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New and Rare Macrolepidoptera (Insecta) from Romanian Dobrogea (South-East Romania)

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Abstract. This study represents a synthesis of recent faunistical results (2012–2015), regarding the Macrolepidoptera of Dobrogea (south-eastern Romania) (Fig. 1A). Records of species of great faunistical and zoogeographical importance for the Romanian fauna are included. *Eublemma porphyrina* (Freyer, 1844) is reported for the first time in the Romanian fauna. The presence of several species known in the country based exclusively on very old records is confirmed (e.g. *Dryobotodes carbonis* (F. Wagner, 1831), *Eremodrina pertinax* (Staudinger, 1879), *Zekelita antiqualis* (Hübner, [1809])). Certain rare species with few records are also presented, such as *Catopta thrips* (Hübner, 1818), *Sphingonaepiopsis gorgoniades* (Hübner, 1819), *Grammodes bifasciata* (Petagna, 1787), *Clytie syriaca* (Bugnion, 1837), *Symira dentinosa* Freyer, 1839, *Chazaria incarnata* (Freyer, 1838), *Protarchanara brevilinea* (Fenn, 1864), *Polymixis rufocincta* (Geyer, [1828]), *Gortyna cervago* Eversmann, 1844, *Dichagyris melanura* (Kollar, 1846), *Polyommatus* (*Agrodiaetus*) *admetus* (Esper, 1783), *Libythea celtis* (Laicharting in Fuessly, 1782), *Kirinia roxelana* (Cramer, 1777), etc. Several Macrolepidoptera species recorded for the first time in Dobrogea are also included, eg: *Hyloicus pinastri* (Linnaeus, 1758), *Cyclophora quercimontaria* (Bastelberger, 1897), *Perconia strigillaria* (Hübner, 1787), *Dryobotodes carbonis* (F. Wagner, 1831), *Meganephria bimaculosa* (Linnaeus, 1767), *Cerastis leucographa* ([Denis & Schiffermüller], 1775), *Noctua janthe* (Borkhausen, 1792). There are 602 Macrolepidoptera species listed in this work. The studied localities have not been, or have been only little investigated previously in terms of Lepidoptera fauna, eg: Creasta Cardonului-Hamcearca, Enisala (Tulcea County), Fântâniţa–Murfatlar, Allah Bair Hill, Esechioi Forest, Oltina, Şipotele (Constanţa County). The study also includes aspects of zoogeography, invasive species, protection of habitats and protection of endangered species.

Key words: Insecta, Macrolepidoptera, faunistics, zoogeography, invasive species, conservation, Dobrogea, South-East Romania

INTRODUCTION

The first work about the Lepidoptera fauna of Dobrogea dates back 150 years (Mann, 1866). Joseph Mann published in that year the results of his work in Northern Dobrogea (Tulcea and surroundings). The work comprises 469 Macro– and 473 Microlepidoptera species. A significant part of these species have been reported for the first time in Europe, species which had been previously known only from Asia Minor and Southern Russia. During the 150 years since the publication, the number of Lepidoptera species reported from Dobrogea doubled, and the number of Macrolepidoptera amounts to approximately 1000 species, which represent almost 50% of the Macrolepidoptera species reported from Romania. Certainly, this high diversity is the consequence of the unique geographical position of Dobrogea, in a confluence zone of the steppe fauna from Southern Russia and Ukraine with that of the Balkans (Fig. 1A). That is why this territory is one of the most interesting regions of Romania from an entomofaunisitic point of view, offering the opportunity for new discoveries year after year. The present work comprises the findings of new research

on the Lepidoptera of Dobrogea (2012–2015), presenting some species which have been recorded very rarely and are little known in Romania.

MATERIAL AND METHODS

Recent results concerning the fauna of Dobrogea are presented, with large amounts of data coming from new sites where Lepidoptera research had hardly been done before, for instance: Cardon-Hamcearca Ridge from Măcin Mountains, Enisala (also an archeological site), Allah Bair Hill, Canaraua Şipote. Only few data were published from Oltina and from Esechioi Forest – Bugeac Lake in the past (Popescu-Gorj, 1959; Popescu-Gorj & Drăghia, 1967; Rákosy & Székely, 1996). The records cover almost the whole period of the year in which Lepidoptera can be observed (April – November), except March, a month during which field work could not be performed in Dobrogea due to hard weather conditions. It is possible that, in March, two or three more Lepidoptera species little known or unknown in Romania are to be found in Dobrogea. The research periods were: Creasta Cardonului-Hamcearca (2014–2015), Enisala (2012–2015), Fântâniţa – Murfatlar (2013–2015), Allah Bair Hill (2012–2015), Esechioi Forest (2008–2015), Oltina (2014–2015), Şipotele (2014–2015). Sporadic data from Tulcea (the town area), Babadag Forest, Slava Rusă, Horia (Tulcea County), Limanu – Hagieni Monastery (near Mangalia), Palazu Mic, Sinoe, Gura Dobrogei, Dobromir (Constanţa County) are included in this work. The material was collected using 125 W mercury vapour bulbs placed in front of a white sheet, powered

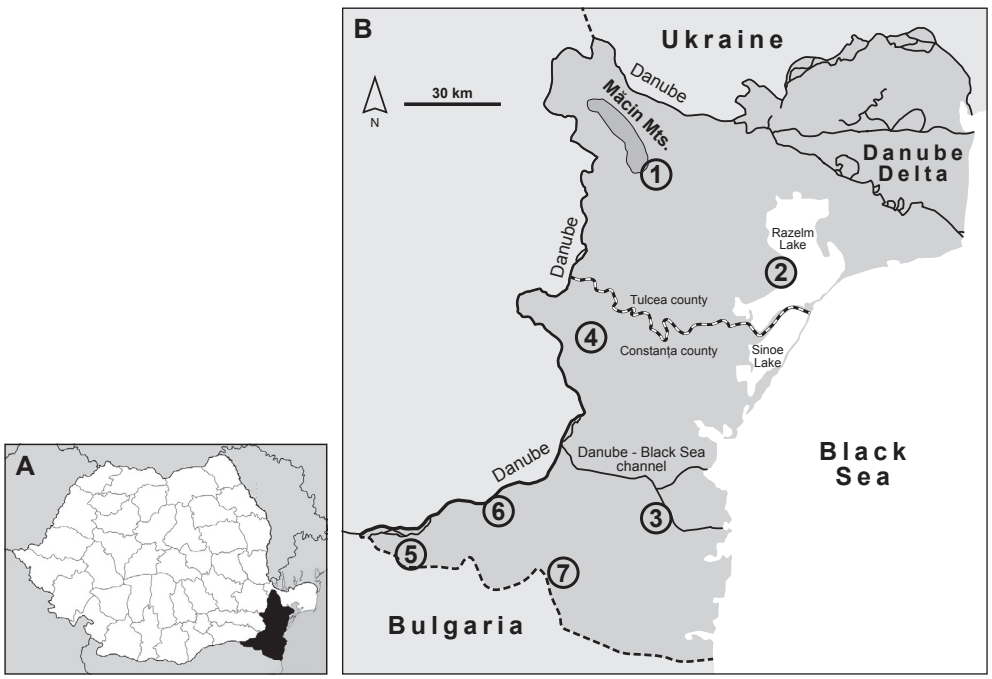

Fig. 1 – A, Location of the studied area in the Romanian territory; B, Map of localities investigated for this study in the period 2012–2015: 1 – Creasta Cardonului, 2 – Enisala, 3 – Fântâniţa–Murfatlar, 4 – Allah Bair Hill, 5 – Esechioi Forest – Bugeac Lake, 6 – Oltina, 7 – Şipotele.

by a portable gasoline generator. In parallel, 3–4 light traps with 8W black and white UV tubes were used every night. The entomological net was used for butterflies.

Collecting sites (Fig. 1B):

Creasta Cardonului – Hamcearca (*Cardon-Hamcearca Ridge*) (Fig. 2A) (45°7′4″N, 28°23′38″E) – Tulcea County – the site is situated between Hamcearca and Balabancea villages, in the south-eastern part of Măcin Mountains, on the right bank of Taița River. The night collecting site is an abandoned limestone quarry (referred to by locals as Cardon), which provided stone for road maintenance some 30–40 years ago. The moths have been collected by lighted screen and by help of light traps. Day collecting covered the surroundings of the quarry as well. The site is characterized by a limestone scenery, with elements of submediterranean and steppe vegetation, and forests dominated by thermophylous oak.

Enisala (Fig. 2B) (44°52′42″N, 28°49′7″E) – Tulcea County – is a village in Tulcea County, under the administration of Sarichioi Commune. The natural setting is extremely rich, located among Babadag Lake in the west, Razim Lake in the east and forested areas in the south. To this contribute the limestone hills with steppe vegetation and the cliffs with characteristic Ponto-Balkanic vegetation, as well as continental habitats. The most remarkable results come from the walls of Enisala Fortress (Herakleia) investigated during the night with light traps.

Fântâniţa–Murfatlar (Fig. 2C) (44°09′24″N, 28°23′11″E) – Constanţa County – is located in Medgidia Plateau, South-East from Basarabi town. It is a botanical and zoological natural reserve protected by law since 1962. It is an area with a sloping relief, with fauna and flora characteristic especially to the Ponto-Balkanic zone. Butterflies have been collected with the entomological net and the moths by lighted screen and light traps.

Allah Bair Hill (Fig. 2D) (44°30’16”N, 28°13’28”E) – Constanţa County – is a hilly region in Central Dobrogea, located among the villages Bălţâgeşti, Crucea and Gălbiori, having some mountainous appearance, called also „Allah’s Mountain”, and comprises the highest landforms of Constanţa County (205 m). The hill was declared a protected area in1980, due to the high number of rare plant species, among which are numerous petrophylous taxa with Ponto-Balkanic and Ponto-Mediterranean origins. The forested areas are insignificant, the Lepidoptera fauna is steppe-specific with numerous elements characteristic to rocky areas. The butterflies have been collected with the entomological net, and the moths by lighted screen and light traps.

Esechioi Forest–Bugeac Lake (Fig. 2E) (44°2′41″N, 27°57′34″E) – Constanţa County – is a botanical and zoological reserve located in the south-western part of Constanța County, on the Podișul Oltinei (Oltina Plateau), at nord-west from Esechioi village. The “Esechioi Forest” Protected Area was established in 1980 and covers an area of 27 ha. In the east and in the north, the neighbouring areas of the village are moorlands, especially in the direction of Bugeac Lake. The butterflies were collected with the entomological net and the moths by lighted screen and by light traps.

Oltina (Fig. 2F) (44°10′8″N, 27°40′5″E) – Constanţa County – is a commune in the south-western part of Constanța County and comprises four villages: Oltina, Răzoarele, Satu Nou and Strunga. The natural setting includes steppe forests and floodplain forests in the neighbouring areas of the lakes (Oltina). The butterflies were collected with the entomological net and the moths by lighted screen and by light traps.

Şipotele (Fig. 2G) (44°2′41″N, 27°57′34″E) – Constanţa County – Șipotele village (Ghiolpunar) is located in the southern part of Constanța County on the

Southern Dobrogea Plateau, and pertains to Deleni commune. It is a limestone area with steppe vegetation, with numerous submediterranean elements. The cliffy areas (Canaraua Şipote), partly covered by trees and shrubs, are very chasracteristic.. The moths have been collected mostly by light traps and to a lesser extent by lighted screen. The butterflies of the area have been studied for a longer time (since 1993), with some notable findings, such as: *Pseudophilotes bavius egea* (Herrich-Schäffer, 1852) (Fig. 2J) and *Zerynthia cerisyi ferdinandi* Stichel, 1907 (Fig. 2L) (Rákosy & Székely, 1996). The area being arid, in many instances butterflies have been collected and observed on the wet ground near the old Turkish fountains, many of them still present in Southern Dobrogea (Fig. 2H).

Abbreviations used: ♂ = male; ♀ = female; spec. (s) = specimen (s); leg. = legit (collected by); det. = identified by; Păd. = forest ("pădure" in Romanian)

RESULTS

There are 602 Macrolepidoptera species listed in this paper. The systematic order follows the Macrolepidoptera of Hungary (Gyulai et al., 2010). The most important taxonomic and phylogenetic modifications that occurred in the last years are relevant. Thus, well known and distinct families in the past are included as subfamilies. Lymantriidae and Arctiidae families, now treated as subfamilies of Noctuidae (Lymantriinae, Arctiinae), are the most notable (*Annex I*).

Order LEPIDOPTERA
Family NOCTUIDAE

Eublemma porphyrina (Freyer, 1844)
(Figs 2O, 3,4)

Material: Enisala, 14–15.VIII.2015, 4♂♂, 1♀ (leg. L. Székely & Z. Izsák), 4.IX.2015, 1♂ (leg. L.Székely & P. Haneschläger) (det. P. Gyulai).

Remarks: Small size species, wingspan of 10–15 mm, whitish ocher colour. In the centre of the fore wings and on the external margin it shows two ranges of poorly marked brown spots. Xero-thermophilous species occurs in dry rocky steppes, sandy steppes and limestone areas (Anikin et al., 2000; Volynkin, 2012). Early stages and foodplants unknown, probably larvae feed on Asteraceae (Fibiger et al., 2010).

Siberian–Mediterranean, subboreal, known from Turkmenistan, Kazakhstan, SE European part of Russia, Southern Ural, Russian Altai, Western Mongolia (Fibiger et al., op. cit.; Nupponen & Fibiger, 2002; Sinev, 2008; Volynkin, 2012), and Ukraine, Zaporpzhje (www.noctuidae.de). According to Karsholt and Razowsky, *E. porphyrina* is present in Romania and Bulgaria, probably based on the general distribution in Eastern Europe (Karsholt & Razowsky, 1996). However, due to the lack of records, this species has been excluded from the Romanian and Bulgarian Lepidoptera Catalogues (Rákosy et al., 2003; Beshkov, 2000).

Although Poole (1989) considered *E. porphyrina* as a synonym of *Eublemma ostrina* (Hübner, [1808]), starting with Fibiger and Hacker's revisions it is considered bona species (Fibiger & Hacker, 1991). The difference between *E. ostrina* and *E. porphyrina* is evident in the structure of the female genitalia, in the shape of corpus bursae, that in *E. ostrina* is ovoid, posteriorly narrow, and in *E. porphyrina* it is spherical (Fig. 3) (Fibiger et al., op. cit.). The population from Enisala (Tulcea) is the westernmost known in Europe. All specimens collected in Enisala were small, only 10–14 mm wing span (Fig. 4). *New record for Romanian fauna.*

Zekelita antiqualis (Hubner, [1809])
(Fig. 2P)

Material: Şipotele, 19.VII.2015, 2♂ (leg. L. Székely & Z. Izsák).

Remarks: Ponto-Mediterranean element, known from the southern walleys of the Alps, Balkans, Asia Minor, Crimea, Near East and Caucasus. In Romania, it is known only in the southtern part (Banat and Dobrogea). The presence of this species in Dobrogea has been uncertain until now. Although it was mentioned from Dobrogea in literature (Rákosy, 1996), precise data are lacking; only data from Balcik – Bulgaria (Rákosy & Székely, 1996) are available, and there is a complete lack of data in the case of Măcin Mountains (Rákosy & Wieser, 2000).

Protarchanara brevilinea (Fenn, 1864)
(Fig. 2S)

Material: Enisala, 14.VI.2012, 1♂, leg. L. Székely & P. Gyulai (det. P. Gyulai) (Székely, 2012b).

Remarks: The presence of this species in south-eastern Romania is quite surprising. Until now it was known especially from northern Europe and Asia: British Isles, Denmark, Sweden, the Netherlands, Finland, Germany, Latvia, Lithuania, Estonia, and Russia (Volga and Don, the Caucasus, Southern Urals, South-Western Siberia, Transbaikalia and Amur Region). The moth flies in one generation from middle June to August. The larvae feed on *Phragmites*. This species is usually confined to steppe and salt marshes. More recently it was also found near Vadu (Constanţa County) close to the Black Sea coast (S. Kovács pers. comm.). The populations currently known from Dobrogea are the southernmost in Europe.

Dryobotodes carbonis (F. Wagner, 1931)
(Fig. 2T)

Material: Esechioi Forest, 2♂, 28.IX.2014, 1.X.2015 (leg. L. Székely & D. Firţa).

Remarks: Mediterranean element, spread in Southern Europe (France, Italy, Balkan Peninsula and Asia Minor). In Romania, it has been extremely rarely reported, and all records are old: Ineu-Arad, Porţile de Fier, Băile Herculane and Pădurea Garboavele-Galaţi (Rákosy, 1989). *First record for the fauna of Dobrogea.*

Eremodrina pertinax (Staudinger, 1879)
(Fig. 2R)

Material: Şipotele, 13.VIII.2015, 3♂, 1♀ (leg. L. Székely & Z. Izsák).

Remarks: Caspian element, known in Europe only from Greece, Bulgaria and Romania. From Romania it was published only from Dobrogea (Caradja, 1929, 1930; Rákosy, 1996), Olimp, C.A. Rosetti (The Danube Delta) (Székely & Cernea, 2007), Adjud and Olimp, in the collection Aurelian Popescu-Gorj (M. Stănescu, pers. com.). In 1930 Caradja described the subspecies *Eremodrina pertinax argentea* (Caradja, 1930) from Balcik (Bulgaria), considered nowadays only an ecological form adapted to the white limestone substrate from the Balcik area (like other subspecies from that particular area described by Caradja).

Meganephria bimaculosa (Linnaeus, 1767)
(Fig. 2X)

Material: Esechioi Forest, 1.X.2015, 4♂♂, 2♀♀ (leg. L. Székely & D. Firţa).

Remarks: Ponto–Mediterranean element, known in Romania only based on few records from Banat, Central and southern Transylvania, Moldova (Rákosy, 1996) and northern Muntenia (Dincă 2005b). *First record for the fauna of Dobrogea.*

Grammodes bifasciata (Petagna, 1787)
(Fig. 2Q)

Material: Allah Bair Hill, 27.VIII.2013, 1♂; Enisala, 16.VIII.2014, 1♂ (leg. L. Székely); Histria, 5.IX.2015, 1♂ (leg. L. Székely & P. Haneschläger).

Remarks: Afro-Tropical element, extending as north as the Mediterranean Basin. It was recently reported as new species in the fauna of Romania, based on a photograph taken in nature (Rákosy & Mihai, 2011). The first specimens collected in Romania were from Histria, in 2011 (Székely, 2012a).

Clytie syriaca (Bugnion, 1837)

Material: Allah Bair hill, 27.VIII.2013, 1♂ (leg. L. Székely).

Remarks: Mediterranean element, widespread in the Balkans, Asia Minor, Cyprus and the Near East. The species reaches its northernmost distribution limit in Romania (Dobrogea and Danube Delta).

Dychagyris melanura (Kollar, 1846)
(Fig. 2U)

Material: Allah Bair Hill, 16.VI.2013, 11♂, 5♀ (leg. L. Székely & T. Hácz), 14.VII.2013, 3♂, 2♀ (leg. L. Székely & P. Haneschläger); Enisala, 11–13.VII.2013, 6♂, 2♀ (leg. L. Székely & P. Haneschläger) (Székely, 2013), 15–16.VI.2014, 8 specs, 5–6. VII.2015, 20–25 specs (leg. L. Székely).

Remarks: Ponto-Mediterranean element, known in Romania only from Dobrogea, with old records from Hagieni and newer ones only from Greci, Măcin Mountains (Rákosy & Wieser, 2000).

Gortyna cervago Eversmann, 1844

Material: Allah Bair hill, 7.X.2012, 1♀, (leg. L. Székely & S. M. Stanciu).

Remarks: Mediterranean – Turanian element, spread in the eastern part of the Balkan Peninsula, Asia Minor, Ukraine, Armenia, Turkmenistan and in Southern Russia. In Romania, it has been reported only from Southern and Eastern Dobrogea. Allah Bair Hill now represents the western limit of this species in Romania (Székely, 2013).

Polymixis rufocincta Geyer, [1828]

Material: Constanţa County – Gura Dobrogei, 5.X.2012, 1♂; Allah Bair Hill, 7. X. 2012, 1♂, 1♀ (leg. L. Székely & S. M. Stanciu) (Székely, 2013).

Remarks: These are the first records of *P. rufocincta* from Central Dobrogea. Ponto-Mediterranean element, very rare in Romania, known only from some places in Dobrogea (Hagieni, Canaraua Fetii) (Rákosy & Székely, 1996), Banat (Iablaniţa), Transylvania (Săcărămb, Rimetea) (Rákosy, 1996) and northern Oltenia (Polovragi) (Székely, 2010).

Chersotis laeta macini Rákosy, Stangelmeier & Wieser, 1996
Chersotis fimbriola niculescui Rákosy, 1997

Material: Allah Bair Hill, 16.VI.2013 (over 50 specimens) (leg. L. Székely & T. Hácz) (Székely, 2013).

Remarks: Both species are very common on Allah Bair Hill. It has previously been recorded only from Măcin Mountains (Rákosy 1996; Rákosy & Wieser 2000), and some large populations have been recently found at Enisala and at Cheile Dobrogei – between 12.VI–5.VII (over 600 specimens) (Székely, 2012a, 2013). These species are present in many rocky regions from Central and Northern Dobrogea, but they are apparently absent from southern Dobrogea.

Noctua janthe (Borkhausen, 1792)
(Fig. 2W)

Material: Creasta Cardonului, 27–28.VI.2015, 4♂, 1♀ (leg. L. Székely & Gy. Makranczy).

Remarks: Atlanto – Mediterranean element, known mainly from Central and Western Europe (Rákosy, 1996). Recent research suggests that the distribution of this species overlaps to a great extent with that of *Noctua janthina* ([Denis & Schiffermüller], 1775) (Ronkay & Ronkay, 2006). The presence of the species has been recently confirmed in Bulgaria (Beshkov, 2015). In Romania, there are only partially confirmed old records from Transylvania (1914, leg. Prall), and from Băişoara (Rákosy, 1996). The colour plate includes *N. janthina* (from Şipotele) and *N. janthe* (from Creasta Cardonului) (Fig. 2V, W). *First record for the fauna of Dobrogea*.

Family SPHINGIDAE

*Sphingonaepiopsis gorgonia*des (Hübner, 1819)
(Fig. 2I)

Material: Şipotele, 1♂, 19.VII.2015 (leg. L. Székely & Z. Izsák).

Remarks: Ponto-Mediterranean element, distributed in the Balkan Peninsula, Ukraine and Crimea, the Caucasus, southern Russia, Turkey, Lebanon, Israel, Jordan, Iraq, Iran, Kazakhstan, Turkmenistan, Kyrgyzstan, Afghanistan. Southern Dobrogea is the northern limit of the species in the Balkan Peninsula. König (2003) considered that the species could occur in Romania, namely in Northern Dobrogea, but its presence has not been confirmed yet. The species has been reported from Romania only once, from Dumbrăveni, in Southern Dobrogea, on 1.V.2005 (Mihuţ & Dincă, 2006). The current record from Şipotele is fairly close (20 km) to Dumbrăveni. The species was observed at Şipotele by L. Rákosy in July 2015 (L. Rákosy pers. com.).

Family LYCAENIDAE

Pseudophilotes bavius (Eversmann, 1832)
(Fig. 2J, K)

Material: Allah Bair Hill, 1–2.V.2013, 16 specs (leg. S. M. Stanciu & D. Firţa) (Székely, 2013); 8.V.2015, 2 specs (leg. L. Székely & D. Firţa).

Remarks: The populations from Dobrogea belong to the subspecies *Pseudophilotes bavius egea* (Herrich-Schäffer, [1852]), currently known only from Asia Minor and from Romania (Dobrogea). It is a protected species listed on Annex II – Habitats Directive (European Union, 1992)

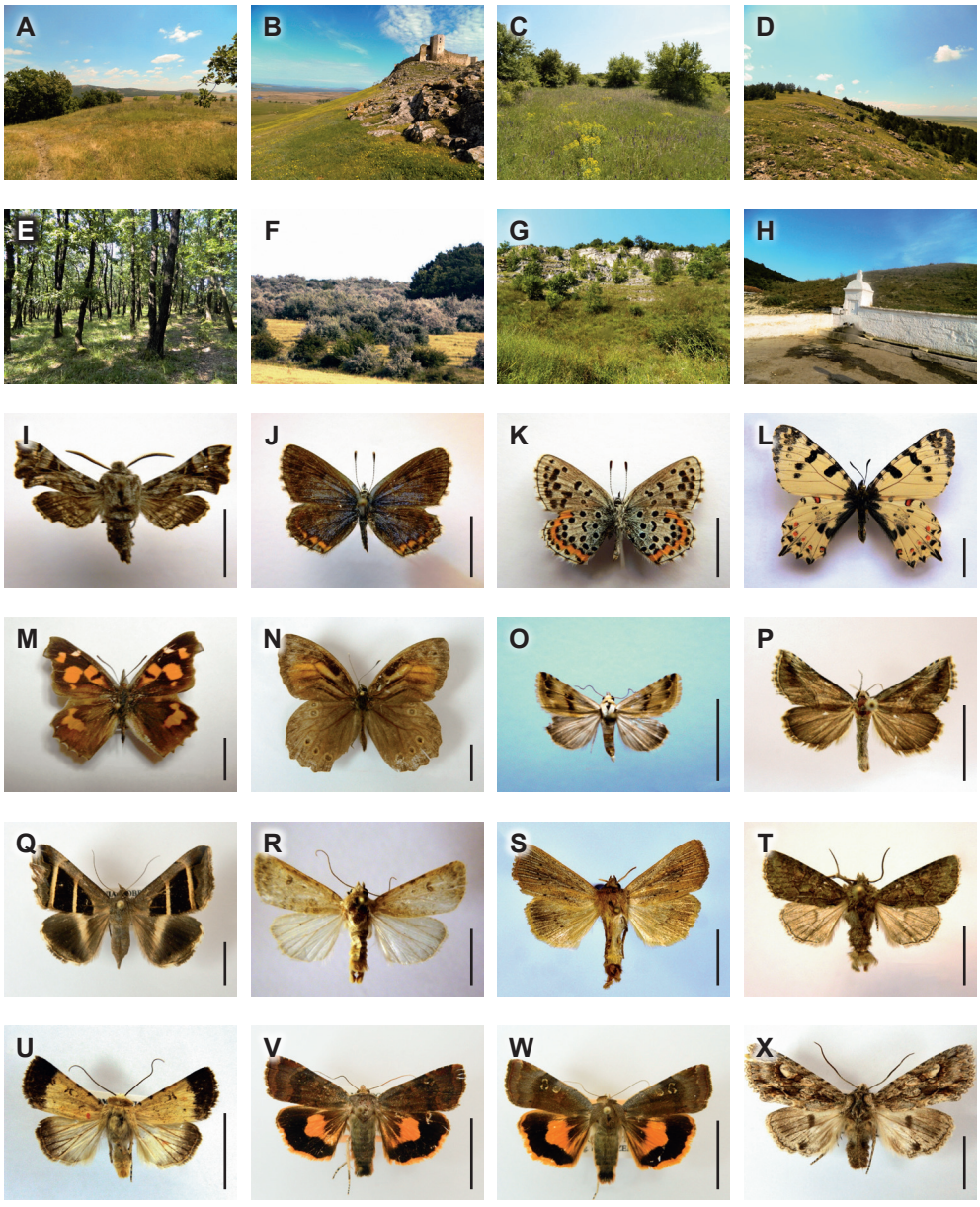

Fig. 2 – Collecting places: A – Creasta Cardonului-Hamcearca (CA), B – Enisala (EN), C – Fântâniţa-Murfatlar (FA), D – Allah Bair Hill (AB), E – Esechioi Forest (ES,) F – Oltina (OL), G – Şipotele (SI), H – old Turkish fountain near Şipotele (In parenthesis the abbreviations occurred in the list); Rare species: I – *Sphingonaepiopsis gorgoniades,* J – *Pseudophilotes bavius,* K – *Pseudophilotes bavius* (underside) L – *Allancastria* (*Zerynthia*) *cerisyi ferdinandi*, M – *Libythea celtis,* N – *Kirinia roxelana,* O – *Eublemma porphyrina,* P – *Zekelita antiqualis,* Q – *Grammodes bifasciata,* R – *Eremodrina pertinax,* S – *Protarchanara brevilinea,* T – *Dryobotodes carbonis,* U – *Dychagyris melanura,* V – *Noctua janthina,* W – *Noctua janthe,* X – *Meganephria bimaculosa* (photos: L. Székely: A-R, T-X; P. Gyulai: S). Scale bar: 1 cm.

Polyommatus (*Agrodiaetus*) *admetus* (Esper, 1783)

Material: Creasta Cardonului, 24–25.VII.2014, 8♂♂, 2♀♀ (leg. L. Székely & V. Dincă); 27.VI.2015, 1♂ (leg. L. Székely & Gy. Makranczy).

Remarks: The status of the subgenus *Agrodiaetus* in Romania, which comprises all the data concerning *Polyommatus* (*Agrodiaetus*) *admetus,* is the subject of a separate study that is in preparation.

Family NYMPHALIDAE

Libythea celtis (Laicharting in Fuessly, 1782)
(Fig. 2M)

Material: Constanţa County, Dobromir, Cetatea village, 21.VI.2013, 1 specimen, leg. A. Vintilă (Székely, 2013).

Remarks: At present, this species is known in Romania only from southern Banat (Herculane, Domogled Mountain, Feregari Mountain, Cazanele Dunării, Dubova, Orşova, Mehadia, Pecinişca and Oglănicului Valley). Based on recent data, it seems that the species is expanding in Dobrogea penetrating from north-eastern Bulgaria, from where there are recent reports from the area between Varna and Balcik, as well as from Russe (S. Beshkov, pers.com.).

Kirinia roxelana (Cramer, 1777)
(Fig. 2N)

Material: Creasta Cardonului, 24–25.VII.2014, 1♂, 2♀♀ (leg. L. Székely & V. Dincă); 27–28.VI.2015, 4♂♂ (leg. L. Székely & Gy. Makranczy).

Remarks: It was reported from Dobrogea for the first time from Măcin Mountains area, from Horia (Rákosy & Wieser, 2000). Subsequently it was found in Esechioi Forest (Dincă, 2005a), and in Babadag Forest (Székely, 2012a), suggesting that the species may be more widespread in Dobrogea than it is currently known. The northern limit of its range seems to be the Danube (it is absent from Ukraine).

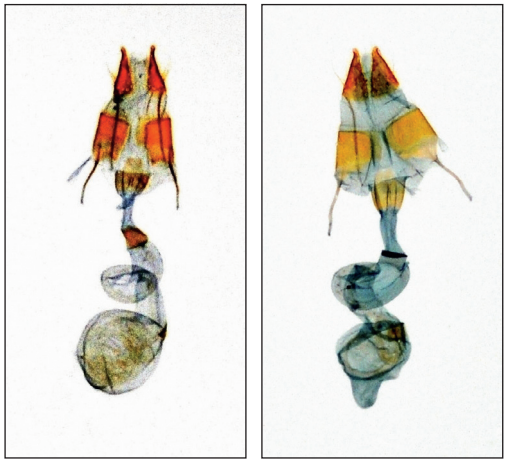

Fig. 3 – Female genitalia of *Eublemma porphyrinia,* Dobrogea (left), and *Eublemma ostrina,* Morocco (right) (Prep. gen. 4370 and 4371 / P. Gyulai)

Fig. 4 – *Eublemma porphyrina*, Dobrogea (left), *Eublemma ostrina*, Bulgaria (right) (photos: L. Székely)

Other new records for the fauna of Dobrogea are: *Hyloicus pinastri* (Linnaeus, 1758) – Tulcea town; *Cyclophora quercimontaria* (Bastelberger, 1897) – Şipotele; *Perconia strigillaria* (Hübner, 1787) – Fântâniţa – Murfatlar; *Cerastis leucographa* ([Denis & Schiffermüller], 1775) – Babadag Forest.

Other rare species, with very few reports from Dobrogea are: *Saturnia pavonia* (Linnaeus, 1758) – Babadag Forest (the third report from Dobrogea); *Panolis flammea* ([Denis & Schiffermüller], 1775) – Babadag Forest (the second report from Dobrogea); *Catopta* (*Paracossulus*) *thrips* (Hübner, 1818) – Hagieni – Balta Limanu), the fifth report from Dobrogea, after Visterna, Beştepe Hill, Izvoarele and Babadag (taxon of conservation concern being a Natura 2000 species); *Dasycorsa modesta* (Staudinger, 1879) – Babadag Forest; *Dyachrisia nadeja* (Oberthür, 1880) – Enisala, Şipotele; *Chazaria incarnata* (Freyer, 1838) – Creasta Cardonului; *Acontia* (*Tarachidia*) *candefacta* (Hübner, [1831]) – Enisala; *Cucullia biornata* Fischer von Waldheim, 1840 – Babadag; *Rhyparioides metelkana* (Lederer, 1861) – Enisala, Esechioi, Oltina; *Amphipyra tetra* (Fabricius, 1787) – Creasta Cardonului; *Symira dentinosa* Freyer, 1839 – Allah Bair Hill; *Mycteroplus puniceago* (Boisduval, 1840) – Enisala, Sinoe.

DISCUSSIONS

Dobrogea stands out as the most prolific territory in Romania as far as the entomological research is concerned, especially in the field of lepidopterology. Although this region is perhaps the best studied territory of Romania from a lepidopterological point of view, Dobrogea is still offering new surprises year after year. Dobrogea is still preserving a multitude of important habitats for the entomofauna, some of them are well represented, such as the steppes and salty marsh areas, other habitats dispersed as isles, such as the forest habitats. Climatic conditions caused primarly by the influence

of the Black Sea, but also the geographical position make possible the presence of many eastern species characteristic to the Ukrainian and Russian steppes, and a multitude of Balkanic elements. For some of these species these steppes represent the south-western limit of their distribution in Europe, such as *Cucullia argentina* (Fabricius, 1787), *Megaspilates mundataria* (Stoll, 1782) etc. The fauna of North-East Dobrogea has many elements in common with that of southern Ukraine (Bugeac and Odessa Region) (Kljuchko, 2006; Kljuchko et al., 2009). The Balkanic elements are predominant in southern Dobrogea. Their numbers decrease from south to north, as the fauna of the Bulgarian coast is more varied compared to the fauna of the Romanian coastal region. The Bulgarian coastline has loess and limestone cliffs with wooded areas, which lack in the Romanian coastline. Furthermore, the anthropic pressure is higher in the southern part of the Romanian coast compared to the Bulgarian coast, because in the former, the inhabited areas are more numerous. The entomofauna is usually represented by common species with high adaptive capacity. At sites that were important for their Lepidoptera fauna in the past (the surroundings of the town Eforie, Comarova Forest) the landscape underwent radical changes. The Hagieni Forest, between 1960 – 1980 considered "The Paradise of Romanian Lepidopterology", has been transformed into a cluster of trees and shrubs, from where many Lepidoptera species disappeared due plantation work, the natural reserve being invaded by black pine and *Robinia* after 1990. The surviving species live outside the forest. The former glades vanished completely, and the natural reserve status has today little justification from a lepidopterological point of view!

The study on the Lepidoptera fauna of the southern region of Dobrogea has begun within the period 1929 – 1930, when Aristide Caradja published the first results of his research on the Lepidoptera from the surroundings of Eforie/Techirghiol (Carmen Sylva), then from the Balcik area (The Silver Coast, a Bulgarian region nowadays) (Caradja, 1929, 1930, 1931). His studies drew attention on the Lepidoptera assemblages inhabiting on the Black Sea coastline between town Constanţa and Cape Ecrene (Bulgaria), and emphasized the richness of fauna of these areas, which consists of many Balkan and Mediterranean elements (Popescu-Gorj, 1959). On biogeographical considerations, Caradja (1931) divided the Lepidoptera fauna in two sub-provinces: "Techirghiol and Eforie Sud", characterized by the presence of steppe elements from southern Russia, and "Silver Coast / Balcik", characterized by the presence of Ponto-Mediterranean elements from Asia Minor, considered preglacial elements, relicts of an ancient period when the Balkan Peninsula was in direct contact to Asia Minor. Preglacial species that remained in Dobrogea during glaciation were unable to compete with mainland Asian species in postglacial, became rarities. Caradja believed that the vast majority of steppe elements were found in southeastern Dobrogea. More recently, however, most of these species have been reported nearly across the entire Dobrogea (Rákosy & Székely, 1996; Rákosy & Wieser, 2000; Székely et al., 2011; Székely 2012a), demonstrating that they are less localized then previously thought. Especially after 1990, the number of areas investigated form a lepidopterological point of view has increased, and hundreds of new records for Dobrogea, and dozens of new records for the Romanian fauna have been discovered. This is primarily due to an increased availability of collecting techniques, since portable power generators and light traps were not available before. In the past, research areas were very limited, for example in southern Dobrogea they were confined to Hagieni Forest and Canaraua Fetii Valley. This led to some erroneous assumptions since various species were believed to be very rare and localized (Popescu-Gorj, 1959, 1960; Popescu-Gorj & Drăghia,

1967). Ongoing research shows that many species, once believed to be very scarce in Dobrogea and Romania in general, can actually be very common and can often be widespread, if sought in their specific habitats where host plants are plentiful and microclimate conditions are favourable. For example: *Lemonia balcanica, Godonella aestimaria sareptanaria, Narraga tessularia, Microloxia herbaria, Eupithecia biornata, Mycteroplus puniceago, Hadula stigmosa, Cardepia hartigi, Saragossa porosa* (Eversmann, 1854)*, Scotochrosta pulla, Rhyparioides metelkana, Chelis maculosa mannerheimii, Arctia festiva,* etc.

Dobrogea concentrates the highest percent of Ponto – Mediterranean and Ponto – Caspian Lepidoptera species (35%) in the Romanian fauna. Among these, the most important are the species that originated in the region of the Caspian Sea; they are predominant in the north-eastern part of Dobrogea, but they can be found in the southern part as well. These Ponto – Caspian species were able to survive in greater numbers in salty steppe and salty marshland areas spread mostly in the north-eastern part of the region (the sand banks of Danube Delta and The Lagoon Complex Razim-Sinoe). In these areas, the most important entomofauna habitats are the steppe pastures developed on limestone formations; they occupy reduced areas, but concentrate a high number of localized steppe species. The number of individuals can sometimes be very high (e.g. populations of *Chersotis laeta* and *C. fimbriola, Ulochlaena hirta, Lemonia balcanica,* etc.). In the southern territories of Dobrogea (especially in the south-western part), important habitats are the Moesian forests of *Quercus pubescens*, consisting of characteristic tree species: *Quercus pubescens*, *Q. cerris*, *Q. virgiliana*, *Acer campestre*, *Prunus mahaleb*, *Fraxinus ornus*. Southern Dobrogea represents the northern limit of a series of Balkanic species such as *Zerynthia cerisyi ferdinandi, Asovia maeoticaria, Nychiodes waltheri, Erannis declinans* etc. These do not infiltrate further north, but are widespread in Bulgaria.

After 1990, more than two hundred Macrolepidoptera species and subspecies have been reported as new for the fauna of Dobrogea, out of which 50 species and subspecies were new records for the Romanian fauna. These included numerous steppe species, as well as several Euro-Siberian ones. Consequently, it cannot be concluded that the number of species of steppe origin is increasing in Dobrogea due to desertification. It is visible that the Euro-Siberian species, due to their higher adaptive capacity, have survived in many areas, especially in the north-western territories of Dobrogea, the surroundings of Măcin Mountains, a region with particular terrain and vegetation. The area shows a mixture of vegetation pertaining to Central-European ecosystems and Submediterranean ecosystems. Here the woods are more widespread than in the other parts of Dobrogea, and consequently microclimate conditions are far more varied as compared to the rest of the region. That is why the Măcin Mountains host a higher proportion of Euro-Siberian species compared to the other regions of Dobrogea, but also a higher number of endemic or strictly localized taxa such as *Polia cherrug* Rákosy & Wieser, 1997 – known only from Măcin Mountains and Babadag Plateau, *Chersotis laeta macini* and *Ch. fimbriola niculescui* – Măcin Mountains, Babadag Plateau and Casimcea Plateau, *Chazaria incarnata* – Măcin Mountains, Niculiţel Peak, *Exophila rectangularis* (Geyer, 1828) – Măcin Mountains, *Symira dentinosa* – Babadag Plateau and Casimcea Plateau, *Parocneria terebinthi* (Freyer, 1838) – Babadag Plateau, *Polyommatus* (*Agrodiaetus*) *admetus* – Niculiţel Peak, Babadag Plateau, *Hipparchia syriaca* and *H. volgensis delattini* – Măcin Mountains, Niculiţel Peak, Tulcea Hills and Babadag Plateau. These species are strictly localized in the above mentioned areas, they are absent in the north (Ukraine) and in the

southern part of Dobrogea, and occur in the south only in the eastern and southern part of Bulgaria (Fig. 5).

Consequently, it is more likely that northern Dobrogea, and especially Măcin Mountains, were a preglacial refuge, and based on known endemisms (*Polia cherrug, Chersotis fimbriola niculescui, Ch. laeta macini*), a center for speciation. On the other hand, the higher number of Euro-Siberian species in this territory could be explained based on historical data. 300–400 years ago, the forested areas of northern Dobrogea were larger, and were linked to the forests of the Romanian Plain (Vlăsiei Forest) up to the Carpathian regions. In the older papers on Lepidoptera (Mann, 1866; Fleck, 1899; Fiebig, 1927) a series of species are included that at present, live only in submontane and montane areas, e.g.: *Colias myrmidone* (Esper, 1781), *Lycaena hippothoe* (Linnaeus, 1761), *L. alciphron* (Rottembureg, 1775), *Limenitis reducta* (Staudinger, 1901), *Erebia aethiops* (Esper, 1777), *E. medusa* (Linnaeus, 1758) (Mann, 1866); *Argynnis laodice* (Pallas, 1771) (Fleck, 1899); *Penthophera morio* (Linnaeus, 1767) (Fiebig, 1927). The composition of local fauna is changing much faster than we thought until now, and 10–20 years are sufficient for visible changes. During 1980–1990 *Aglais urticae* (Linnaeus, 1758) and *Arctia caja* (Linnaeus, 1758) were still present in Dobrogea, but after that they seem to have disappeared. However, some new, in the past unknown species, penetrated the territory of Dobrogea, such as: *Hyles hippophaes* (from southern Ukraine), *Malacosoma castrensis, Lycaena tityrus, Neptis sappho, Libythea celtis* (from northern Bulgaria) (Rákosy & Székely, 1996; Dincă et al., 2009; Székely, 2013). These changes are caused mainly by natural factors, but also by human activities. Due to the black pine plantation which appeared in Dobrogea after 1980–1990, a series of invasive species occurred in Dobrogea, such as: *Bupalus piniaria* (Linnaeus, 1758), *Panolis flammea, Hyloicus pinastri, Lymantria monacha,* which were not present before. In the same way, probably through the *Robinia* plantations, *Neptis sappho* spread in south-western Dobrogea, reaching north up to Cernavodă. In the last period, the more frequent occurrence of many migrant, cosmopolitan species of sub-tropical origin has been reported, which have rarely appeared in the past, such as: *Leptotes pirithous, Lampides boeticus, Grammodes bifasciata, Aedia leucomelas, Chrysodeixis chalcites* (Esper, 1789), *Cornutiplusia circumflexa* (Linnaeus, 1767),

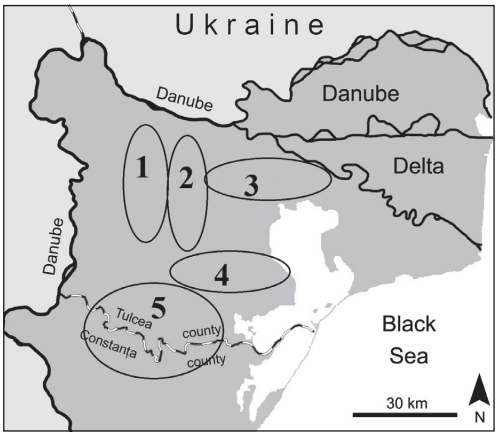

Fig. 5 – Distribution areas of endemic or strictly localized species: Măcin Mountains / Munţii Măcinului (1), Niculiţel Peak / Culmea Niculiţelului (2), Tulcea Hills / Dealurile Tulcei (3), Babadag Plateau / Podişul Babadagului (4), Casimcea Plateau / Podişul Casimcei (5)

Mythimna unipuncta, Acherontia atropos, Hyles livornica etc. Some of them seem to persist on the territory of Dobrogea for longer periods of time (several years), probably due to milder winters.

Protection and threats

What is important in terms of nature protection in Dobrogea is what remains of the old steppes. Some fragments of these steppes are preserved today, surviving mainly in rocky areas and around some precipices unfit for agriculture. They were almost entirely transformed to cropland. These steppe remainders constitute the western limit of "Ponto-Caspian Steppe", which stretches from Dobrogea to Kazakhstan as part of the great Eurasian steppe. Thus, a priority should be the protection of relatively natural steppes of Dobrogea and establishing management measures, especially regarding appropriate grazing, that should be neither inexistent nor too intensive, to avoid the coverage of steppes with thistles and shrubs while maintaining their floristic diversity. It should be evaluated how steppes destroyed through *Robinia* and black pine plantations can possibly be "ecologically reconstructed" by clearing these plantations. Lepidoptera cannot protect themselves if their habitats are not secured. Lepidoptera (especially butterflies) live on glades and meadows and not in forests. That is why their protection should begin with legislation aimed at protecting and preserving open space areas (meadows, pastures).

In many protected areas, due to the lack of human intervention, wooded areas have become predominant and meadows have disappeared together with their specific Lepidoptera fauna (e.g.: Hagieni Forest). Other areas, such as Dobrogea Gorges (Cheile Dobrogei), are destroyed by overgrazing. Even in the Danube Delta Biosphere Reserve in 2015 sheepfolds appeared (Histria) and the soil was plowed (north of Razim Lake, Plopu-Sarinasuf). In almost every protected area monasteries were built (Babadag, Gura Dobrogea, Canaraua Fetii, etc.). In the protected area Canaraua Fetii agricultural land has been extended to the base of the limestone cliffs and the habitat of *Zerynthia cerisyi ferdinandi* has been destroyed.

The number of Lepidoptera species protected at European and national level is high in Dobrogea. Among the species of Community (European) interest, Dobrogea includes 13 species (nearly half of the 28 Romanian species of Community importance), and half (43) of the protected species at a national level (Annex 2). The list of species protected by national Law (Rákosy, 2005), includes some species whose protection is not justified because they are common (e.g. *Hadula* (*Calocestra*) *stigmosa, Neptis sappho*). The highest priority should be to include in the list of protected species *Cucullia argentina* and *Megaspilates mundataria,* species of high zoogeographical value that are found in the entire European Union only in Dobrogea.

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Annex 1

FAUNISTIC LIST OF MACROLEPIDOPTERA

Note: "Period" refers to the period when the species were collected or observed. It does not always cover the entire flight period! If the collecting year is missing, it means that the species were collected or observed every year between 2012–2015.

Abbreviations: * – older records (1950–1970); ** – doubtful records (requiring confirmation); ♂ = male; ♀ = female; spec. (s) = specimen; VR = very rare (1–2 specimens/collecting day or night); R = rare (3–5 specimens/collecting day or night); C = common (6–29 specimens/collecting day or night); RC = relatively common (oscillating between rare and common / in some years it is common in other years it is rare); VC = very common (30–100 specimens/collecting day or night); leg. = legit (collected by); det. = determined by; Păd. = Forest ("pădure" in Romanian); e.g. larva = specimens in larva stage; CA= Creasta Cardonului – Hamcearca; EN = Enisala / Cetatea Enisala; FA = Fântânița – Murfatlar; AB = Allah Bair hill; ES = Esechioi Forest – Bugeac Lake; OL = Oltina; SI = Şipotele.

	CA	**EN**	**FA**	**AB**	**ES**	**OL**	**SI**	Period:	Obs.
Suprafam. ZYGAENOIDEA Latreille, 1809									
Fam. LIMACODIDAE Stephens, 1850									
Apoda limacodes (Hufnagel, 1766)	CA	EN	FA	AB	ES	OL	SI	22.V–25.VIII	VC
Suprafam. COSSOIDEA, Mosher, 1916									
Fam. COSSIDAE Leach, [1815]									
Cossus cossus (Linnaeus, 1758)	CA	EN		AB	ES	OL	SI	12.VII–14.VIII	R
Parahypopta caestrum (Hübner, 1808)	CA	EN	FA	AB		OL	SI	14.VI–13.VIII	RC
Catopta (*Paracossulus*) *thrips* (Hübner, 1818)	Hagieni – Balta Limanu							13.VIII.2014	1♂
Dyspessa ululа (Borkhausen, 1790)	CA	EN		AB	ES	OL		14.VI–12.VII	C
Dyspessa salicicola (Eversmann, 1848)		EN	FA					14.VI–4.VII	R
Zeuzera pyrina (Linnaeus, 1761)	CA	EN	FA	AB	ES	OL	SI	11.VII–18.VIII	C
Phragmatecia castaneae (Hübner, 1790)	CA	EN	FA	AB	ES	OL		22.V–26.VIII	VC
Suprafam. BOMBYCOIDEA Latreille, [1803]									
Fam. LASIOCAMPIDAE Harris, 1841									
Malacosoma castrensis (Linnaeus, 1758)		EN		AB	ES			30.V–20.VI	C
Malacosoma neustria (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	14.VI–26.VII	C
Eriogaster catax (Linnaeus, 1758)					ES			26.IX–6.X	R
Odonestis pruni (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	16.VI–17.VIII	RC
Macrothylacia rubi (Linnaeus, 1758)			FA					22.V.2015	1♀
Gastropacha quercifolia ([Denis & Schiffermüller], 1775)	CA	EN			ES		SI	30.V–26.VIII	R
Gastropacha populifolia ([Denis & Schiffermüller], 1775)		EN						17.VIII.2014	1♂
Phyllodesma ilicifolia (Linnaeus, 1758)	Păd. Babadag							15.IV–21.V	R
Phyllodesma tremulifolia (Hübner, 1790)	CA	EN		AB	ES	OL	SI	19.V–24.VIII	RC
Fam. LEMONIIDAE Hampson, 1918									
Lemonia balcanica (Herrich-Schäffer, 1847)		EN	FA	AB	ES	OL		24.IX–7.X	C
Fam. SPHINGIDAE Latreille, [1802]									
Subfam. Sphinginae Latreille, [1802]									

	CA	EN	FA	AB	ES	OL	SI	Period:	Obs.
Acherontia atropos (Linnaeus, 1758)		EN			ES	OL		21.IX–5.X	VR
Agrius convolvuli (Linnaeus, 1758)		EN	FA	AB	ES	OL		21.VII–4.X	C
Sphinx ligustri (Linnaeus, 1758)	CA	EN				OL	SI	2.V–14.VIII	RC
Hyloicus pinastri (Linnaeus, 1758)	Tulcea							6.VII.2015	1♂
Subfam. Smerinthinae Grote & Robinson, 1865									
Laothoe populi (Linnaeus, 1758)	CA	EN		AB	ES		SI	1.V–24.VIII	RC
Marumba quercus ([Denis & Schiffermüller], 1775)	CA	EN	FA		ES	OL	SI	17.V–24.VII	VC
Mimas tiliae (Linnaeus, 1758)	CA	EN	FA		ES	OL	SI	8.V–24.VIII	C
Smerinthus ocellata (Linnaeus, 1758)	CA	EN		AB		OL	SI	1.V–24.VIII	RC
Subfam. Macroglosiinae Harris, 1839									
Macroglossum stellatarum (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	22.V–5.X	RC
Sphingonaepiopsis gorgoniades (Hübner, 1819)							SI	19.VII.2015	1♂
Deilephila elpenor (Linnaeus, 1758)	CA	EN		AB	ES			17.V–4.IX	RC
Deilephila porcellus (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	8.V–29.IX	VC
Hyles euphorbiae (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	22.V–5.X	C
Hyles galii (Rottemburg, 1775)		EN					SI	8.VII–21.VIII	R
Hyles hippophaes hippophaes (Esper, 1793)	CA	EN	FA	AB		OL	SI	17.V–4.IX	RC
Hyles livornica (Esper, 1780)	CA	EN		AB	ES	OL	SI	22.V–5.X	RC
Fam. SATURNIIDAE Boisduval, [1837] 1834									
Saturnia pyri pyri ([Denis & Schiffermüller], 1775)		EN	FA		ES	OL		30.IV–25.V	RC
Saturnia pavonia (Linnaeus, 1758)	Păd. Babadag							16.IV.2015	1♀
Perisomena caecigena (Kupido, 1825)*					ES			1954/ Popescu-Gorj, 1959	?
Fam. DREPANIDAE Meyrick, 1895									
Cilix asiatica Bang-Haas, 1908	CA	EN			ES	OL	SI	14.VI–5.IX	RC
Cilix glaucata (Scopoli, 1763)		EN		AB	ES		SI	10.VI–24.IX	C
Watsonalla binaria (Hufnagel, 1766)	CA		FA		ES	OL	SI	24.V–14.VIII	C
Fam. THYATIRIDAE Smith, 1893									
Subfam. Thyatirinae Smith, 1893									
Thyatira batis (Linnaeus, 1758)	CA		FA	AB	ES		SI	14.VI–23.VII	C
Tethea ocularis (Linnaeus, 1767)		EN			ES			20.V–4.VII	1♂
Subfam. Polyplocinae Meyrick, 1895									
Polyploca ridens (Fabricius, 1787)		EN		AB	ES			15.IV–7.V	VC
Suprafam. GEOMETROIDEA Leach, [1815]									
Fam. GEOMETRIDAE Leach, [1815]									
Subfam. Orthostixinae Meyrick, 1892									
Orthostixis cribraria (Hübner, 1799)	CA		FA		ES	OL		14.VI–13.VII	R
Subfam. Alsophilinae Herbulot, 1962									
Alsophila aescularia ([Denis & Schiffermüller], 1775)		EN						15–30.IV.2015	C
Subfam. Geometrinae Stephens, 1829									
Comibaena bajularia ([Denis & Schiffermüller], 1775)	CA							26.VI.2015	1♀
Hemithaea aestivaria (Hübner, 1789)	CA	EN		AB	ES			12.VI–15.VII	RC
Thetidia smaragdaria (Fabricius, 1787)	CA	EN		AB	ES	OL	SI	14.VI–5.IX	C
Hemistola chrysoprasaria (Esper, 1795)	CA	EN			ES	OL		17.V–24.VII	RC
Thalera fimbrialis (Scopoli, 1763)	CA				ES	OL	SI	27.VI–8.VII	R

	CA	EN	FA	AB	ES	OL	SI	Period:	Obs.
Microloxia herbaria (Hübner, [1813])		EN		AB				14.VI–5.IX	C
Chlorissa viridata (Linnaeus, 1758)		EN					SI	24.V–25.VIII	RC
Phaiogramma etruscaria (Zeller, 1849)		EN		AB	ES		SI	4.VI–13.VII	R
Subfam. Sterrhinae Meyrick, 1892									
Idaea muricata (Hufnagel, 1767)		EN		AB			SI	13.VI–26.VII	4 specs
Idaea rufaria (Hübner, 1799)	CA							26.VI.2015	2 specs
Idaea serpentata (Hufnagel, 1767)		EN						13.VI–5.VII	R
Idaea sericeata (Hübner, 1813)		EN						14.VI.2012	3 specs
Idaea camparia (Herrich-Schäffer, 1851)		EN						11–13.VII.2013	2 specs
Idaea ochrata (Scopoli, 1763)		EN						14.VI–13.VII	RC
Idaea pallidata ([Denis & Schiffermüller], 1775)		EN						9–10.V.2015	R
Idaea rusticata ([Denis & Schiffermüller], 1775)	CA	EN	FA				SI	10.V–18.VIII	RC
Idaea filicata (Hübner, 1799)	CA	EN					SI	14.VI–25.VIII	RC
Idaea rubraria (Staudinger, 1901)							SI	13.VIII.2015	1♂
Idaea fuscovenosa (Goeze, 1781)		EN	FA				SI	22.V–13.VIII	R
Idaea subsericaeata (Haworth, 1809)			FA					22.V.2015	2♂♂
Idaea laevigata (Scopoli, 1763)	CA	EN		AB				24.V–14.VIII	R
Idaea moniliata ([Denis & Schiffermüller], 1775)	CA	EN						26.VI–12.VII	RC
Idaea seriata (Schrank, 1802)		EN						5.VII.2015	1♂
Idaea aversata (Linnaeus, 1758)	CA	EN	FA	AB	ES		SI	24.V–25.IX	VC
Idaea deversaria (Herrich-Schäffer, 1848)	CA	EN	FA	AB	ES	OL	SI	24.V–5.IX	C
Scopula immorata (Linnaeus, 1758)			FA				SI	3–25.VII	R
Scopula tessellaria (Boisduval, 1840)	CA				ES			15.VI–14.VIII	RC
Scopula ornata (Scopoli, 1763)		EN	FA	AB	ES			14.VI–14.VIII	C
Scopula decorata ([Denis & Schiffermüller], 1775) / *Scopula orientalis* (Alphéraky, 1876) – ?		EN		AB	ES			14.VI–13.VII	RC
Scopula rubiginata (Hufnagel, 1767)	CA			AB				16.VIII–6.IX	C
Scopula marginepunctata (Goeze, 1781)		EN		AB	ES			29.IV–29.V	C
Scopula immutata (Linnaeus, 1758)	CA							27.VI.2015	3 specs
Scopula flaccidaria (Zeller, 1852)	CA	EN		AB	ES			24.V–29.IX	RC
Rhodostrophia vibicaria (Clerck, 1759)	CA	EN	FA	AB	ES	OL	SI	14.VI–3.X	VC
Rhodotrophia calabra (Petagna, 1787)	CA	EN			ES		SI	24.V–30.IX	C
Timandra comae A. Schmidt, 1931	CA	EN		AB			SI	14.VI–26.IX	C
Cyclophora annulata Schulze, 1775	CA					OL	SI	4.VII–16.VIII	RC
Cyclophora quercimontaria (Bastelberger, 1897)							SI	13.VIII.2015	2 specs
Cyclophora albiocellaria (Hübner, 1789)	CA				ES			26.VI–16.VIII	R
Cyclophora porata (Linnaeus, 1767)	CA					OL		4.VII–16.VIII	R
Cyclophora punctaria (Linnaeus, 1758)	CA							26–27.VI.2015	C
Subfam. Larentiinae Duponchel, 1845									
Lythria purpuraria (Linnaeus, 1758)	CA	EN	FA	AB	ES		SI	4.VII–2.X	VC
Lythria cruentaria (Hufnagel, 1767)		EN						29.IV–24.V	R

	CA	EN	FA	AB	ES	OL	SI	Period:	Obs.
Cataclysme riguata (Hübner,1813)		EN		AB				9.V–14.VI	C
Xanthorhoe quadrifasciata (Clerck, 1759)	CA							26–27.VI.2015	C
Xanthorhoe fluctuata (Linnaeus, 1758)	CA	EN		AB	ES	OL	SI	14.VI–13.VIII	C
Epirrhoe galiata ([Denis & Schiffermüller], 1775)	CA			AB	ES	OL		5–27.VI	R
Catarhoe rubidata ([Denis & Schiffermüller], 1775)	CA							26–27.VI.2015	R
Catarhoe putridaria bulgariata Milliere, 1868	CA	EN		AB	ES			14.VI–19.VII	RC
Orthonama obstipata (Fabricius, 1794)		EN		AB	ES			12.VI–26.IX	R
Camptogramma bilineata (Linnaeus, 1758)	CA	EN	FA	AB	ES			14.VI–7.X	C
Costaconvexa polygrammata (Borkhausen, 1794)		EN		AB	ES			29.IV–13.VII	RC
Pelurga comitata (Linnaeus, 1758)	CA		FA	AB	ES	OL		3.VII–16.VIII	RC
Cosmorhoe ocellata (Linnaeus, 1758)	CA			AB				14.VI–13.VII	R
Nebula salicata (Hübner,1799)		EN		AB				9.V–27.VIII	C
Nebula achromaria (La Harpe, 1853)		EN			ES			9–28.V	RC
Horisme vitalbata ([Denis & Schiffermüller], 1775)							SI	13.VIII.2015	R
Horisme corticata (Treitschke, 1835)		EN						9–10.V.2015	C
Horisme tersata ([Denis & Schiffermüller], 1775)			FA					22.V.2015	2 specs
Horisme vitalbata ([Denis & Schiffermüller], 1775)	CA							16.VIII.2015	R
Horisme aemulata (Hübner,1813)			FA				SI	3.VII–13.VIII	R
Operopthera brumata (Linnaeus, 1758)					ES			24.X.2011	C
Perizoma bifaciata (Haworth, 1809)							SI	14.VIII.2015	4 specs
Eupithecia tenuiata (Hübner,1813)					ES			4.VII.2014	2 specs
Eupithecia biornata Christoph, 1867		EN						14.VIII.2015	2♂♂
Eupithecia linariata ([Denis & Schiffermüller], 1775)	CA	EN	FA		ES	OL		14.VI–19.VII	RC
Eupithecia haworthiata Doubleday, 1856	CA							26–27.VI.2015	R
Eupithecia centaureata ([Denis & Schiffermüller], 1775)	CA	EN	FA	AB	ES			16.V–5.IX	RC
Eupithecia tantillaria Boisduval, 1840		EN						8.V.2015	R
Aplocera plagiata (Linnaeus, 1758)		EN			ES		SI	3.VII–26.IX	RC
Lithostege griseata ([Denis & Schiffermüller], 1775)		EN			ES			29.IV–14.VI	VC
Lithostege farinata (Hufnagel, 1767)		EN			ES			29.IV–14.VI	C
Asthena albulata (Hufnagel, 1767)							SI	13.VIII.2015	R
Lobophora halterata (Hufnagel, 1767)		EN						29.IV.2014	2 specs
Subfam. Ennominae Duponchel, 1845									
Lamaspilis marginata (Linnaeus, 1758)	CA			AB	ES		SI	25.V–19.VII	R
Ligdia adustata ([Denis & Schiffermüller], 1775)			FA	AB				14.VI–5.VII	RC
Stegania dilectaria (Hübner,1790)							SI	13.VIII.2015	1 specs
Chiasmia clathrata (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	1.V–27.IX	C
Heliommata glarearia ([Denis & Schiffermüller], 1775)	CA		FA	AB	ES		SI	1.V–13.VIII	RC
Godonella aestimaria sareptanaria (Staudinger, 1891)	CA	EN		AB				25.V–5.IX	C
Macaria notata (Linnaeus, 1758)	CA		FA	AB	ES		SI	3.VII–13.VIII	R
Macaria alternata ([Denis & Schiffermüller], 1775)	CA		FA	AB	ES			26.VI–16.VIII	R
Narraga tessularia kasyi Moucha & Povolny, 1957		EN	FA	AB				4.VII–5.IX	C

	CA	EN	FA	AB	ES	OL	SI	Period:	Obs.
Tephrina arenacearia ([Denis & Schiffermüller], 1775)		EN	FA	AB	ES	OL	SI	1.V–25.IX	VC
Tephrina murinaria ([Denis & Schiffermüller], 1775)		EN		AB	ES	OL		29.IV–6.X	RC
Neognopharmia stevenaria (Boisduval, 1840)	CA	EN		AB	ES	OL	SI	14.VI–13.VIII	C
Petrophora chlorosata (Scopoli, 1763)			FA					3.VII. 2014	1♂
Opistograpthis luteolata (Linnaeus, 1758)			FA			OL		22.V–4.VII	VR
Therapis flavicaria ([Denis & Schiffermüller], 1775)	CA	EN			ES	OL	SI	2.V–16.VIII	RC
Pseudopanthera macularia (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	15.V–23.VIII	C
Eilicrinia cordiaria (Hübner, 1790)	CA	EN			ES			24.V–13.VIII	R
Eilicrinia trinotata (Metzner, 1845)	CA		FA		ES	OL	SI	24.V–26.VII	RC
Ennomos autumnaria (Werneburg, 1859)		EN		AB	ES			24.IX–5.X	R
Ennomos fuscantaria (Haworth, 1809)				AB	ES			25.VII–24.X	RC
Ennomos erosaria ([Denis & Schiffermüller], 1775)	CA							26.VI–24.VII	R
Selenia dentaria (Fabricius, 1775)	CA			AB				1.V–6.IX	RC
Selenia lunularia (Hübner, 1788)	CA						SI	24.V–26.VII	RC
Crocallis tusciaria ([Denis & Schiffermüller], 1775)		EN			ES			5.IX–4.X	R
Crocallis elinguaria (Linnaeus, 1758)	CA	EN	FA		ES		SI	19.VII–26.IX	RC
Colotois pennaria (Linnaeus, 1758)		EN		AB	ES	OL		24.X–12.XI	C
Dasycorsa modesta (Staudinger, 1879)	Pădurea Babadag							16–17.IV.2015	6♂♂, 1♀
Lycia hirtaria (Clerck, 1759)		EN						16.IV–1.V	C
Biston strataria (Hufnagel, 1767)		EN			ES			16.IV–2.V	R
Biston betularia (Linnaeus, 1758)	CA	EN		AB	ES	OL		24.V–26.VII	RC
Erannis defoliaria (Linnaeus, 1758)		EN						11–12.XI.2014	C
Nychiodes waltheri Wagner, 1919					ES	OL		27.V–4.VII	R
Synopsia sociaria (Hübner, 1799)	CA	EN	FA	AB	ES	OL	SI	1.V–5.IX	C
Cleora cinctaria ([Denis & Schiffermüller], 1775)	CA	EN		AB	ES			24.V–26.VII	RC
Hypomecis roboraria ([Denis & Schiffermüller], 1775)			FA	AB			SI	14.VI–24.VIII	C
Peribatodes rhomboidaria ([Denis & Schiffermüller], 1775)	CA		FA	AB	ES		SI	27.VI–4.VIII.	RC
Ascotis selenaria ([Denis & Schiffermüller], 1775)	CA	EN	FA	AB	ES	OL	SI	25.V–24.VIII.	C
Asovia maeoticaria (Alphéraky, 1876)					ES	OL		23.V–4.VII	R
Tephronia sepiaria (Hufnagel, 1767)	CA							16.VIII.2015	5 specs
Ematurga atomaria (Linnaeus, 1758)		EN		AB	ES	OL		30.IV–29.V	RC
Cabera pusaria (Linnaeus, 1758)	CA		FA		ES	OL	SI	27.VI–4.VIII.	RC
Cabera exanthemata (Scopoli, 1763)	CA				ES			24.V–25.VII	R
Lomographa bimaculata (Fabricius, 1775)	CA		FA	AB		OL		25.V–5.IX	R
Lomographa temerata ([Denis & Schiffermüller], 1775)			FA			OL	SI	3.VII–13.VIII	R
Campaea margaritata (Linnaeus, 1761)		EN	FA		ES			24.V–26.IX	R
Charissa obscurata ([Denis & Schiffermüller], 1775)			FA	AB	ES			3.VII–7.X	R
Charissa variegata (Duponchel, 1830)		EN						29.IV–5.IX	R
Charissa onustria (Hübner, 1809)	CA	EN						29.IV–13.VII	RC
Chariaspilates formosaria (Eversmann, 1837)		EN						14.VIII.2015	1♂
Semiaspilates ochrearia (Rossi, 1794)	CA	EN	FA	AB	ES	OL		29.IV–6.IX	C
Dyscia innocentaria (Christoph, 1885)	CA	EN		AB	ES	OL		16.V–24.IX	C
Perconia strigillaria (Hübner, 1787)			FA					22.V.2015	1♂

	CA	EN	FA	AB	ES	OL	SI	Period:	Obs.
Suprafam. NOCTUOIDEA Latreille, 1809									
Fam. NOTODONTIDAE Stephens, 1829									
Subfam. Dicranurinae Duponchel, [1845]									
Furcula furcula forficula Fischer von Waldheim, 1820		EN			ES			16.V–2.VII	R
Harpyia milhauseri (Fabricius, 1775)		EN			ES	OL		29.IV–7.VII	RC
Stauropus fagi (Linnaeus, 1758)		EN			ES		SI	20.V–14.VIII	R
Dicranura ulmi ([Denis & Schiffermüller], 1775)		EN			ES			18.IV–24.V	RC
Subfam. Notodontinae Stephens, 1829									
Drymonia dodonaea ([Denis&Schiffermüller], 1775)	CA				ES	OL		14.VI–26.VII	R
Drymonia ruficornis (Hufnagel, 1766)	CA	EN				OL		5.VII–16.VIII	R
Gluphisia crenata (Esper, 1785)			FA		ES	OL		22.V–5.VII	R
Paradrymonia vittata bulgarica de Freina, 1983					ES	OL	SI	3.V–14.VIII	R
Notodonta dromedarius (Linnaeus, 1758)	CA		FA		ES			9.V–25.VII	VR
Notodonta tritophus ([Denis&Schiffermüller], 1775)		EN	FA			OL		1.V–19.VIII	R
Notodonta ziczac (Linnaeus, 1758)	CA				ES			24.V–17.VIII	R
Pterostoma palpina (Clerck, 1759)		EN		AB	ES		SI	20.V–5.IX	RC
Peridea anceps (Goeze, 1781)			FA		ES	OL		1–26.V	RC
Spatalia argentina ([Denis&Schiffermüller], 1775)	CA	EN	FA	AB	ES	OL	SI	20.V–5.IX	RC
Subfam. Phalerinae Butler, 1886									
Phalera bucephaloides (Ochsenheimer, 1810)	CA		FA				SI	14.VI–26.VII	C
Subfam. Pygaerinae Duponchel, [1845]									
Clostera anastomosis (Linnaeus, 1758)		EN						12–13.VII.2013	VR
Clostera curtula (Linnaeus, 1758)		EN		FA	ES			14.V–16.VI	R
Clostera pigra (Hufnagel, 1766)		EN						10.V.2015	2♂♂
Fam. NOCTUIDAE Latreille, 1809									
Subfam. Rivulinae Grote, 1895									
Rivula sericealis (Scopoli, 1763)	CA	EN	FA	AB	ES		SI	29.IV–25.IX	RC
Subfam. Boletobiinae Grote, 1895									
Parascotia fuliginaria (Linnaeus, 1761)	CA		FA					3–25.VII	VR
Subfam. Aventiinae Tutt, 1896									
Laspeyria flexula ([Denis & Schiffermüller], 1775)	CA				ES		SI	28.V–5.IX	RC
Subfam. Herminiinae Leach, 1815									
Simplicia rectalis (Eversmann, 1842)	CA			AB		OL	SI	25.V–26.VII	RC
Herminia tenuialis (Rebel, 1899)							SI	13.VIII.2015	3 specs
Herminia tarsicrinalis (Knoch, 1782)			FA					3.VII.2014	2 specs
Paracolax tristalis (Fabricius, 1794)	CA			AB	ES		SI	27.VI–14.VIII	RC
Zanclognatha tarsipennalis Treitschke, 1835		EN			ES			14.VI–5.VII	R
Zanclognatha lunalis (Scopoli, 1763)	CA							27.VI.2015	3 specs
Subfam. Hypeninae Herrich-Schaffer, 1851									
Zekelita antiqualis (Hübner, [1809])							SI	19.VII.2015	2♂♂
Hypena proboscidalis (Linnaeus, 1758)	CA	EN	FA	AB	ES		SI	14.VI–7.X	C
Hypena rostralis (Linnaeus, 1758)			FA	AB				4–13.VII	VR

	CA	EN	FA	AB	ES	OL	SI	Period:	Obs.
Subfam. Eublemminae Forbes, 1954									
Calymma communimacula ([Denis & Schiffermüller], 1775)	CA			AB	ES		SI	23.VI–14.VIII	R
Odice suava (Hübner, 1793)	CA	EN		AB	ES		SI	25.V–19.VIII	R
Eublemma porphyrina (Freyer, 1844)		EN						14.VIII–4.IX.2015	5♂♂, 1♀
Eublemma amoena (Hübner, [1803])	CA	EN		AB	ES	OL	SI	10.V–25.IX	RC
Eublemma purpurina ([Denis & Schiffermüller], 1775)	CA	EN	FA	AB	ES	OL	SI	21.V–2.X	C
Eublemma polygramma (Duponchel, [1842])		EN		AB	ES		SI	25.V–19.VIII	VR
Subfam. Phytometrinae Hampson, 1913									
Colobochyla salicalis ([Denis & Schiffermüller], 1775)	CA		FA		ES		SI	29.V–17.VIII	RC
Subfam. Calpinae Boisduval, 1840									
Calyptra thalictri (Borkhausen, 1790)	CA	EN	FA			OL	SI	5.VII–13.VIII	R
Scoliopteryx libatrix (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	23.V–12.XI	R
Subfam. Lymantriinae Hampson, 1893									
Lymantria dispar Linnaeus, 1758	CA	EN	FA	AB	ES	OL	SI	13.VI–26.VIII	RC
Lymantria monacha Linnaeus, 1758	Băneasa, Ocol Silvic							20.VII.2012 (leg. Vintilă)	1 ♂
Callitaera pudibunda (Linnaeus, 1758)	CA		FA		ES	OL	SI	24.V–13.VII	R
Orgyia antiqua (Linnaeus, 1758)							SI	13.VIII.2015	2♂♂
Euproctis similis (Fuessly, 1767)	CA	EN	FA	AB	ES	OL	SI	10.V–13.VII	RC
Laelia coenosa (Hübner, 1808)	CA	EN		AB				24.VI–25.IX	VC
Leucoma salicis (Linnaeus, 1758)		EN	FA	AB	ES	OL		14.VI–14.VIII	RC
Arctornis l-nigrum (Müller, 1764)	CA	EN		AB	ES	OL	SI	25.V–16.VIII	C
Subfam. Arctiinae Leach, 1815									
Spilosoma lubricipeda (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	29.IV–2.VIII	RC
Spilosoma urticae (Esper, 1789)		EN		AB				9–14.VII	R
Phragmatobia fuliginosa (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	1.V–7.X	VC
Hyphantria cunea (Drury, 1773)	CA	EN		AB				29.IV–22.VIII	RC
Diaphora mendica (Clerck, 1759)		EN			ES			29.IV–16.V	R
Chelis maculosa mannerheimii (Duponchel, 1936)	CA	EN		AB	ES	OL	SI	9.V–1.X	RC
Rhyparioides metelkana (Lederer, 1861)		EN			ES	OL		9–21.VII	R
Diacrisia sannio (Linnaeus, 1758)		EN		AB		OL		24.V–4.IX	R
Arctia villica (Linnaeus, 1758)	CA		FA		ES	OL	SI	20.V–15.VI	RC
Arctia festiva (Hufnagel, 1766)	Horia							1.X.2013 (leg. Haneschläger)	2♂♂
Euplagia quadripunctaria (Poda, 1761)	CA	EN	FA	AB	ES	OL	SI	9.VII–26.VIII	RC
Subfam. Lithosiinae Billberg, 1820									
Spiris striata (Linnaeus, 1758)	Gura Dobrogei							25.V.2013	1♂
Miltochrista miniata (Forster, 1771)	CA	EN	FA		ES		SI	8.V–5.IX	C
Thumata senex (Hübner,[1808])		EN						15.VIII.2015	3 specs
Pelosia muscerda (Hufnagel, 1766)		EN					SI	13.VIII–5.IX	RC
Pelosia obtusa (Herrich-Schäffer, [1847])		EN						14.VI–15.VIII	C
Lithosia quadra (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	22.V–4.IX	RC
Eilema caniola (Hübner, 1808)	CA	EN	FA					13.VI–5.IX	RC

	CA	EN	FA	AB	ES	OL	SI	Period:	Obs.
Eilema complana balcanica (Daniel, 1939)	CA	EN			ES		SI	21.VI–26.IX	RC
Eilema pygmaeola pallifrons (Zeller, 1847)			FA		ES			3.VII–15.VIII	R
Wittia sororcula (Hufnagel, 1766)	CA	EN	FA	AB	ES	OL	SI	29.IV–13.VIII	VC
Subfam. Ctenuchinae Kirby, 1837									
Amata phegea (Linnaeus, 1758)	CA	EN	FA		ES	OL	SI	25.V–5.VII	VC
Amata kruegeri marjana (Stauder, 1913)		EN						14.VI.2012	2 specs
Dysauxes ancilla (Linnaeus, 1767)		EN		AB				9.VI–14.VII	R
Dysauxes punctata (Fabricius, 1781)		EN						4–5.IX.2015	2 specs
Dysauxes famula (Freyer, 1836)	CA	EN	FA	AB	ES		SI	24.V–25.X	C
Subfam. Catocalinae Boisduval, 1828									
Lygephila craccae ([Denis & Schiffermüller], 1775)				AB	ES			12.VII–27.IX	RC
Euclidia glyphica (Linnaeus, 1758)	CA		FA		ES	OL	SI	25.V–13.VIII	RC
Euclidia mi (Clerck, 1759)	CA					OL		26.VI–7.VII	R
Euclidia triquetra ([Denis & Schiffermüller], 1775)			FA					3.VII.2014	2♂♂
Catephia alchymista ([Denis & Schiffermüller], 1775)	CA				ES			28.V–27.VI	VR
Minucia lunaris ([Denis & Schiffermüller], 1775)	CA		FA		ES			23.V–27.VI	RC
Dysgonia algira (Linnaeus, 1767)	CA	EN	FA	AB	ES	OL	SI	23.V–2.X	R
Grammodes stolida (Fabricius, 1775)	CA	EN	FA	AB	ES	OL	SI	9.V–24.IX	VC
Grammodes bifasciata (Petagna, 1787)		EN		AB				15.VIII–5.IX	R
Drasteria caucasica (Kolenati, 1846)		EN		AB				15.VI–18.VIII	RC
Clytie syriaca (Bugnion, 1837)				AB				27.VIII.2013	1♂
Catocala nymphagoga (Esper, 1787)	CA	EN	FA	AB		OL		14.VI–15.VII	RC
Catocala hymenaea ([Denis & Schiffermüller], 1775)				AB		OL	SI	15.VII–14.VIII	RC
Catocala nupta (Linnaeus, 1758)		EN		AB	ES			13.VIII–4.X	R
Catocala elocata (Esper, 1787)		EN	FA	AB	ES			26.VI–5.IX	R
Catocala promissa ([Denis & Schiffermüller], 1775)	CA				ES	OL		14.VI–13.VII	R
Catocala sponsa (Linnaeus, 1767)				AB		OL		19.VI–11.VII	R
Subfam. Euteliinae Grote, 1882									
Eutelia adulatrix (Hübner, 1813)	CA			AB	ES		SI	22.V–27.VIII	R
Subfam. Nolinae Bruand, 1846									
Meganola strigula (Denis & Schiffermüller], 1775)							SI	13.VIII.2015	4 specs
Nola aerugula **(**Hübner, 1813)		EN					SI	13.VIII–5.IX	VR
Nola chlamitulalis (Hübner, 1813)							SI	13.VIII.2015	2 specs
Bena bicolorana (Fuessly, 1775)	CA	EN		AB	ES		SI	24.V–25.VIII	R
Pseudoips prasinana (Linnaeus, 1758)	CA	EN	FA	AB			SI	8.VII–13.VIII	R
Earias clorana (Linnaeus, 1758)	CA	EN					SI	5.VII–19.VIII	RC
Earias vernana (Fabricius, 1787)		EN			ES		SI	5.VII–13.VIII.	R
Nycteola asiatica (Krulikovsky, 1904)				AB	ES		SI	13.VIII–25.IX	VR
Subfam. Plusiinae Boisduval, 1828									
Abrostola tripartita (Hufnagel, 1766):	CA	EN		AB	ES			26.VI–5.IX	RC
Abrostola asclepiadis ([Denis & Schiffermüller], 1775)		EN		AB	ES		SI	26.V–19.VII	RC
Abrostola triplasia (Linnaeus, 1758)	CA		FA					22.V–14.VIII	RC

	CA	EN	FA	AB	ES	OL	SI	Period:	Obs.
Trichoplusia ni (Hübner, 1803)	CA	EN		AB	ES		SI	13.VIII–24.X	R
Macdunnoughia confusa (Stephens, 1850)	CA	EN	FA	AB	ES	OL	SI	29.IV–7.X	RC
Diachrysia chryson deltaica Rákosy, 1996		EN						23.V–14.VI	VR
Diachrysia chrysitis (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	16.V–25.X	RC
Diachrysia stenochrysis (Warren, 1913)	CA	EN			ES			12.VI–27.IX	RC
Diachrysia nadeja (Oberthür, 1880)		EN					SI	12.VI–25.VII	VR
Autographa gamma (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	29.IV–11.XI	RC
Plusia festucae (Linnaeus, 1758)	CA	EN	FA	AB	ES		SI	10.VII–25.IX	R
Subfam. Eustrotiinae Grote, 1882									
Phyllophila obliterata (Rambur, 1833)	CA				ES			27.VI–25.VII	RC
Pseudeustrotia candidula ([Denis & Schiffermüller], 1775)		EN	FA		ES	OL	SI	13.VI–14.VIII	RC
Deltote uncula (Clerck, 1759)							SI	13.VIII.2015	2 specs
Deltote bankiana (Fabricius, 1775)	CA	EN				OL		26.VI–7.VII	R
Subfam. Acontiinae Guenée, 1841									
Acontia titania (Esper, [1798])	CA		FA		ES		SI	12.VI–16.VIII	R
Acontia lucida (Hufnagel, 1766)	CA	EN	FA	AB	ES	OL	SI	1.V–5.IX	RC
Acontia (*Emmelia*) *trabealis* (Scopoli, 1763)	CA	EN	FA	AB	ES	OL	SI	1.V–16.VIII	RC
Acontia (*Tarachidia*) *candefacta* (Hübner, [1831])		EN						14.VIII.2015	1 spec.
Aedia funesta (Esper, [1766])	CA	EN	FA	AB	ES	OL		15.V–13.VIII	RC
Aedia leucomelas (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	24.V–26.IX	C
Subfam. Pantheinae Smith, 1898									
Colocasia coryli (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	16.IV–2.X	RC
Subfam. Dilobinae Aurivillius, 1889									
Diloba caeruleocephala (Linnaeus, 1758)		EN		AB	ES	OL		2.X–12.XI	VC
Subfam. Acronictinae Heinemann, 1959									
Craniophora ligustri ([Denis & Schiffermüller], 1775)	CA	EN	FA	AB	ES	OL		29.IV–11.VII.	C
Oxicesta geographica (Fabricius, 1787)	CA	EN	FA	AB				3–26.VII	R
Moma alpium (Osbeck, 1778)	CA	EN		AB		OL		15.VI–26.VII	R
Symira nervosa ([Denis & Schiffermüller], 1775)		EN		AB				13.VII–15.VIII	VR
Symira albovenosa (Goeze, 1781)	CA	EN		AB	ES	OL	SI	24.VI–16.VIII	R
Symira dentinosa Freyer, 1839				AB				16.V.2013 (ex. larva)	C
Acronicta psi (Linnaeus, 1758)	CA							27.VI–25.VII	R
Acronicta euphorbiae ([Denis & Schiffermüller], 1775)		EN			ES	OL		24.VI–7.VII	VR
Acronicta megacephala ([Denis & Schiffermüller], 1775)	CA	EN		AB				14.VI–16.VIII	C
Acronicta rumicis (Linnaeus, 1758)	CA		FA			OL		12.VI–16.VIII	C
Acronicta aceris (Linnaeus, 1758)	CA				ES			1–7.VII	R
Subfam. Metaponinae Herrich-Schäffer, 1851									
Aegle koekeritziana (Hübner, [1799])	CA	EN		AB				9–25.VII	R
Mycteroplus puniceago (Boisduval, 1840)		EN		AB	Sinoe			21.VIII–6.IX	RC
Tyta luctuosa ([Denis & Schiffermüller], 1775)	CA	EN	FA	AB	ES	OL	SI	29.IV–2.X	C
Subfam. Cucullinae Herrich-Schäffer, 1850									

	CA	EN	FA	AB	ES	OL	SI	Period:	Obs.
Shargacucullia thapsiphaga (Treitschke, 1826):		EN						13.–14.VI.2012	R
Shargacucullia lychnitis (Rambur, 1833)	CA	EN						13.VI–25.VII	R
Cucullia umbratica (Linnaeus, 1758)	CA	EN		AB	ES			14.VI–13.VIII	R
Cucullia biornata Fischer von Waldheim, 1840	Babadag							21.V.2013 (leg. Juhász)	1♂
Cucullia tanaceti ([Denis & Schiffermüller], 1775)	CA							25.VII.2014	1♂
Cucullia santonici (Hübner, [1813])	CA	EN		AB				16.V–25.VII	RC
Subfam. Oncocnemidinae Forbes & Franclemont, 1954									
Calophasia lunula (Hufnagel, 1766)	CA	EN		AB		OL		2.V–27.VIII	R
Calophasia opalina (Esper, [1794])	CA	EN	FA	AB	ES	OL	SI	14.V–5.IX	R
Omphalophana antirrhini (Hübner, [1803])	CA			AB	ES			27.VI–25.VII	R
Subfam. Amphipyrinae Guenée, 1837									
Amphipyra pyramidea (Linnaeus, 1758)	CA	EN	FA	AB	ES			24.V–5.X	RC
Amphipyra berbera Rungs, 1949	CA				ES			26.VI–1.X	R
Amphipyra livida ([Denis & Schiffermüller], 1775)			FA	AB	ES			24.IX–10.XI	RC
Amphipyra tragopoginis (Clerck, 1759)	CA	EN		AB	ES			24.V–7.X	RC
Amphipyra tetra (Fabricius, 1787)	CA							16.VIII.2015	1♂
Subfam. Psaphidinae Grote, 1896									
Asteroscopus sphinx (Hufnagel, 1766)		EN		AB	ES	OL		4.X–12.XI	RC
Lamprosticta culta ([Denis & Schiffermüller], 1775)	CA				ES			29.V–27.VI	C
Meganephria bimaculosa (Linnaeus, 1767)					ES			1–2.X.2015	4♂♂, 2♀♀
Allophyes oxyacanthae (Linnaeus, 1758)		EN		AB	ES	OL		24.IX–12.XI	VC
Subfam. Condicinae Poole, 1995									
Eucarta virgo (Treitschke, 1835)	CA							27.VI.2015	1♂
Subfam. Heliothinae Boisduval, 1828									
Periphanes delphinii (Linnaeus, 1758):	CA	EN		AB				16.V–24.VIII	C
Chazaria incarnata (Freyer, 1838)	CA							24–25.VII.2014	3♂♂
Pyrrhia umbra (Hufnagel, 1766)		EN		AB	ES		SI	2.V–26.IX	R
Pyrrhia purpurina (Esper, [1804])	CA	EN						14.VI–24.VII	VR
Protoschinia scutosa ([Denis & Schiffermüller], 1775)	CA	EN	FA	AB	ES			25.V–7.X	RC
Heliothis peltigera ([Denis & Schiffermüller], 1775)	CA	EN	FA	AB	ES			20.V–24.X	VC
Heliothis ononis ([Denis & Schiffermüller], 1775)		EN						10.V–12.VI	VR
Heliothis viriplaca (Hufnagel, 1766)	CA	EN	FA	AB	ES			12.VI–26.VII	RC
Heliothis adaucta Butler, 1878	CA	EN		AB				15.V–13.VIII	RC
Helicoverpa armigera (Hübner, 1808)	CA	EN	FA	AB	ES		SI	2.V–24.X	RC
Subfam. Bryophilinae Guenée, 1852									
Cryphia algae (Fabricius, 1775)	CA	EN		AB				26.VI–25.VII	C
Bryophila raptricula ([Denis & Schiffermüller], 1775)	CA						SI	13–16.VIII.2015	C
Bryophila tephrocharis Boursin, 1953	CA							26.VI–24.VII	R
Nyctobria amasina (Draudt, 1931)		EN					SI	14.VI–13.VIII	RC
Nyctobria muralis (Forster, 1771)	CA	EN					SI	19.VII–16.VIII	R
Subfam. Xyleninae Guenée, 1837									
Spodoptera exigua (Hübner, [1808])		EN		AB	ES			5.IX–24.X	RC
Elaphria venustula (Hübner, 1790)	CA	EN	FA	AB	ES	OL	SI	20.V–26.IX	RC

	CA	EN	FA	AB	ES	OL	SI	Period:	Obs.
Caradrina morpheus (Hufnagel, 1766)	CA	EN						16.VIII–5.X	R
Caradrina kadenii Freyer, 1836		EN		AB	ES			26.V–6.X	RC
Caradrina aspersa (Rambur, 1834)				AB			SI	14.VII–13.VIII	R
Caradrina clavipalpis (Scopoli, 1763)		EN	FA	AB	ES	OL	SI	20.VI–25.IX	RC
Eremodrina pertinax (Staudinger, 1879)							SI	13.VIII.2015	3♂♂, 1♀
Hoplodrina octogenaria (Goeze, 1781)	CA	EN		AB			SI	24.V–7.X	VC
Hoplodrina blanda ([Denis & Schiffermüller], 1775)			FA		ES		SI	29.V–26.IX	R
Hoplodrina respersa ([Denis & Schiffermüller], 1775)							SI	13.VIII.2015	2 specs
Hoplodrina ambigua ([Denis & Schiffermüller], 1775)	CA	EN	FA	AB	ES	OL	SI	15.V–27.VIII	C
Chilodes maritima (Tauscher, 1806)		EN		AB				14.VI–13.VII	RC
Charanyca trigrammica (Hufnagel, 1766)	CA	EN		AB	ES			16.V–26.VII	RC
Rusina ferruginea (Esper, [1785])	CA		FA	AB				3–25.VII	R
Athetis gluteosa (Treitsche, 1835)							SI	13.VIII.2015	2♂♂
Athetis furvula (Hubner,[1808])							SI	13.VIII.2015	1♂
Trachea atriplicis (Linnaeus, 1758)	CA	EN		AB	ES	OL		12.VI–25.VII	R
Dypterygia scabriuscula (Linnaeus, 1758)	CA	EN		AB				15.V–13.VIII	RC
Polyphaenis sericata Esper, 1787	CA		FA	AB				12.VI–26.VII	R
Thalpophila matura (Hufnagel, 1766)	CA	EN		AB	ES	OL		24.VI–24.X	RC
Actinotia polyodon (Clerck, 1759)	CA			AB				26.VI–14.VII	R
Chloantha hyperici ([Denis & Schiffermüller], 1775)	CA	EN						30.IV–12.VII	R
Phlogophora meticulosa (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	2.V–12.XI	RC
Euplexia lucipara (Linnaeus, 1758)	CA	EN	FA		ES			20.V–25.VII	R
Auchmis detersa (Esper, [1787])	CA	EN		AB				24.VII–5.IX	R
Calamia tridens (Hufnagel, 1766)	CA	EN		AB				15.VI–24.VIII	RC
Eremobia ochroleuca ([Denis & Schiffermüller], 1775)							SI	19.VII.2015	1♂
Gortyna flavago ([Denis & Schiffermüller], 1775)		EN			ES	OL		5–25.IX	R
Gortyna cervago Eversmann, 1844				AB				7.X.2012	1♀
Hydraecia micacea (Esper, [1789])				AB				27.VIII.2014	2♂♂
Luperina testacea ([Denis & Schiffermüller], 1775)	CA	EN		AB	ES			24.VII–7.X	R
Luperina rubella (Duponchel, 1826)	CA	EN			ES			16.VIII–5.X	VR
Luperina dumerilli (Duponchel, 1826)		EN						4–5.IX.2015	VR
Rhizedra lutosa (Hübner, [1803])		EN		AB				23.VIII–12.XI	RC
Nonagria typhae (Thunberg, 1784)	CA	EN		AB	ES			13.VII–6.X	RC
Lenisa geminipuncta (Haworth, 1809)		EN						5–6.VII.2015	R
Archanara dissoluta (Treitschke, 1825)	CA	EN		AB				27.VI–19.VIII	RC
Protarchanara brevilinea (Fenn, 1864)		EN						14.VI.2012	1♂
Oria musculosa (Hübner, [1808])	CA		FA					26.VI–3.VII	VR
Denticucullus pygmina (Haworth, 1809)		EN		AB	ES			13.VI–27.VIII	R
Photedes fluxa (Hübner, [1809])		EN		AB	ES	OL		5.IX.2015	3 specs
Globia sparganii (Esper, 1790)		EN						5.VII.2015	3 specs
Globia algae (Esper, 1789)		EN		AB			SI	25.VII–13.VIII	R
Apamea monoglypha (Hufnagel, 1766)	CA	EN	FA	AB			SI	15.VI–19.VIII	RC

	CA	EN	FA	AB	ES	OL	SI	Period:	Obs.
Apamea anceps ([Denis & Schiffermüller], 1775)		EN						20.V.2015	3 specs
Mesapamea secalis (Linnaeus, 1758)	CA	EN	FA	AB			SI	25.V–25.IX	RC
Mesoligia furuncula ([Denis & Schiffermüller], 1775)	CA							24.VII.2014	3 specs
Oligia strigilis (Linnaeus, 1758)			FA	AB	ES		SI	3.VII–13.VIII	RC
Oligia versicolor (Borkhausen, 1792)	CA		FA		ES		SI	13.VI–25.VII	RC
Oligia latruncula ([Denis & Schiffermüller], 1775)	CA				ES			12.VI–25.VII	R
Episema glaucina (Esper, [1789])		EN			ES			5.IX–4.X	R
Episema tersa ([Denis & Schiffermüller], 1775)		EN		AB	ES	OL		24.IX–25.X	C
Cleoceris scoriacea (Esper, [1789])		EN						24.IX–6.X	RC
Ulochlaena hirta (Hübner, [1813])		EN			ES	OL		25.X–12.XI	VC
Cosmia diffinis (Linnaeus, 1767)	CA			AB				20.VI–14.VII	R
Cosmia affinis (Linnaeus, 1767)	CA		FA	AB				3.VII–24.VIII	R
Cosmia trapezina (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	24.V–5.IX	RC
Cosmia pyralina ([Denis & Schiffermüller], 1775)			FA		ES			14.VI–13.VIII	R
Dicycla oo (Linnaeus, 1758)	CA		FA	AB	ES	OL		15.VI–25.VII	VC
Atethmia ambusta ([Denis & Schiffermüller], 1775)		EN						5.IX.2015	1♂
Atethmia centrago (Haworth, 1809)				AB	ES			23.IX–24.X	RC
Tiliacea citrago (Linnaeus, 1758)					ES			26.IX–6.X	R
Tiliacea sulphurago ([Denis & Schiffermüller], 1775)				AB	ES			26.IX–7.X	C
Lithophane ornitopus (Hufnagel, 1766)		EN		AB	ES	OL		15.IV–1.V; 25.IX–12.XI	RC
Eupsilia transversa (Hufnagel, 1766)		EN		AB	ES			15.IV–9.V; 2.X–12.XI	RC
Conistra vaccinii (Linnaeus, 1761)		EN		AB	ES			15–16.IV; 25.IX–12.XI	VC
Conistra ligula (Esper, [1791])		EN		AB	ES			15–16.IV; 25.IX–12.XI	VC
Conistra erythrocephala ([Denis & Schiffermüller], 1775)		EN			ES			15–16.IV; 25.IX–24.X	R
Agrochola lychnidis ([Denis & Schiffermüller], 1775)					ES	OL		6–24.X	RC
Agrochola nitida ([Denis & Schiffermüller], 1775)		EN		AB	ES	OL		25.IX–12.XI	C
Agrochola litura (Linnaeus, 1758)		EN		AB	ES			25.IX–12.XI	C
Agrohola helvola (Linnaeus, 1758)					ES			6–24.X	C
Agrochola circellaris (Hufnagel, 1766)		EN		AB	ES	OL		25.IX–12.XI	C
Agrochola laevis (Hübner, [1803])		EN		AB	ES			25.IX–12.XI	C
Xanthia togata (Esper, [1788])		EN		AB				25.IX–7.X	RC
Cirrhia gilvago ([Denis & Schiffermüller], 1775)				AB	ES			25.IX–7.X	R
Cirrhia ocellaris (Borkhausen, 1792)		EN		AB	ES			25.IX–7.X	RC
Scotochrosta pulla ([Denis & Schiffermüller], 1775)		EN			ES	OL		24.IX–6.X	VC
Dichonia aeruginea (Hübner, [1808])		EN		AB	ES			25.IX–12.XI	R
Dichonia convergens ([Denis & Schiffermüller], 1775)		EN						25.IX–12.XI	C
Griposia aprilina (Linnaeus, 1758)				AB	ES	OL		3.X–12.XI	RC
Dryobotodes eremita (Fabricius, 1775)		EN		AB	ES			5–24.X	RC
Dryobotodes carbonis (F.Wagner, 1831)					ES			28.IX–1.X.2014–15	2♂♂
Ammoconia caecimacula ([Denis & Schiffermüller], 1775)		EN		AB	ES	OL		1.X–12.XI	VC

	CA	EN	FA	AB	ES	OL	SI	Period:	Obs.
Aporophyla lutulenta ([Denis & Schiffermüller], 1775)		EN		AB				24.IX–7.X	R
Polymixis rufocincta (Geyer,[1828])	Gura Dobrogei			AB				5–7.X.2012	2♂♂, 1♀
Mesogona oxalina (Hübner, [1803])		EN		AB	ES	OL		24.IX–12.XI	RC
Subfam. Hadeninae Guenée, 1837									
Mythimna turca (Linnaeus, 1761)		EN			ES	OL	SI	20.VI–25.VII	RC
Mythimna pudorina ([Denis & Schiffermüller], 1775)		EN					SI	20.V–15.IX	RC
Mythimna pallens (Linnaeus, 1758)	CA	EN	FA	AB		OL	SI	5.VII–13.VIII	RC
Mythimna straminea (Treitschke, 1825)	CA			AB				26.VI–13.VII	C
Mythimna vitellina (Hübner, [1808])	CA	EN	FA	AB	ES	OL	SI	16.V–7.X	VC
Mythimna unipuncta (Haworth, 1809)		EN			ES			1.X–12.XI	R
Mythimna albipuncta ([Denis & Schiffermüller], 1775)	CA	EN	FA	AB	ES	OL	SI	14.V–12.XI	C
Mythimna ferrago (Fabricius, 1787)		EN					SI	12.VI–25.IX	R
Mythimna l-album (Linnaeus, 1767)	CA	EN	FA	AB	ES	OL	SI	25.V–7.X	RC
Leucania comma (Linnaeus, 1761)		EN	FA	AB			SI	16.V–7.X	
Leucania obsoleta (Hübner, [1803])		EN						9.V–24.VIII	VC
Senta flammea (Curtis, 1828)		EN		AB				13.VII–14.VIII	R
Hadula trifolii (Hufnagel, 1766)	CA	EN	FA	AB	ES	OL	SI	29.IV–25.IX	VC
Hadula (*Calocestra*) *stigmosa* (Christoph, 1887)	CA	EN		AB				11.VII–4.IX	RC
Sideridis lampra (Schawerda, 1913)	CA			AB				15.V–25.VII	RC
Sideridis turbida (Esper, 1790)	CA	EN	FA		ES			23.V–25.VII	R
Heliophobus reticulata (Goeze, 1781)	CA			AB	ES		SI	24.VI–19.VII	R
Saragossa implexa (Hübner, [1809])		EN		AB	Palazu Mic			22.V–14.VI	VR
Conisania luteago ([Denis & Schiffermüller], 1775)	CA	EN	FA	AB	ES		SI	12.VI–13.VIII	RC
Mamestra brassicae (Linnaeus, 1758)	CA	EN	FA	AB	ES		SI	12.VI–25.IX	RC
Melanchra persicariae (Linnaeus, 1761)	CA	EN	FA			OL		15.VI–24.VII	RC
Ceramica pisi (Linnaeus, 1758)	CA	EN		AB				5–24.VII	R
Lacanobia w-latinum (Hufnagel, 1766)	CA	EN			ES	OL		18.V–26.VIII	RC
Lacanobia thalassina (Hufnagel, 1766)	CA	EN	FA	AB	ES			9.V–25.IX	RC
Lacanobia suasa ([Denis & Schiffermüller], 1775)				AB	ES			29.V–26.IX	RC
Lacanobia oleracea (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL		20.V–7.X	RC
Lacanobia splendens (Hübner, [1808])		EN		AB				5–13.VII	R
Lacanobia praedita (Hübner, [1813])		EN						12.VI–5.VII	VR
Lacanobia blenna (Hübner, [1824])	CA	EN		AB			SI	16.V–13.VIII	R
Hecatera bicolorata (Hufnagel, 1766)			FA	AB				3–13.VII	R
Hecatera dysodea ([Denis & Schiffermüller], 1775)		EN	FA		ES	OL		25.V–26.VIII	R
Hecatera cappa (Hübner, 1809)	CA	EN		AB				23.V–5.IX	RC
Hadena capsincola ([Denis & Schiffermüller], 1775)	CA	EN		AB				26.VI–24.VIII	R
Hadena filograna (Esper, [1788])			FA					22.V.2015	1♂
Hadena albimacula (Borkhausen, 1792)	CA	EN		AB			SI	26.VI–13.VIII	VR
Panolis flammea ([Denis & Schiffermüller], 1775)	Păd. Babadag							16.IV.2015	1♂, 1♀
Orthosia incerta (Hufnagel, 1766)		EN		AB				15.IV–14.V	C
Orthosia cruda ([Denis & Schiffermüller], 1775)		EN						15–30.IV	C
Orthosia miniosa ([Denis & Schiffermüller], 1775)		EN		AB				15.IV–7.V	C

	CA	EN	FA	AB	ES	OL	SI	Period:	Obs.
Orthosia gothica (Linnaeus, 1758)		EN		AB				15.IV–7.V	C
Anorthoa munda ([Denis & Schiffermüller], 1775)		EN		AB				15.IV–7.V	C
Egira conspicillaris (Linnaeus, 1758)		EN		AB				15.IV–7.V	VC
Tholera decimalis (Poda, 1761)		EN		AB	ES	OL		25.IX–12.XI	RC
Cardepia hartigi (Parenzan, 1981)		EN						24.VI–14.VIII	R
Subfam. Noctuinae Latreille, 1809									
Peridroma saucia (Hübner, 1808)	CA			AB	ES			12.VI–7.X	R
Dichagyris flammatra ([Denis & Schiffermüller], 1775)		EN						5.IX.2015	1♂
Dichagyris nigrescens (Höfner, 1887)	CA							26–27.VI.2015	1♂, 1♀
Dichagyris melanura (Kollar, 1846)		EN		AB				15.VI–13.VII	RC
Dichagyris renigera (Hübner, 1808)		EN		AB				16.VI–11.VII	R
Euxoa obelisca ([Denis & Schiffermüller], 1775)		EN			ES			19.VIII–24.IX	R
Euxoa temera (Hübner, [1808])		EN		AB	ES			5.IX–24.X	RC
Euxoa nigricans (Linnaeus, 1758)				AB				7.X.2012	1♂
Euxoa distinguenda (Lederer, 1857)		EN						4–5.IX.2015	4 specs
Euxoa segnilis (Duponchel, 1836)		EN		AB				5.IX–7.X	C
Euxoa tritici (Linnaeus, 1761)				AB	ES			24.IX–2.X	R
Agrotis bigramma (Esper, 1790)		EN		AB				15.VIII–2.X	RC
Agrotis cinerea ([Denis & Schiffermüller], 1775)	CA	EN						9.V–28.VI	R
Agrotis exclamationis (Linnaeus, 1758)	CA	EN		AB				16.V–12.XI	RC
Agrotis segetum ([Denis & Schiffermüller], 1775)	CA	EN	FA	AB	ES	OL	SI	1.V–12.XI	C
Agrotis ipsilon (Hufnagel, 1766)	CA	EN		AB	ES	OL	SI	1.V–12.XI	C
Agrotis trux (Hübner, [1824])	CA			AB				27.VI–13.VII	VR
Agrotis puta (Hübner, [1803])		EN		AB	ES	OL		21.VII–1.X	RC
Agrotis vestigialis (Hufnagel, 1766)		EN						5–6.IX.2015	C
Axylia putris (Linnaeus, 1761)		EN	FA	AB	ES	OL	SI	21.V–5.IX	RC
Ochropleura plecta (Linnaeus, 1758)	CA	EN			ES			15.V–7.X	RC
Cerastis rubricosa ([Denis & Schiffermüller], 1775)		EN			ES			15.IV–9.V	R
Cerastis leucographa ([Denis & Schiffermüller], 1775)	Păd. Babadag							15–16.IV.2015	1♂, 1♀
Chersotis rectangula ([Denis & Schiffermüller], 1775)		EN						14.VI–5.VII	VR
Chersotis laeta macini Rákosy, Stangelmeier & Wieser, 1996		EN		AB				12.VI–13.VII	VC
Chersotis fimbriola niculescui Rákosy, 1997		EN		AB				12.VI–13.VII	VC
Noctua pronuba (Linnaeus, 1758)	CA	EN	FA		ES			16.V–12.XI	RC
Noctua fimbriata (Schreber, 1759)	CA			AB	ES		SI	27.VI–1.X	RC
Noctua orbona (Hufnagel, 1766)		EN			ES			6.VII–27.IX	RC
Noctua interposita (Hübner, 1790)		EN		AB	ES			12.VI–20.VII	R
Noctua comes (Hübner, 1813)	CA		FA	AB	ES			15.VI–25.IX	RC
Noctua interjecta (Hübner, 1803)	CA					OL		6.VII–16.VIII	R
Noctua janthina ([Denis & Schiffermüller], 1775)	CA	EN		AB	ES	OL	SI	19.VI–25.IX	RC
Noctua janthe (Borkhausen, 1792)	CA							27–28.VI.2015	4♂♂, 1♀
Epilecta linogrisea ([Denis & Schiffermüller], 1775)	CA					OL		26.VI–25.VII	RC

	CA	EN	FA	AB	ES	OL	SI	Period:	Obs.
Opigena polygona ([Denis & Schiffermüller], 1775)					ES			1.X.2015	1♂
Xestia stigmatica (Hübner, [1813])		EN			ES			12.VI–5.VII	R
Xestia xanthographa ([Denis & Schiffermüller], 1775)		EN		AB	ES	OL		5.IX–24.X	RC
Xestia cohaesa (Herrich-Schaffer, [1849])		EN		AB	ES			5.IX–24.X	RC
Xestia c-nigrum (Linnaeus, 1758)	CA	EN		AB	ES		SI	16.V–7.X	RC
Xestia triangulum (Hufnagel, 1766)		EN			ES	OL		20.VI–7.VII	RC
Metagnorisma depuncta (Linnaeus, 1761)	CA			AB	ES			27.VI–25.VII	R
Suprafam. HESPERIOIDEA Latreille, 1809									
Fam. HESPERIIDAE Latreille, 1809									
Subfam. Pyrginae Burmeister, 1878									
Erynnis tages (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	1.V–5.IX	RC
Carcharodus alceae (Esper, [1780])			FA		ES	OL		28.V–7.IX	RC
Carcharodus floccifera (Zeller, 1847)		EN	FA		ES			20.V–26.VII	RC
Carcharodus orientalis Reverdin, 1913		EN				OL	SI	5.VII–25.IX	R
Spialia orbifer (Hübner, 1823)		EN	FA	AB	ES		SI	22.V–24.VI	R
Pyrgus malvae (Linnaeus, 1758)			FA	AB	ES			20.VI–19.VIII	C
Pyrgus armoricanus (Oberthür, 1910)	CA	EN	FA	AB	ES	OL	SI	25.V–6.X	C
Pyrgus sidae (Esper, [1784])			FA		ES	OL	SI	20.V–15.VI	R
Subfam. Hesperiinae Latreille, 1809									
Ochlodes sylvanus (Esper, 1779)	CA		FA		ES	OL	SI	20.V–25.VII	RC
Suprafam. PAPILIONOIDEA Latreille, [1802]									
Fam. PAPILIONIDAE Latreille, [1802]									
Subfam. Parnassinae Duponchel, [1835]									
Zerynthia polyxena (Den. & Schiff., [1775])**		EN						Specimens found by students (M.Skolka, pers. com.)	?
Zerynthia cerisyi ferdinandi Stichel, 1907					ES*	OL	SI	21.V–4.VI	VR
Parnassius mnemosyne wagneri Bryk, 1925	CA		FA		ES	OL	SI	1–26.V	RC
Subfam. Papilioninae Latreille, [1802]									
Iphiclides podalirius (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	30.IV–25.VIII	C
Papilio machaon (Linnaeus, 1758)	CA	EN	FA	AB		OL		26.VI–2.X	R
Fam. PIERIDAE Duponchel, [1835]									
Subfam. Coliadinae Swainson, 1827									
Colias erate (Esper, 1805)	CA	EN	FA	AB	ES	OL	SI	2.VII–25.X	C
Colias croceus (Fourcroy, 1785)	CA	EN	FA	AB	ES	OL	SI	25.V–12.XI	C
Colias hyale (Linnaeus, 1758)		EN		AB	ES	OL		10.V–1.X	RC
Colias alfacariensis Ribbe, 1905	CA		FA		ES		SI	21.V–16.VIII	RC
Gonepteryx rhamni (Linnaeus, 1758)	CA		FA			OL	SI	26.VI–25.VII	RC
Subfam. Dismorphiinae Schatz, [1886]									
Leptidea sinapis sinapis (Linnaeus, 1758)	CA		FA	AB	ES	OL	SI	16.IV–23.VIII	
Subfam. Pierinae Duponchel, [1835]									
Aporia crataegi (Linnaeus, 1758)				AB				20.V.2013	1♂
Pieris brassicae (Linnaeus, 1758)		EN	FA	AB	ES		SI	12.VI–7.X	C
Pieris napi (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	15.IV–12.XI	VC
Pieris rapae (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	15.IV–12.XI	VC

	CA	EN	FA	AB	ES	OL	SI	Period:	Obs.
Pontia daplidice edusa (Fabricius, 1777)	CA	EN	FA	AB	ES	OL	SI	1.V–6.X	VC
Euchloe ausonia (Hübner, [1804])		EN	FA	AB				16.IV–25.V	RC
Anthocharis cardamines (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	15.IV–23.V	C
Fam. LYCAENIDAE [Leach] [1815]									
Subfam. Lycaeninae [Leach] [1815]				AB					
Lycaena phlaeas (Linnaeus, 1761)	CA		FA			OL		26.VI–3.X	R
Lycaena dispar rutila (Werneburg, 1864)	CA	EN	FA	AB	ES	OL	SI	25.V–2.X	RC
Lycaena thersamon (Esper, 1784)	CA			AB	ES	OL		15.VIII–28.IX	RC
Lycaena titirus (Poda, 1761)					ES	OL		14.VII–28.IX	RC
Subfam. Theclinae Swainson, 1831									
Satyrium w-album (Knoch, 1782)				AB				14.VII.2013	1♂, 1♀
Subfam. Polyommatinae Swainson, 1827									
Lampides boeticus (Linnaeus, 1758):		EN		AB				19.VIII–7.X	VR
Leptotes pirithous (Linnaeus, 1758)		EN		AB		OL	SI	15.IX–25.X	RC
Celastrina argiolus (Linnaeus, 1758)	CA		FA		ES	OL		1.V–16.VIII	RC
Cupido (*Everes*) *argiades* (Pallas, 1771)	CA		FA					3–25.VII	R
Pseudophilotes schiffermülleri Hemming, 1792	CA	EN	FA	AB		OL	SI	1.V–25.VII	C
Pseudophilotes bavius egea (Herrich-Schäffer, 1852)	Gura Dobrogei			AB			SI	16.IV–8.V	RC
Scolitantides orion (Pallas, 1771)				AB				7–21.V	RC
Glaucopsyche alexis (Poda, 1761)		EN	FA		ES		SI	9.V–20.VI	R
Maculinea arion (Linnaeus, 1758)							SI	26.VII–14.VIII	R
Plebejus argus (Linnaeus, 1761)	CA	EN	FA	AB	ES	OL	SI		
Plebejus idas (Linnaeus, 1758)**			FA					Skolka, 1994	?
Plebeius argyrognomon (Bergsträsser, 1779)		EN						14.VIII.2015	2♂♂, 1♀
Aricia agestis ([Denis & Schiffermüller], 1775)	CA	EN	FA	AB	ES	OL	SI	1.V–3.X	VC
Polyommatus icarus (Rottemburg, 1775)	CA	EN	FA	AB	ES	OL	SI	15.IV–24.X	VC
Polyommatus (*Plebicula*) *thersites* (Cantener, 1835)		EN	FA					14.VI–4.VII	R
Polyommatus (*Agrodiaetus*) *admetus* (Esper, 1783)	CA							27.VI–25.VII	RC
Polyommatus (*Meleageria*) *daphnis* ([Denis & Schiffermüller], 1775)	CA			AB				14.VII–6.IX	RC
Polyommatus (*Lysandra*) *bellargus* (Rottemburg, 1775)	CA	EN	FA	AB	ES	OL	SI	20.V–7.X	RC
Polyommatus (*Lysandra*) *coridon* (Poda, 1761)	Slava Rusă							15.VIII–5.IX.2015	C
Fam. NYMPHALIDAE Swainson, 1827									
Subfam. Libytheinae Boisduval, 1833									
Libythea celtis (Laicharting in Fuessly, 1782)	Dobromir – Cetatea							21.VI.2013 (leg. Vintilă)	1 spec.
Subfam. Limenitinae Behr, 1864									
Neptis sappho (Pallas, 1771)					ES	OL		20.VI–4.X	RC
Subfam. Heliconiinae Swainson, 1827									
Argynnis paphia (Linnaeus, 1758)	CA		FA	AB		OL		20.VI–25.IX	RC
Argynnis pandora ([Denis & Schiffermüller], 1775)	CA	EN	FA	AB	ES	OL	SI	14.V–7.X	VC
Argynnis aglaja (Linnaeus, 1758)	CA		FA		ES			22.V–25.VII	R
Argynnis niobe (Linnaeus, 1758)					ES			5.VII.2014	R

	CA	**EN**	**FA**	**AB**	**ES**	**OL**	**SI**	Period:	Obs.
Issoria lathonia lathonia (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	9.V–25.IX	C
Brenthis daphne ([Denis & Schiffermüller], 1775)	CA							27.VI–24.VII	VR
Boloria dia (Linnaeus, 1758)	CA		FA		ES			20.V–25.IX	C
Subfam. Apaturinae Boisduval, 1840									
Apatura metis Freyer, 1829					ES	OL		26.VII–3.X	RC
Subfam. Nymphalinae Swainson, 1827									
Melitaea cinxia (Linnaeus, 1758)	CA			AB				7.V–27.VI	RC
Melitaea didyma (Esper, 1779)	CA		FA	AB	ES	OL		20.V–16.VIII	RC
Melitaea phoebe ([Denis & Schiffermüller], 1775)	CA		FA	AB			SI	20.V–26.VII	RC
Melitaea trivia ([Denis & Schiffermüller], 1775)	CA	EN		AB				27.VI–5.IX	RC
Melitaea athalia (Rottemburg, 1775)	CA	EN	FA	AB	ES	OL	SI	20.V–25.VII	RC
Araschnia levana (Linnaeus, 1758)			FA			SI		22.V–26.VII	R
Nymphalis (*Inachis*) *io* (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	15.IV–25.X	RC
Nymphalis polychloros (Linnaeus, 1758)	CA							27.VI.2015	1♂
Nymphalis (*Polygonia*) *c-album* (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	15.IV–12.XI	RC
Vanessa atalanta atalanta (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	20.VI–25.X	RC
Vanessa cardui cardui (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	15.IV–12.XI	C
Subfam. Satyrinae Boisduval, [1833]									
Kirinia roxelana (Cramer, 1777)	CA				ES			26.VI–25.VII	R
Parage aegeria tircis (Godart, 1821)	CA		FA	AB			SI	9.V–16.VIII	RC
Lasiommata megera (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	1.V–28.X	C
Lasiommata maera (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	20.VI–2.X	C
Coenonympha arcania (Linnaeus, 1761)	CA					OL		27.VI–25.VII	RC
Coenonympha glycerion (Borkhausen, 1788)	CA		FA		ES	OL	SI	20.VI–13.VIII	RC
Coenonymphia pamphilus (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	7.V–7.X	VC
Maniola jurtina (Linnaeus, 1758)	CA	EN	FA	AB	ES	OL	SI	20.V–25.IX	C
Melanargia galathea (Linnaeus, 1758)	CA		FA	AB	ES	OL	SI	21.VI–25.VII	RC
Minois dryas (Scopoli, 1763)	CA		FA	AB				3.VII–14.VIII	C
Hipparchia syriaca (Staudinger, 1871)	CA	EN						26.VI–4.X	RC
Hipparchia volgensis delattini Kudrna, 1975	CA	EN						12–28.VI	RC
Hipparchia statilinus (Hufnagel, 1766)			FA	AB				14.VII–7.X	RC
Arethusana arethusa ([Denis & Schiffermüller], 1775)	CA		FA	AB				24.VII–21.VIII	C
Brintesia circe (Linnaeus, 1758)	CA							26.VI–25.VII	VC

Annex II

Current status of protected Lepidoptera species in Dobrogea:
(EUROPEAN UNION, 1992 – Annex II; Rákosy, 1996, 2005; Rákosy & Székely, 1996; Székely, 2012a)
The estimations express the author's view.

Taxa protected by law at European level:	Observations:
Apatura metis Freyer, 1829	Localized on floodplain forests. Not endangered at present.
Arytrura musculus (Ménétries, 1859	Known only from the Danube Delta. Relatively widespread, but rare. The habitats require protection.
Catopta (*Paracossulus*) *thrips* (Hübner, 1818)	Data deficient, known only from Babadag, Beştepe Hill, Izvoarele, Visterna (Gura Dobrogei) and Hagieni-Limanu (in total 6 specimens).
Eriogater catax (Linnaeus, 1758)	Data deficient, only three specimens known from Esechioi Forest. The habitat requires protection.
Euphydryas maturna (Linnaeus, 1758)	Isolated populations in northern Dobrogea (Ciucurova, Slava Rusă-Babadag). In southern Dobrogea known only from Canaraua Fetii area. The habitats require protection.
Euplagia quadripunctaria (Poda, 1761)	Viable populations in many areas. Not endangered.
Hyles hippophaes (Esper, 1893)	Sporadic appearance in the whole region. Not endangered at present.
Lycaena dispar rutila (Werneburg, 1864)	Viable populations in many wetland areas. Not endangered.
Maculinea arion (Linnaeus, 1758)	Isolated populations at Dumbrăveni, Şipotele, Dobromir, Urluia and Canaraua Fetii. The habitats require protection.
Parnassius mnemosyne wagneri Bryk, 1925	Viable populations in many areas. Not endangered at present.
Proserpinus proserpina (Pallas, 1772)	Isolated populations in some wetland areas. Not endangered at present.
Pseudophilotes bavius (Eversmann, 1832)	Isolated populations at Allah Bair Hill, Gura Dobrogei, Canaraua Fetii, Dumbrăveni and Şipotele. The habitats require strict protection.
Zerynthia polyxena ([Denis & Schiffermüller], 1775)	Isolated population in Canaraua Fetii. Habitat requires protection.

Taxa protected by law at national level:	Observations:
Acontia titania (Esper, 1798)	Isolated populations in many areas. Not endangered at present.
Amphipyra micans Lederer, 1857	Very old records from Eforie-Techirghiol. Data deficient – requiring confirmation!
Amphipyra styx Herrich-Schäffer, 1850	Known only from southern Dobrogea (Canaraua Fetii). Data deficient!
Amphipyra tetra (Fabricius, 1787)	Known only from Măcin Mountains (Greci, Hamcearca-Creasta Cardonului). The habitats require protection.
Anarta (*Calocestra*) *stigmosa* (Christoph, 1887)	Very common in many salt steppe areas. Not endangered.

Taxa protected by law at national level:	Observations:
Apaustis rupicola ([Denis & Schiffermüller],1775)	Known only from southern Dobrogea (Canaraua Fetii – near Goruni village) and Măcin Mountains (Greci). Data deficient!
Arethusana arethusa ([Denis & Schiffermüller], 1775)	Viable populations in many areas. Not endangered at present.
Calocucullia celsiae (Herrich-Schäffer, 1850)	Isolated population in Canaraua Fetii. Habitat requires protection.
Cucullia biornata Fischer v. Waldheim, 1840	Rare in salt steppes. The habitats require protection.
Cucullia dracunculi (Hübner, [1813])	Known only from Pricopan (Măcin Mountains). Habitat requires protection.
Cucullia santonici (Hübner, [1813])	Viable populations in many areas. Not endangered at present.
Cyclophora suppunctaria (Zeller, 1847)	Known only from southern Dobrogea (Canaraua Fetii). Data deficient!
Diachrysia chryson deltaica Rákosy, 1996	Viable populations in Danube Delta, Hagieni, Canaraua Fetii and Enisala – Babadag Lake. The habitats require protection.
Enargia abluta (Hübner, 1808)	Known only from Danube Delta and from Razim Lake area (Plopu – Sarinasuf). Data deficient!
Epimecia ustula (Freyer, 1835)	Very old records from Agigea. Data deficient – requiring confirmation!
Eublemma ostrina (Hübner, 1808)	Rare and local (reported from Măcin Mts., Hagieni, Canaraua Fetii, Cheile Dobrogei). Data deficient, possible confusions with *Eublemma porphyrina*. The habitats require protection.
Eublemma pannonica lenis (Eversmann, 1844)	Known only from Danube Delta. Rare and local. The habitats require protection.
Eublemma parva (Hübner, 1808)	Isolated populations in Măcin Mountains. The habitat requires protection.
Euchloe ausonia (Hübner, 1804)	Viable populations in many areas. The habitats require protection.
Eupithecia biornata Christoph, 1867	Common in salt steppes. Not endangered at present.
Everes alcetas (Hofmannsegg, 1804)	Known from Razim Lake area – Plopu, Nifon, Smârdan and Hagieni Forest. The habitats require protection.
Gortyna cervago Eversmann, 1844	Isolated populations in many areas. Rare and local. The habitats require protection.
Heteropterus morpheus (Pallas, 1771)	Known only from Danube Delta (Letea, Caraorman), and from Greci (Măcin Mountains). The habitats require protection.
Hydraecia osseola (Staudinger, 1882)	Known only from Danube Delta. Data deficient!
Hyponephele lupinus (O. G. Costa, 1836)	Known only from Danube Delta (Letea and Periprava). The habitats require protection.
Kirinia roxelana (Cramer, 1777)	Isolated populations at Horia – Creasta Cardonului (Măcin Mts.), Babadag and Esechioi Forest. The habitats require strict protection.
Lasiocampa eversmanni (Eversmann, 1843)	Known only from Danube Delta (C.A. Rosetti, Periprava, Caraorman), and from Histria-Sinoe area. Viable populations – not endangered at present.
Lemonia balcanica (Herrich-Schäffer, 1847)	Viable populations in many areas. Not endangered at present.

Taxa protected by law at national level:	Observations:
Neptis sappho (Pallas, 1771)	Known only from south-western-Dobrogea. Relatively common in the forested areas. Not endangered at present.
Oxytripia orbiculosa (Esper, 1799)	Data deficient, known only from Hagieni area (total 2 specimens).
Paradrymonia vittata bulgarica de Freyna, 1983	Viable populations in many forested areas. Not endangered at present.
Parocneria terebinthi (Freyer, 1838)	Isolated population in Babadag Forest. Habitat requires protection.
Peridea korbi (Rebel, 1918)	Known only from SW-Dobrogea (Canaraua Fetii). Data deficient!
Phyllodesma ilicifolia (Linnaeus, 1758)	Isolated population in Babadag Forest. Habitat requires protection.
Polia cherrug Rákosy & Wieser, 1997	Isolated populations in Măcin Mountains and Babadag Forest. The habitats require protection.
Polyommatus amandus (Schneider, 1792)	Isolated population in Babadag Forest. Habitat requires protection.
Pyrgus sidae (Esper, [1784])	Isolated populations in many areas. The habitats require protection.
Rhyparioides metelkana (Lederer, 1861)	Relatively common in some wetland areas. The habitats require protection.
Saragossa porosa (Eversmann, 1854)	Known only from Razim Lake area (Plopu – Sarinasuf). Habitat requires protection.
Schinia cognata (Freyer, 1833)	Known only from southern Dobrogea (Canaraua Fetii). Habitat requires protection.
Tomares nogelii dobrogensis Caradja, 1895	Known only from northern Dobrogea, in very isolated small populations. The habitats require strict protection.
Zerynthia cerisyi ferdinandi Stichel, 1907	Known only from southern Dobrogea (Şipotele, Canaraua Fetii, Oltina and Esechioi Forest). It used to be a common species (10–20 years ago), but nowadays it is almost extinct! The habitats require protection.
Zygaena laeta orientis Burgeff, 1926	Known only from Danube Delta (Letea Forest), and from Canaraua Fetii area in southern Dobrogea. Data deficient!