

# TO AGGTELEK, HUNGARY AND BACK (or a cryptozoologist looks at butterfly behaviour)

by Richard Muirhead

Between May 13<sup>th</sup> and May 28<sup>th</sup> 2009 I stayed at the Szálámándrá-haz Hostel in the Aggtelek National Park in northern Hungary, near Szögliget (see [www.anp.hu](http://www.anp.hu)), a few kilometres from the border with Slovakia. I was with a group of British people from various walks of life. The primary purpose of the expedition was to study the behaviour of the knapweed fritillary (*Melitaea phoebe*) and the Hungarian fritillary (*Melitaea telona*), which look very similar this was the work of one of the scientists, Janós Toth, Ph.D. However, to be honest, even by the end of the trip I could still hardly tell the two species apart.

We were particularly interested in their population structure and migratory behaviour between several sites on wooded slopes within a few kilometres in the National Park.

We were asking how the different species interact and move between sites, and which sites were permanently populated. When either of these species was caught, their sex was determined and a letter and number were marked on a wing, and then noted down. These letters and numbers corresponded to site location and numerical order of being caught.

On being marked, the butterflies were released and were sometimes caught later at a different location. Several small populations need to have an exchange of genetic material between sites. Sometimes the spotted fritillary (*Melitaea didyma*) was caught and a total of eleven other fritillary species was recorded by the end of the expedition (see the 'Butterfly Species' list at the end of this report). It is not the purpose of this report to go into further detail on the research and results of the fritillary investigations; I am hoping this will appear in the September 2009 issue of the *Butterfly Conservation Cheshire and Peak District Branch News*.

In addition to studying butterflies and moths (with the latter being caught in moth traps at locations in Kent, Germany and Hungary) we also studied a wide variety of other flora and fauna. The bats we noticed on May 19<sup>th</sup> had been caught in a net strung across a river near the hostel. There were at least two greater horseshoe bats (*Rhinolophus ferrumequinum*), one Daubenton's

bat (*Myotis daubentonii*) and one serotine bat (*Eptesicus serotinus*). Sandor (a team member) caught ten bats of five different species. The animals I remember most from this trip, though, were the storks. They had been electrocuting themselves, attempting to build their nests on electrical cables so on May 20<sup>th</sup>, a group of us constructed four nests for them out of sticks, wood and wire.

We also saw a number of reptiles; including slow worms (*Anguis fragilis*), an Aesculapian snake (*Elaphe longissima*), a fire salamander (*Salamandra salamandra*) which is incidentally the logo of the Aggtelek National Park, and a sand lizard (*Lacerta agilis*). Concerning the Aesculapian snake, 'There is a small colony within the Welsh Mountain Zoo and [they] are also found in nearby gardens.' (1)

Amongst the moths we saw was the large Emperor moth, (*Saturnia pavonia*, see photo). We also saw three tawny owls (*Strix aluco*) in a tree near a ruined abbey and a large Urals owl (*Strix uralensis*) in woods.



In woodland we saw a red Squirrel (*Sciurus vulgaris*) with a very dark brown/almost black coat, which reminded me of the black squirrels reported from Hertfordshire and Cambridgeshire. (2). Also memorable was seeing the larva of the purple Emperor butterfly (*Apatura iris*) being surrounded by numerous small beetles.



The photo of the jackalope was taken in a restaurant at Dreifelder Weiher in central Germany between Koln and Frankfurt on May 10th. The jackalope also called an antelabbit, aunt benny, Wyoming thistled hare or stagbunny is an imaginary animal of folklore and a supposed cross between a jackrabbit and an antelope, goat or deer. It is usually portrayed as a rabbit with antlers. It is possible that the tales of jackalopes were inspired by sightings of rabbits infected with the Shope papilloma virus, which is also known as *Epidermodysplasia verruciformis*, which causes the growth of horn- and antler-like tumours in various places on the rabbit's head and body. (3)

This is an example of cryptozoology, literally the study of "hidden animals." The jackalope would fall into the category of folklore/fable whilst at the other end there are "flesh and blood animals" such as the reed wolf or jackal (*Canis aureus*) which is now back in Hungary since the late 1990s after a gap of about 100 years.

For me, the highlight of the whole trip was observing the behaviour of the different species of butterfly; whether it was courting/mating behaviour or gatherings of large numbers of butterflies in one small area. On May 19<sup>th</sup>, as we were all passing through the village of Szin (pronounced 'Sin') in the mini-bus, on the way to fields above to record butterflies and plants with Roland, we spotted a sight probably not seen in the United Kingdom for many years: a swarm of about 1500 silver-studded

blue butterflies (*Plebejus argus*) on the north side of the road, feeding on minerals. The swarm was about 20 feet long by 3 feet wide and the butterflies were all male. There had been a brief but heavy shower of rain at 10.05am that morning. The swarm was seen at about 2.30pm and included one Adonis blue (*Lysandra bellargus*) and a woodland ringlet (*Erebia medusa*.) The accompanying photo shows the swarm. A few hours after this photo was taken we drove past the site and the horn was sounded but the butterflies did not stir, though there were fewer than before. At midnight on May 21st a small number of silver-studded blues were seen congregating upon some faeces in the National Park.

Mike Williams, of Butterfly Conservation, told me:

*"I have been to the Aggtelek National Park on several occasions both through West Midlands Butterfly Conservation and more recently through the European Interests Group (EIG) of Butterfly Conservation of which I am Vice-chair. I have witnessed something very similar to what you describe above the village of Josvafo where hundreds and hundreds of male silver-studded blues were gathered on the banks of a stream extending for several metres. 'Mud-puddling' amongst butterflies is relatively common throughout the world, especially in the tropics (where huge gatherings have been photographed) and as suggested, it is thought that in many cases the butterflies are extracting some mineral rather than simply moisture. It generally occurs when temperatures are high (I suspect the rain was coincidental apart from in the sense that it*



moistened the ground!) and certainly does occur in Britain on occasions but I have never personally witnessed this with silver-studded blues...The behaviour is much more common in warmer parts of Europe and I have seen gatherings of many differing species including wood whites, swallowtails, skippers and various other species of blue.” (4)

In the tropics it is common to see groups of butterflies gathered on damp ground that has become saturated with certain minerals. These aggregations consist exclusively of males who, by engaging in this 'puddling' activity, are thought to be replenishing vital sodium reserves lost to the female in the spermatophore during mating. (5)

A day later Mike Williams contacted me again and said:

*My understanding [of why the Szin silver-studded blue swarm was all male] from what I have read, is that the males require minerals, especially sodium, because they lose much of their sodium reserve during the process of mating and this needs to be replenished. Conversely, females don't need to indulge in this behaviour as their sodium reserves are boosted through copulation.* (6)

The comments in the square brackets above are my own.

According to C. I. Rutherford in his *Butterflies in Cheshire 1961-1982*:

*“Where it does occur, the Silver-Studded Blue can be extremely numerous. Populations containing tens of thousands of adults have been measured in Wales, Suffolk, and Devon, and it is clear that many in Dorset, Hampshire and Surrey are equally large.”* (7)

Another interesting aspect of butterfly behaviour is the mass migration of various species; with a special emphasis here on the painted lady (*Vanessa cardui*.) Records of migrating butterflies in Europe go back as far as the beginning of the 12th century. (8)

1101-Bavaria: Swarms of butterflies for three days—from Saxony

1147: England: Swarms of butterflies sprinkled with blood.

1869-1870 was a prodigious year for insect invasions of Britain, including butterflies.

According to Charles Fort, the chronicler of the anomalous:

*'Near Reading, “clouded yellow butterflies”, insects that had never before been recorded in Berkshire, appeared (Science Gossip., 1869-210). At Hardwicke, many bees of a species that was unknown to the observer, were seen (Nature, 2-98). Field, August 21 and November 20 swarms of hummingbird hawk moths. As described in Science Gossip, 1869-273, there was, at Conway, “a wonderful sight” flock of hummingbird hawk moths and several species of butterflies. Clouds of insects appeared in Battersea Park, London, hovering over trees in volumes so thick that people thought the trees had been set afire (Field, June 4th, 1870)...Thrips suddenly appeared at Scarborough, August 25th [1870?] (Sci. Op., 2-292). At Long Benton, clouds of Thrips descended upon the town, wafting into houses, where they were dusted from walls, and swept from floors (Ent.Mo.Mag., 1869-171). Also, at Long Benton appeared an immense flight of the white butterflies that were so scarce everywhere else, gardeners killing thousands of them (Ent. Mo. Mag., December, 1869).'*' (9)

The illustration below shows a huge cloud of large cabbage white (*Pieris brassicae*) as identified by the correspondent to *La Nature* July 4th 1904. *'The captain of the French vessel, plying between Chausey and Grandville, said that the swarm was as thick as a snowstorm and took most of two days to pass (i.e. 10th-11th June). The sea was “almost entirely” carpeted with fallen butterflies and they covered the boat, blown by an easterly wind.'* (10) Thanks to Bob Rickard of *Fortean Times* for providing this image which was supplied by Signs-and-Wonders.com



Jumping forward to the late 20th Century; an interesting observation was made: butterfly migrations are not always one-way from the continent to Britain. Letters in the *Daily Telegraph* on July 29th and 31st

1992 from A. W. Kimberley of Colchester commented:

*“On July 16<sup>th</sup>, during a three-hour passage in a yacht between Dungeness and Dover, some three to five miles off-shore, I observed a continuous flow of Cabbage Whites moving out to sea towards France. They were flying 6-10 feet above the waves in good weather conditions with a light cross wind from the SW, so their movement towards France was a deliberate one. They were not blown across.”*(11)

Whilst driving through Germany on the way to Hungary on May 11th 2009 we saw a mass of painted ladies flying northwards on the autobahn between Frankfurt and Passau. Later, on May 26th, towards the end of our trip; we saw a few ragged individuals flying near tree-top height from north to south uphill in woodland near Jósvafo in the Aggtelek National Park. A British newspaper reported on May 27th:

*‘In what could be the biggest influx of butterflies into this country in decades, millions have flown into Britain from the deserts of north Africa. Up to 18,000 were spotted sailing on the breeze across Scott Head Island on the north Norfolk coast: 50 arriving every minute according to Natural England nature reserve staff.’* (12)



Three days previously (May 24th) the influx had reached Melton Mowbray, Leicestershire (13). Other reports on May 30th included:

*·Tim Jenkins... “Re Painted Ladies; I have seen a dozen plus in Coventry, all belting north without stopping.”*

*Phil Lewis writes... “Have seen at least 3 today in Abingdon and Oxford - good news!!!”*

*Malcolm Beeton tells us there were “Six painted ladies yesterday morning Sunday 24th May! On a lavender bush in Bushey Hertfordshire at 09.30am....”* (14)

Finally, no investigation of butterfly mysteries would be complete without looking at Albin's Hampstead Eye:

*‘At the beginning of the eighteenth century, Hampstead Heath, despite being the haunt of footpads and highwaymen, was a popular hunting ground for naturalists. James Petiver, the apothecary, herbalized there with fellow botanists as well as looking for insects; and Albin collected spiders, butterflies and moths which he then illustrated in his books... The Heath was the place where... Albin was said to have caught the famous and, at that time, unique butterfly... ‘Albin’s Hampstead Eye’ and added that it was the “the only one I have yet seen.” That he did not see another is hardly surprising since this butterfly, which is still preserved among the remains of Petiver’s collection in the Natural History Museum in London is Junonia villida, a native of Australia Tasmania, New Guinea and a few other islands in the Pacific and adjacent Indian Oceans!’* (15)

It is now thought that the butterfly arrived in Britain by way of a Dutch entomologist trading with a Dutch East India Company vessel collecting specimens from their colonies and that Albin got it mixed up with another butterfly taken at Hampstead.

The Appendix below shows all the species of butterfly seen during our stay in Hungary.

## European Conservation Action Network

### Visit to Hungary May 9<sup>th</sup> 29<sup>th</sup> 2009

#### Butterfly species recorded

##### **Skippers - Hesperidae**

grizzled skipper	<i>Pyrgus</i>
<i>malvae</i>	
dingy skipper	<i>Erynnis</i>
<i>tages</i>	
small skipper	
<i>Thymelicus sylvestris</i>	
large skipper	
<i>Ochlodes sylvanus</i>	
chequered skipper	
<i>Carterocephalus palaemon</i>	
safflower skipper	<i>Pyrgus</i>
<i>carthami</i>	
red-underside skipper	<i>Spialia</i>

*sertorius*

### Whites - Pieridae

wood white

*Leptidea sinapis*

green-veined white

*Artogeia napi*

pale clouded yellow

*Colias hyale*

Berger's clouded yellow

*Colias alfacariensis*

brimstone

*Gonepteryx rhamni*

large white

*Pieris brassicae*

orange-tip

*Anthocharis cardamines*

black-veined white

*Aporia crataegi*

### Metalmarks - Rhodinidae

Duke of Burgundy

*Hamearis lucina*

### Blues, Coppers and Hairstreaks - Lycaenidae

sloe hairstreak

*Satyrrium acaciae*

black hairstreak

green hairstreak

silver-studded blue

Reverdin's blue

*Plebejus argyrognomon*

common blue

Chapman's blue

*Polyommatus thersites*

turquoise blue

*Polyommatus dorylas*

Provençal short-tailed blue

*Everes alcetas*

Adonis blue

*Lysandra bellargus*

small blue

*Cupido minimus*

osiris blue

*Cupido osiris*

chequered blue

*Scolitanides orion*

holly blue

*Celastrina argiolus*

green-underside blue

*Glaucopsyche alexis*

large blue

*Maculinea arion*

mazarine blue

*Cyaniris semiargus*

large copper

*Lycaena dispar*

sooty copper

*Lycaena tityrus*

purple-shot copper

*Lycaena alciphron*

### Admirals, Emperors, Fritillaries and Browns - Nymphalidae

common glider

*Neptis sappho*

Hungarian glider

*Neptis rivularis*

poplar admiral

*Limenitis populi*

painted lady

*Vanessa cardui*

a major northward migration

red admiral

*Vanessa atalanta*

Peacock

*nachis io* larvae

small tortoiseshell

*Aglais urticae*

comma

*Polygonia c-album*

map

*Araschnia levana*

purple Emperor

*Apatura iris* larva

Camberwell beauty

*Vanessa antiopa*

weaver's (violet) fritillary

*Boloria dia*

small pearl-bordered fritillary

*Boloria selene*

knapweed fritillary

*Melitaea phoebe*

'Hungarian' fritillary

*Melitaea telona*

spotted fritillary

*Melitaea didyma*

lesser spotted fritillary

*Melitaea trivia*

Glanville fritillary

*Melitaea cinxia*

heath fritillary

*Mellitaea athalia*

Nickerl's fritillary

*M. aurelia*

false heath fritillary

*M. diamina*

lesser marbled fritillary

*Brenthis ino*

twin-spot fritillary

*Brenthis hecate*

high-brown fritillary

*Argynnis adippe* (var. *cleodoxa*)  
 Queen of Spain fritillary  
*Issoria lathonia*  
 Speckled wood  
*Pararge aegeria*  
 small heath  
*Coenonympha pamphilus*  
 chestnut heath  
*Coenonympha glycerion*  
 pearly heath  
*Coenonympha arcania*  
 wall brown  
*Lasiommata megera*  
 large wall brown  
*Lasiommata maera*  
 meadow brown  
*Maniola jurtina*  
 woodland ringlet  
*Erebia medusa*

### Swallowtails etc Papilionidae

Swallowtail  
*Papilio machaon*  
 scarce swallowtail  
*Iphiclides podalirius*  
 southern festoon  
*Zerynthia polyxena*

“Visit the author’s Flickr site to view the entire Hungary photo collection:

<http://www.flickr.com/photos/39076926sets/7215761919435282>

Extracts from my video will appear on the Centre for Fortean Zoology CFZtv website.

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Further information can be obtained from [www.kincombecentre.org.uk](http://www.kincombecentre.org.uk) or from Nigel Spring (Tel 0044.1963.233559; email:nigelspring@yahoo.co.uk).

## ACKNOWLEDGEMENTS

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