.07.2015, N47,1569° E22,9923°, 323 m; light trap on hilltop (21.15-24.00), leg. Z.P. Erőss, A. Kenéz, P.G. Sulyán & Z. Vas.
- 279 – Dealurile Boiului (Szamoszug), Vălişoara (Dióspatak), limestone hill, meadow, 23.05.2016, N47,375635° E23,410792°; collecting with butterfly net, leg. Z. Erőss, A. Gubányi, G. Katona & A. Kenéz.
- 280 – Dealurile Boiului (Szamoszug), Vălişoara (Dióspatak), limestone hill, meadow, 23.05.2016,

- N47,363696° E23,424869°; light trap, leg. Z. Eröss, A. Gubányi, G. Katona & A. Kenéz.
- 282 – Dealurile Boiului (Szamoszug), Vălișoara (Diósptak), limestone hill, meadow, 24.05.2016, N47,375635° E23,410792°; hand collecting, collecting with butterfly net, plancton sample, leg. Z. Eröss, A. Gubányi, G. Katona & A. Kenéz.
- 286 – Dealurile Boiului (Szamoszug), Vălișoara (Diósptak), limestone hill, fountain, 25.05.2016, N47,353833° E23,435919°; hand collecting, leg. Z. Eröss, A. Gubányi, G. Katona & A. Kenéz.
- 287 – Dealurile Boiului (Szamoszug), Vălișoara (Diósptak), limestone hill, meadow, fountain 25.05.2016, N47,357672° E23,426467°; hand collecting, collecting with butterfly net, leg. Z. Eröss, A. Gubányi, G. Katona & A. Kenéz.
- 292 – Dealurile Boiului (Szamoszug), Vălișoara (Diósptak), limestone hill, meadow, 26.05.2016, N47,375239° E23,414301°; collecting with butterfly net, leg. Z. Eröss, A. Gubányi, G. Katona & A. Kenéz.
- 294 – Depresiunea Almaș-Agrij (Almăș-Egri-medence), Ugruț (Ugróc), closed steppe, edge of oak forest, pastures in valley floor, 25.05.2016, N47,019369° E23,363349°; singling with butterfly net, leg. A. Gubányi & G. Katona.
- 295 – Jibou Botanical Garden (Grădina Botanică Vasile Fati), 26.05.2016, N47,263674° E23,252381°; hand collecting, butterfly net, leg. Z. Eröss, A. Gubányi, G. Katona & A. Kenéz.



Fig. 2: The larva of *Cossus cossus*, in Vălișoara (Diósptak) 24. May, 2016, loc. 282. (Photo: A. Gubányi)

RESULTS:

GEOMETROIDEA

Geometridae

- Ascotis selenaria* ([Denis et Schiffermüller], 1775) – 252.
- Biston betularius* (Linnaeus, 1758) – 252.!
- Catarhoe cuculata* (Hufnagel, 1767) – 252.
- Chiasmia clathrata* (Linnaeus, 1758) – 280, 282.
- Chlorissa viridata* (Linnaeus, 1758) – 279.

- Cyclophora linearia* (Hübner, 1799) – 252.
- Ematurga atomaria* (Linnaeus, 1758) – 252.
- Epirrhoe alternata* (Müller, 1764) – 252.
- Eupithecia millefoliata* Rössler, 1866 – 252.*
- Heliomata glarearia* ([Denis et Schiffermüller], 1775) – 252.*
- Hemistola chrysoprasaria* (Esper, 1795) – 252.!
- Hypomecis punctinalis* (Scopoli, 1763) – 252.!
- Idaea subsericeata* (Haworth, 1809) – 252.
- Phaiogamma etruscaria* (Zeller, 1849) – 252.!
- Plagidis dolabraria* (Linnaeus, 1767) – 252.!
- Pseudoterpna pruinata* (Hufnagel, 1767) – 252.
- Scopula ornata* (Scopoli, 1763) – 252.
- Siona lineata* (Scopoli, 1763) – 279, 282(o), 287(o), 292(o), 294(o).
- Timandra comae* Schmidt, 1931 – 252.
- Xanthorhoe montanata* ([Denis et Schiffermüller], 1775) – 280, 282, 287.!

PAPILIONOIDEA

Hesperiidae

- Carterocephalus palaemon* (Pallas, 1771) – 282.
- Ochlodes sylvanus* (Esper, 1779) – 294.
- Pyrgus malvae* (Linnaeus, 1758) – 294.
- Pyrgus sidae* (Esper, 1784) – 287.*

Lycaenidae

- Callophrys rubi* (Linnaeus, 1758) – 294.
- Cupido minimus* (Fuessly, 1775) – 282.
- Glaucopsyche alexis* (Poda, 1761) – 282, 292.
- Lycaena dispar rutilus* (Werneburg, 1864) – 282, 294(o).
- Lycaena tityrus* (Poda, 1761) – 282, 294.
- Maculinea arion* (Linnaeus, 1758) – 294.
- Plebejus argus* (Linnaeus, 1758) – 279, 282, 292, 294.
- Plebejus argyrognomon* (Bergsträsser, 1779) – 287.
- Plebejus idas* (Linnaeus, 1758) – 292, 294.
- Plebejus sephirus* (Frivaldszky, 1835) – 294.
- Polyommatus icarus* (Rottemburg, 1775) – 282, 287, 292, 294.
- Polyommatus semiargus* (Rottemburg, 1775) – 282.
- Polyommatus thersites* (Cantener, 1835) – 294.
- Pseudophilotes schiffermuelleri* (Hemming, 1929) – 294.

- Satyrus pruni* (Linnaeus, 1758) – 294.

Nymphalidae

- Euphydryas aurinia* (Rottemburg, 1775) – 294.
- Melitaea phoebe* ([Denis et Schiffermüller], 1775) – 282.
- Melitaea athalia* (Rottemburg, 1775) – 279, 282, 294.
- Melitaea cinxia* (Rottemburg, 1775) – 294.
- Melitaea trivia* ([Denis et Schiffermüller], 1775) – 292.
- Neptis sappho* (Pallas, 1771) – 282.

Pieridae

- Anthocharis cardamines* (Linnaeus, 1758) – 282.
- Aporia crataegi* (Linnaeus, 1758) – 282(o), 294, P1(o: swarming adults).
- Colias alfacariensis* Ribbe, 1905 – 282, 287.
- Colias erate* (Esper, 1805) – 294.
- Gonepteryx rhamni* (Linnaeus, 1758) – 286(o), 287(o).
- Leptidea major* Grund, 1905 – 292.
- Leptidea sinapis* (Linnaeus, 1758) – 282, 292, 294.
- Pieris napi* (Linnaeus, 1758) – 282.
- Pieris rapae* (Linnaeus, 1758) – 282.

Satyridae

- Coenonympha arcania* (Linnaeus, 1758) – 294.
Coenonympha glycerion (Scopoli, 1763) – 287, 292.
Coenonympha pamphilus (Linnaeus, 1758) – 279, 294.
Erebia medusa ([Denis et Schiffermüller], 1775) – 294.
Lasiommata megera (Linnaeus, 1758) – 282, 294.

DREPANOIDEA

Drepanidae

- Thyatira batis* (Linnaeus, 1758) – 252.
Watsonalla binaria (Hufnagel, 1767) – 252.!

BOMBYCOIDEA

Sphingidae

- Deilephila porcellus* (Linnaeus, 1758) – 252.
Marumba quercus (Denis & Schiffermüller, 1775) – P2.*

NOCTUOIDEA

Arctiidae

- Diacrisia sannio* (Linnaeus, 1758) – 294.
Eilema griseola (Hübner, 1803) – 252.!
Phragmatobia fuliginosa (Linnaeus, 1758) – 252.

Lymantriidae

- Lymantria dispar* (Linnaeus, 1758) – 252.!

Noctuidae

- Abrostola asclepiadis* ([Denis et Schiffermüller], 1775) – 252.
Abrostola triplasia (Linnaeus, 1758) – 252.!
Callistege mi (Clerck, 1759) – 294.
Calyptra thalictri (Borkhausen, 1790) – 252.*
Catocala fulminea (Scopoli, 1763) – 252.!
Chloantha hyperici ([Denis et Schiffermüller], 1775) – 252.
Cryphia algae (Fabricius, 1775) – 252.
Deltote bankiana (Fabricius, 1775) – 252.!
Dichagyris forcipula ([Denis et Schiffermüller], 1775) – 252.*
Dypterygia scabriuscula (Linnaeus, 1758) – 286.!
Euclidia glyphica (Linnaeus, 1758) – 282, 294(o).
Hoplodrina blanda ([Denis & Schiffermüller], 1775) – 252.
Lacanobia contigua ([Denis & Schiffermüller], 1775) – 252.
Lamprosticta culta ([Denis et Schiffermüller], 1775) – 252.!
Mesapamea secalis/secalella species-pair. – 252.
Mythimna albipuncta ([Denis et Schiffermüller], 1775) – 252.
Noctua pronuba Linnaeus, 1758 – 252.
Polypogon lunalis (Scopoli, 1763) – 252.!
Nolidae
Bena prasinana (Linnaeus, 1758) – 252.!
Notodontidae
Phalera bucephaloides (Ochsenheimer, 1810) – 252.*

TINEOIDEA

Psychidae

- Bijugis bombycella* ([Denis et Schiffermüller], 1775) – 287.
Canephora hirsuta (Poda, 1761) – 282(s).!
Taleporia politella (Ochsenheimer, 1816) – 282(s).!

GELECHIOIDEA

Coleophoridae

- Coleophora conspicuella* Zeller, 1849 – 287.!
Coleophora medelichensis Krone, 1908 – 287.*

PYRALOIDEA

Crambidae

- Cydalima perspectalis* (Walker, 1859) – 295(p).*
Thisanotia chrysonuchella (Scopoli, 1763) – 287.

COSSOIDEA

Cossidae

- Cossus cossus* (Linnaeus, 1758) – 282(l)(o)(Fig. 2).!
Zeuzera pyrina (Linnaeus, 1761) – 252.!



Fig. 3: *Buxus* shrubs defoliated by *Cydalima perspectalis* in the Jibou Botanical Garden (Gradina Botanica Vasile Fati), 26 May, 2016, loc. 295. (Photo: G. Katona)

DISCUSSIONS AND CONCLUSIONS:

Calyptra thalictri – In the Carpathian Basin this species is the only representative of the pantropical tribe Calpini, having various migrant species. In the Palearctic region *C. thalictri* is widely distributed and probably it is also a migrant. The early stages have been recorded first by Imre Frivaldszky (1863). It has been recorded for the regions of Banat and Transylvania (Rákossy *et al.* 2003). New for the Satu Mare-Maramureș region, as well as for Sălaj County.

Coleophora medelichensis – The species is represented in the collection of the HNHM by several voucher specimens collected in different Pannonian localities (Buschman & Richter 2016), supposedly it is a widely distributed micromoth. It has been recorded only from Transylvania from the entire territory of present-day Romania (Rákossy *et al.* 2003). New for the Satu Mare-Maramureș region, as well as for Sălaj County.

Cydalima perspectalis (Fig. 3) – The species has been recorded in Romania, (Székely *et al.* 2011; Gutue *et al.* 2014; Bunesu *et al.* 2016). Via the presence of defoliated *Buxus* shrubs, pupal skin and nets in the branches found in the botanical garden of Jibou we record here for the first time the occurrence of the species for the Satu Mare-Maramureș region, and hence it turned to be also new for Sălaj County. The

species invaded Hungary in the present decade, obviously from southwest (Vétek *et al.* 2014).

Dichagyris forcipula – In Pannonia it is a widely distributed species typical for xerothermic habitats. It has been recorded for the regions of Banat and Transylvania (Rákósy *et al.* 2003). New for the Satu Mare-Maramureş region, as well as for Sălaj County.

Eupithecia millefoliata – In Pannonia, it is a widely distributed species, typical for xerothermic primary and secondary habitats. It has been recorded for the regions of Banat, Crisana and Transylvania (Rákósy *et al.* 2003). New for the Satu Mare-Maramureş region, as well as for Sălaj County.

Helimata glarearia – In Pannonia it is a widely distributed and common species typical for xerothermic habitats. In Romania it is also common but has been recorded only for the regions of Banat and Transylvania (Rákósy *et al.* 2003). New for the Satu Mare-Maramureş region, as well as for Sălaj County.

Marumba quercus – In Pannonia it is a widely distributed species typical for xerothermic habitats covered by *Quercus* forests and shrublands with *Quercus pubescens*. It has been recorded from the regions of Banat, Crisana and Transylvania (Rákósy *et al.* 2003). New for the Satu Mare-Maramureş region, as well as for Sălaj County.

Phalera bucephaloides – In Pannonia it is a local species typical for xerothermic forests, where *Quercus pubescens* is dominant. It has been recorded for the regions of Banat and Transylvania (Rákósy *et al.* 2003). New for the Satu Mare-Maramureş region, as well as for Sălaj County.

Pyrgus sidae – In Pannonia this steppicolous species disappeared. According to the literature in Romania it still occurs in the regions of Banat and Transylvania (Rákósy *et al.* 2003), but in the former territory it has not been collected since more than a century. New for the Satu Mare-Maramureş region, as well as for Sălaj County. In the collection of the HNHM there is an old voucher specimen from Geoagiu, Hunedoara County („Algyógy, 1908, leg. Gergely”) what indicates that the species probably also occurs in the Crisana region, and has a wider distribution in the Carpathian Basin than that the hitherto published data indicates. Most recently the species has been recorded in Dobrogea (Székely 2012).

As a result of our previous works the occurrence of 446 Lepidoptera species was recorded for the Sălaj County. In this paper we recorded the occurrence of 96 Lepidoptera species. Amongst them there were 30 species not collected previously during the Sălaj project, therefore the total number of the species has grown to 476. Nine Lepidoptera species newly captured and discussed above turned to be new for the region Satu Mare-Maramureş including Sălaj County.

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