Hungary

European Butterflies Group Contact	Mike Williams
Local Contact	Szabolcs Sáfián, Rob de Jong
Butterfly Conservation Europe Partner	'Szalkay József' Hungarian Lepidopterological Society (HLS)
Local Recording Scheme	Under development
Butterfly List	

Books

Only in Hungarian:

ABAFI-AIGNER, L. (1905): Magyarország lepkéi. Budapest 220 pp. + 52 colour plates. reprint (2000) with modernized nomenclature and additional chapter by Zsolt Bálint.
Lepidoptera of Hungary.
The oldest comprehensive fauna work of historic Hungary including present day Croatia, parts of Slovenia, Austria, Slovakia, Ukraine, Romania (entire Transylvania) and Serbia.

VARGA, Z. (1989): Lepkék (Lepidoptera). – In: RAKONCZAY, Z. (szerk.): Vörös Könyv, Akadémiai Kiadó, Budapest 188-244 p.
Red Data Book of endangered animals and plants of Hungary (chapter Lepidoptera), includes many Hungarian specialties.

BÁLINT, ZS. (1996): A Kárpát-medence nappali lepkéi I. – Az MME Könyvtára 12., Magyar Madártani Egyesület, Budapest 183 pp. 12 színes tábla.
Contains information about Papilionidae, Pieridae and Lycaenidae of the Carpathian Basin. With colour plates from original aquarelles.

BÁLINT, ZS., ÁBRAHÁM, L., ILONCZAI, Z., MÁTÉ, A., NÉMETH, L., VARGA, Z. (2003): Hungary In: VAN SWAAY ed. Prime Butterfly Areas in Europe – Die Vlinderstichting (Dutch Butterfly Foundation), Wageningen 695 pp.
General information on important butterfly areas in Hungary.

BÁLINT, ZS. GUBÁNYI, A., PITTER, G. (2007): Magyarország védett pillangóalakú lepkéinek katalógusa a Magyar Természettudományi Múzeum gyűjteménye alapján – A nappali lepkék elterjedése I. – MTM, Budapest 136 pp.
Distributional atlas of protected butterfly species – based on the collection of the Hungarian Natural History Musem.

Holidays

Ecotours Ltd. (www.ecotours.hu) offers a wide range of butterfly, moth and dragonfly tours to several areas of the country, Farm Lator (www.farmlator.hu) is a popular destination for Lepidopterists with excellent guiding and traditional dishes. The newly founded Hungarian Natural Heritage Trust is aiming to develop Őrség National Park as an international butterfly and moth destination (www.termeszet.org). They welcome enthusiasts as well as helping hands to manage their meadows and woodlands in a sympathetic way for butterflies. Greeneye (http://www.greeneye.org.uk/tours_butterflies_hungary.htm) offers butterfly and other wildlife and photography tours.

Sites & Species

Map of Hungary with the protected areas network: http://geo.kvvm.hu/tir_en/viewer.htm

Hungary is situated right in the heart of Europe in the so called Carpathian Basin. This small country of just 93.000 km2 originally had about 170 butterfly species; the present number of species is just over 160 due to extinctions as a result of changes in landscape use and drainage of wetlands in the late XIX. and early XX. centuries. The butterfly fauna of Hungary is typical Central European with a number of Mediterranean elements (such as Nettle-tree Butterfly, Cardinal, Iolas Blue or even occasional specimens of Long-tailed Blue). Penetration of Atlanto-Mediterranean species (e.g. Red Underwing Skipper) and Siberian elements (Yellow-legged Tortoiseshell, Pallas' Fritillary) occur mainly in the north-western and north eastern regions). Hungary is also rich in moths; approximately 3400 moth species have been positively recorded from the country including Carpathian endemics and post-glacial relicts. The butterfly and moth season begins at the end of March and lasts until November.

It is worth noting that many of the butterfly hot-spots lie within the protected areas network such as national parks, landscape conservation areas or Natura 2000 sites where activities are limited or the conservation authorities may require prior permission or offer organized visits to certain localities. Guides of organized tours normally carry appropriate permits and will inform visitors about the restrictions, while individual travellers should request information from the regional national park directorate of the area they wish to visit. The local EIG contacts could send more information about recommended localities, restrictions, accommodations etc. Collecting of butterflies and moths is strictly forbidden inside the protected areas network while outside of the protected areas collecting is permitted, although there is an extensive list of species protected by Hungarian or European law and specimens are not allowed to be collected, killed and/or to be exported dead or alive.

Butterfly hotspots:

Transdanubia

1. Sopron and the Little Hungarian Plain (northwest) – Sopron is situated in the northwestern corner in Hungary and is famous for the mountainous elements of its fauna and flora. The town lies on the boundary of the Little Hungarian Plain which comprises one-third of Lake Fertő (Lake Neusidl), the surrounding saline steppe vegetation and the extensive wetland which once stretched from the Lake Fertő to the city of Győr a 100 km away.

Still nowadays the area has a wide range of natural habitats including mountainous beech woodland and conifers, dry and warm oak forest and steppe on a limestone base, one of Hungary's largest reedbeds and a variety of wetlands including marshy areas, swamps, temporarily watersoaked saline grasslands and damp hay meadows. This diversity is also reflected in the butterfly fauna. In the Sopron Mountains, it is easy to see some of the most beautiful and largest European butterflies including Camberwell Beauty (*Nymphalis antiopa*), Purple Emperor (*Apatura iris*) and Poplar Admiral (*Limenitis populi*). The damp meadows around Lake Fertő host Great Burnet (*Sanguisorba officinalis*) which is foodplant for the first instar larvae of Scarce Large Blue (Maculinea teleius) and Dusky Large Blue (*Maculinea nausithous*). Among them there's always Large Copper (Lycaena dispar rutilus) and Large Checquered Skipper (*Heteropterus morpheus*). The chalk hills near Fertőrákos host the only population of Red Underwing Skipper (*Spialia sertorius*) in Hungary. Rare moths in the mountains are the birch feeding Scarce Prominent (*Odontosia carmelita*), White Prominent (*Leucodonta bicoloria*), and Alder Kitten (*Furcula bicuspis*), while the reedbeds of the lake host several reed-feeding species: *Arenostola fragmitidis*, Reed Leopard (*Phragmataecia castaneae*) and Reed Tussock (*Laelia coenosa*). Dusky Clearwing Moth (*Paranthrene tabaniformis*) is widespread and common in the extensive poplar plantations of the drained wetlands of the Little Plain. False Ringlet (*Coenonympha oedippus*) was believed extinct from northwest Hungary until 2009 when a strong population was found in the Hanság area

2. The Vértes – is a small but very diverse hilly area just 60 km southwest of Budapest. The southern part is real sub-Mediterranean and continental steppe and steppe-woodland, while the central area is more sub-mountainous with patches of dry grasslands on the hilltops. There are many interesting species to be seen in a relatively small area. Hungarian Skipper (Red-orbed Underwing Skipper) (*Spialia orbifer*) is common on the driest steppe meadows, along with Small Mountain White (*Pieris ergane*). Turquoise Blue (*Polyommatus dorylas*), Meleager's Blue (*Polyommatus daphnis*), Chalk Hill Blue (*Polyommatus coridon*) and Amanda's Blue (*Polyommatus amandus*). Cardinal (*Argynnis pandora*) penetrates the hills from the south while Silver-washed Fritillary (*Argynnis paphia*) is amongst the commonest butterflies, not even the dark green form female (*f. valesina*) is rare. There are good populations of the xerophilous eco-type of Alcon Blue (*Maculinea alcon*) [formerly known as *M. rebeli* or *M. xerophila*] and Ligurian Large Blue (*Maculinea arion ligurica*) is also found here. Surprisingly, a relict population of Woodland Grayling (*Erebia medusa*) has survived the isolation since the post-glacial periods in the Vértes with no other records within several hundred kilometres. The moth fauna is also extremely rich, in some years the first emerging (not hibernating) moths can be seen from late February or early March. Anker's Spring Umber (*Erannis ankeraria*) flies only in the warmest furry oak woodland, while the early spring noctuid *Perigrapha i-cinctum* flies in the dolomite grasslands. Orange Upperwing (*Jodia croceago*) flies later in April along with the giant Chestnut-like *Orbona fragariae*. The Vértes is extremely rich in Shark (*Cucullia*) species including the endemic Vértes Shark (*Cucullia mixta lorica)* recorded only here and near Budapest in Hungary. All Hungarian Chersotis (a xeromountainous genus, very rich in the Asian Palaeartic mountains) species occur here in numbers, as well as several rare Darts (*Euxoa hastifera, Euxoa distinguenda, Euxoa vitta*). Hungarian Buff Tip (*Phalera bucephaloides*) and Oak Hawk Moth (*Marumba quercus*) are also very common. The dry grassland form of Marsh Fritillary (*Euphydryas aurinia*) has recently reached the Vértes Mts from the Bakony Hills.

3. Bakony is a large hilly area that stretches northwest to southeast from the Mór Rift (which separates it from the Vértes) along the northern shores of Lake Balaton, the largest freshwater lake in Central Europe. Bakony is constituted by a mosaic of different habitats, such as limestone and dolomite plateaus, with grasslands, warm oak woodlands and damp Sanguisorba rich meadows, and in one of the best butterfly and moth areas in Hungary with lots of interesting species. The high number of Mediterranean species is striking.

Small Mountain White (*Pieris ergane*), The Hermit (*Chazara brizeis*), Lesser Clouded Yellow (*Colias chrysotheme*), Iolas Blue (*Iolana iolas*) are among the real rarities of Central Europe. These species are more common on the southern slopes and small steppe plateaus of Balaton Upland and the Várpalota Plateau. Other species with Mediterranean distribution – which are rare elsewhere – are common all over the Bakony: False Grayling (*Arethusana arethusa*), Lesser Spotted Fritillary (*Melitaea trivia*) and Nettle Tree Butterfly (*Libythea celtis*). The Bakony is famous also for its mud-puddling butterfly assemblages, hundreds of fritillaries can be seen on the wet ground during the hot summer months such as Spotted Fritillary (*Melitaea didyma*), Heath Fritillary (*Melitaea athalia*), Assmann's Fritillary (*Melitaea britomartis*) High Brown Fritillary (*Argynnis adippe*) and Dark Green Fritillary (*Argynnis aglaja*). All European Large Blues are present in the Bakony. The 'ordinary' Large Blue (*Maculinea arion arion*) prefers the moderately warm gentle slopes full of thyme, the Ligurian Large Blue (*Maculinea arion ligurica*) (which differs from the ordinary one both morphologically and ecologically) flies rapidly along oak woodlands and lays its eggs on Oregano (*Origanum vulgare*). The Alcon Blue (*Maculinea alcon*) has two eco-types here, one lays on *Gentiana cruciata* and lives on xerothermic woodlands and grasslands, while the other is found in damp meadows and lays on *Gentiana pneumonanthe*. These damp meadows also provide habitats for Scarce Large Blue (*Maculinea teleius*) and Dusky Large Blue (*Maculinea nausithous*). Marsh Fritillary (*Euphydryas aurinia*) is also widely distributed in the Bakony while Scarce Fritillary (*Euphydryas maturna*) is restricted to the cold valleys with ash trees. The moth fauna is also very diverse with lots of local and rare species. There are rich populations of *Chersotis fimbriola* and *Phyllometra culminaria* on the dolomite plateau near Várpalota with hundreds of other xerophilous species. *Asteroscopis syriaca decipulae* is a Carpathian endemism and is found only on the warmest limestone steppe-woodland with lots of Manna Ash (*Fraxinus ornus*) trees. Near Lake Balaton in the Kál Basin Arytrura musculus, one of the rarest European noctuids, was recorded recently.

4. Southern Transdanubia (The Villány Hills, Dráva Plain and Belső-Somogy) – There are several Lepidoptera hot-spots along the River Dráva, the southern border of Hungary in Transdanubia. Villány Hills is the warmest locality in Hungary with several special butterflies and moths that occur nowhere else in the country. Southern White Admiral (*Limenitis reducta*) and Iolas Blue (*Iolana iolas*) can be abundant on the dolomite slopes of Szársomlyó Hill in two generations from May to September; the endemic *Polymixis rufocincta isolata* might be seen in good numbers at its peak in late November or early December. Rarer are the unique *Cucullia formosa* and the Latreille's Latin (*Callopistria laterillei*). The riparian forest along the River Dráva provides excellent habitat for the unique Freyer's Purple Emperor (Apatura metis), which can actually be common in mid-June or early August. The floodlands of the river provide good habitats for Southern Festoon (*Zerynthia polyxena*), while the hardwood gallery forests further away from the river host strong populations of Scarce Fritillary (*Euphydryas maturna*). Barcs, in the Belső-Somogy, is an excellent place for Gliders. Both Common Glider (*Neptis sappho*) and Hungarian Glider (*Neptis rivularis*) are common in the 'nyíres-borókás' (open juniper-birch pasture), which is also one of the few Hungarian localities for Gatekeeper (*Pyronia tithonus*). The Dayflying Cloud (*Actinotia radiosa*) is one of the characteristic species of the thyme (Thymus spp.) covered dry acidic sand dunes of Belső-Somogy and the introduced Japanese Silkmoth (*Antheraea yamamai*) can be extremely common in early August, more than a hundred of this magnificent moths were counted at moth light in a night in the 1980s. This area is also a paradise for migratory species: Eastern Bordered Straw (*Heliothis nubigera*), Ni Moth (*Trichoplusia ni*) and the Sorcerer (*Aedia leucomelas*) are possible sightings in August.

5. The Őrség and Vendvidék – are hilly areas in the westernmost corner of Hungary. The climate of the region is relatively cool and humid compared to the more continental or submediterranean locations which helped the formation of the mosaic type forest-meadow landscape, also formed by the traditional livestock-keeping in the region. The Őrsége and Vendvidék (Őrség National Park) with its 40.000 hectares host probably the largest metapopulation of Scarce Large Blue (*Maculinea teleius*) and Dusky Large Blue (*Maculinea* nausithous) in Europe, while Alcon Blue (*Maculinea alcon*) and Large Blue (*Maculinea arion arion*) also have scattered populations here. The Marsh Fritillary (*Euphydryas aurinia*) has strong populations in the damp meadows, amongst Lesser Marbled Fritillary (*Brenthis ino*), Large Copper (*Lycaena dispar rutilus*) and Purple-edged Copper (*Lycaena hippothoe*). Őrség is also a good site to see Poplar Admiral (*Limenitis populi*), Purple Emperor (Apatura iris) and Camberwell Beauty (*Nymphalis antiopa*). Brown Hairstreak (*Thecla betulae*) can be relatively common along the blackthorn-rich forest glades in August-September. The blackthorn shrubs host other butterflies and moths too; Sloe Hairstrak (*Satyrium acaciae*) and Black Hairstreak (*Satyrium pruni*) are both recorded from the Őrség as well as Small Eggar (*Eriogaster lanestris*) and Orange Eggar (*Eriogaster catax*).

Budapest and its surroundings

6. Budapest and the surroundings (Central Hungary) – Believe it or not but more than 80% of Hungary's butterfly fauna is present within an hour's drive of Budapest. Unfortunately, the expansion of the capital city has led to the disappearance of most natural habitats and the remainder has largely been degraded due to the intensification of agriculture which feeds the city. Still nowadays one can see many of the Hungarian rarities within a 60 km diameter circle, although the habitats are mostly fragmented and are usually small in size. The Buda Hills are still in good condition and is an excellent place to observe many species. Clouded Apollo (*Parnassius mnemosyne*) is one of the abundant species here, along with Hungarian Glider (*Neptis rivularis*) which can be present even in the gardens of houses on the slopes of Buda Hills, wherever Spiraea bushes have been planted. The last remnant of the once strong population of Damon Blue (*Polyommatus damon*) – one of Hungary's most endangered butterfly species – is also found within the administrative boundaries of Budapest, near Normafa, a famous picnic area. Just outside the city, northwest of Budapest, lies the Fótisomlyó hill, a long known protected area which is famous for having the north-westernmost population of Zephyr Blue (*Plebeius sephirus*) in the world. This hill is also famous for its rare moths. The sandstone foundation has special steppe-woodland vegetation with lots of thyme (*Thymus* spp.) which is the favourite nectar source of *Apaustis rupicola*, a small diurnal noctuid. This is one of the most delicate species in Europe and a real Mediterranean element in the Hungarian fauna. Similarly, the Hungarian Buff Tip (*Phalera bucephaloides*), which can be extremely abundant here along with Oak Hawk-moth (*Marumba quercus*). North of the hill begin the Northern Mountains which stretch from the Danube to near Ukraine in the east, constituted by the Börzsöny, Cserhát, Mátra, Bükk, Zemplén and the karst of Aggtelek. The westernmost section of the mountains is Börzsöny, which hosts strong populations of Clouded Apollo (*Parnassius mnemosyne*), Purple and Lesser Purple Emperors (*Apatura iris, Apatura ilia*) and Large Tortoiseshell (*Nymphalis polychloros*). The Naszály Hill near Vác has a small population of Amanda's Blue (*Polyommatus amandus*), Anomalous Blue (*Polyommatus admetus*), Osiris Blue (*Cupido osiris*) and Iolas Blue (*Iolana iolas*). South-east of Budapest lies the Great Plain which once had large areas of swamps and wetlands as well as chalky sand dunes. Still nowadays if one drives a bit further from Budapest one can reach one of the remnants of the swamp-forests and damp meadows near Ócsa where the rare False Ringlet (*Coenonympha odedippus*) can be seen flying with Large Chequered Skipper (*Heteropterus morpheus*) and Cardinal (*Pandoriana pandora*).

Just another 20-30 km further, the sand dunes between Tatárszentgyörgy and Kunpeszér have a completely different butterfly fauna with lots of steppe elements. Oriental Meadow Brown (*Hyponephele lupina*) and Tree Grayling (*Hipparchia statilinus*) are common in the sparse White Poplar and Juniper woodland of the sand dunes, Chalk Hill Blue (*Polyommatus coridon*) and the Cardinal (*Pandoriana pandora*) are also frequent. In the damp meadows between the sand dunes, Scarce Large Blue (*Maculinea teleius*) and Alcon Blue (*Maculinea alcon*) are present in large numbers. Somewhere in this habitat complex once lived the Esper's Marbled White (*Melanargia russiae*) and the diurnal *Oxytripia orbiculosa*, one of the most spectacular moths, which flies in October sunshine above the extensive stands of Dwarf Iris (*Iris pumila*) and Sand Flag (*Iris arenaria*). Both are now extinct from Hungary with no records since the 1920s. This unique sandy steppe vegetation and the damp meadows between the dunes are also favoured by a large number of rare moths. The larva of the Swamp Tiger (*Rhyparioides metelkanus*) is known to approach its foodplant – a mint species – by swimming! Another rare tiger moth species is the Large Sand Tiger (*Arctia festiva*). On different species of wormwood plants *(Artemisia* spp.) feed the caterpillars of several Shark (*Cucullia*) species, including the beautiful Green Silver-spangled Shark (*Cucullia argentea*), while *Shargacucullia* species feed on Verbascum here. A real unique moth is the Pannonian Marbled (*Eublemma pannonica*) which can be found around the larval foodplant *Helichrysium arenarium*.

North-eastern Hungary

7. The Northern Mountains are constituted by several smaller massifs, from east to west: Börzsöny, Cserhát, Mátra, Bükk and Zemplén. The karst region of Aggtelek which lies northwest from the Zemplén Mts. is a small area but famous for its butterflies and it is therefore important to mention. The mountains of Bükk, Zemplén and the karst of Aggtelek are the most famous butterfly areas in Hungary, since the majority of the organized butterfly tours visit this part of Hungary. It is not only the diversity of the species that bring here many visitors every year, but the gentle landscape and the traditional buildings of Aggtelek Karst, the beautiful Bükk Plateau and the famous wine regions of Eger and Tokaj all further encourage eco-tourists. Nevertheless, the region is extremely rich in butterflies, and if somebody wants to see some of the ponto-mediterranean or real Eastern European specialities they should visit the north-eastern hills of Hungary. Anomalous Blue (*Polyommatus admetus*), Osiris Blue (*Cupido osiris*) and Chapman's Blue (*Polyommatus thersites*) can be locally common on semi-dry meadows with Sainfoin (*Onobrychis arenaria*) in the northern Bükk or around Aggtelek, Pallas' Fritillary (*Argynnis laodice*) can be common in the Zemplén, while Yellow-legged Tortoiseshell (*Nymphalis xanthomelas*) has returned here after a few decades of complete absence in Hungary. The Tohonya Valley near Jósvafő hosts the strongest population of Poplar Admiral (*Limenitis populi*) and Woodland Brown (*Lopinga achine*) in Hungary. Almost all Hungarian fritillaries, hairstreaks and coppers are present in the region, as is White Admiral (*Limenitis camilla*), Common Glider (*Neptis Sappho*) and Hungarian Glider (*Neptis rivularis*). One small population of Scotch Argus (*Erebia aethiops*) survives in the northern part of Zemplén. Lots of interesting moths are also recorded from the Northern Mountains. On the shrubby southern slopes, there are many sites for Orange Eggar (*Eriogaster catax*) and the sub-endemic *Dioszeghyana schmidtii*. This spring noctuid is close to the *Orthosia* species, and the only moth carrying names of two Hungarian lepidopterists: Antal Schmidt, former curator of the Lepidoptera collection of the Hungarian Natural History Museum, and Sámuel Diószeghy its discoverer (the genus was much later separated from Orthosia and was named after Diószeghy). Some high montane species also occur in the higher elevations of the Northern Mts, *Entephria cyanata* spp. *gerennae* is an endemic race of a sub-alpine species, restricted to a rocky bluff of the Bükk Pleateu, while the beautiful Giant Tiger Moth *Pericallia matronula* is very local in the higher parts of Zemplén.

The Great Plain

8. Sanddunes of Kiskunság and the Körös Valley. The Great Hungarian Plain has many excellent butterfly areas, although the area is huge and the habitats are strongly fragmented. Still, with time, lots of interesting sites can be discovered. The sand dunes near Kunpeszér, (also referred to as Peszér, Puszta-Peszér) were once excellent habitats. Many rarities were recorded from here including the endangered Danube Clouded Yellow (*Colias myrmidone*) and the long extinct Russian Marbled White (*Melanargia russiae*). Still, between the sand dunes, small bogs are present which host *Gentiana pneumonanthe*, the foodplant of Alcon Blue (*Maculinea alcon*). It occurs along with Scarce Large Blue (*Maculinea teleius*) and Large Copper (*Lycaena dispar*). Only a few kilometres away on the dunes, the fauna is completely different, Eastern Baton Blues (*Pseudophilotes schiffermuelleri*) fly with Lesser Fiery Coppers (*Lycaena thersamon*) and Zephyr Blue (*Plebeius sephyrus*) on the real dry habitats where its larval foodplant: *Astragalus excapus* is found. If we cross the river Tisza and go down to the south-eastern corner of Hungary, we find very nice riverine hardwood forests near the Körös rivers. Within the floodland area of the Fekete (Black) Körös, Fehér (White) Körös, and Sebes (Fast) Körös rivers, there are large old oak-ash-elm woodlands hosting the largest Central European metapopulation of Scarce Fritillaries (*Euphydryas maturna*) with millions of individuals, while a special lowland eco-type of Clouded Apollo (*Parnassius mnemosyne*) is also found here, although it is very local and restricted to the oldest forest stands. Southern Festoon (*Zerynthia polyxena*) is a typical species of the edges of these riverine gallery forests. Lesser Purple Emperors also live on the willows near the rivers, while Black-veined White (*Aporia crataegi*) is more associated with dryer grasslands in the area. There are large saline steppe meadows along the Körös rivers, that escaped cultivation because of their alkaline content. They have very few special butterfly species, although a number of moths are known associated with saline steppe habitats. Fisher's Estuarine Moth (*Gortyna borelii lunata*) is one of them which is local but not rare in the saline areas. *Saragossa porosa kenderesiensis*, *Hadula dianthi* and two small geometers *Narraga fasciolaria* and *Narraga tessularia* also inhabit saline habitats.