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European Conservation Action Network
Conservation Visit To Zdanice, Czech Republic
August 6th – 23rd 2008

The Butterflies of Zdanice, Czech Republic

In 2007 The Kingcombe Trust, which is based in Dorset at The Kingcombe Centre, established The European Conservation Action Network (EuCAN).

The Kingcombe Centre (Reg. Charity no. 1054758) is dedicated to conservation and environmental education in association with the Dorset Branch of Butterfly Conservation. The EuCAN project is funded through the Leonardo da Vinci section of the European Union Lifelong Learning Programme. It has partners in France, Hungary, the Czech Republic and Poland. For further information on the project see www.kingcombecentre.org.uk or contact Nigel Spring (tel: 0044.1963.23559; email: nigelspring@yahoo.co.uk).

The European Conservation Action Network (EuCAN) project to Zdanice, Czech Republic commenced on Wednesday 6th August 2008. Thirteen volunteers from various walks of life joined together to participate. The purpose behind the project was to improve grassland areas in Zdanice, Czech Republic for the benefit of butterflies. We used an assortment of tools which included chainsaws, brush-cutters, loppers and saws to cut down scrub and rank vegetation



The group pictured with the Mayor of Zdanice:
Mr Miroslav Prochazka

to allow desirable herbs and grasses to grow. By working together with specialists in this area of entomology we were able to educate local people on the importance of preserving grassland habitats. During our time in Czech Republic forty-three species of butterfly were identified, and we hope our efforts to create a varied and excellent habitat mosaic will play a vital part in their future survival.

Zdanice was once agricultural land made up of grazing meadows and crop fields. This led to the loss of vital butterfly habitats including woodland glades and species-rich grasslands. Since then, with the sequential change in vegetation known as succession, the area became Xerothermic grassland, resulting in too much scrub. Grassland is very important in this area because there are many endangered species of butterflies that depend upon the habitat. A particular casualty of this is the High Brown Fritillary (*Argynnis adippe*) which is believed to have declined by 94%. Larvae of the High Brown Fritillary pupate on the ground amongst leaf litter and feed mainly on violet leaves. The leaves of the violet must be exposed to the sun, which highlights the importance of short grassland areas and open forests to prevent the leaves becoming over-shadowed.

The Dryad butterfly is quite an endangered species in Czech Republic and requires succession grassland for its habitat. Other rare species include the Great Banded

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Grayling (*Brinthesia circe*). This species lives in grassy places and is relatively rare in Europe, living mainly in northern Spain, Switzerland and Austria.

Some butterflies have special adaptations in order to provide their young with the best chance of survival, such as the Alcon Blue (*Maculinea alcon rebeli*). The female of this species lays her eggs on flower buds of Cross Gentian (*Gentiana cruciata*). Once



Swallowtail (*Papilio machaon*)

the eggs hatch the caterpillar becomes cannibalistic and eats its siblings, then feeds on the seeds of Gentian. Only one caterpillar can survive in each stamen of the flower, and it produces the same chemical pheromones which ants produce. This makes the adult ants believe the caterpillar to be ant larvae, so they carry it to their anthill and feed it as though it is one of their young. Sometimes the caterpillar is parasitic so it kills any ant larvae present in the anthill. The caterpillar then survives here for up to two years until it eventually develops into a butterfly.

Areas of bare soil must also be provided, particularly for the Red-underwing Skipper (*Spialia sertorius*) which makes the soil its life territory for the purpose of mating. Lots of nectar-producing flowers are essential for the production of eggs.

There are of course certain species that require scrub, such as the Scarce Swallowtail (*Iphiclides podalirius*) which lives mainly on tops of hills. This behaviour is known as High-topping.

Solitary scrub is also important for Hairstreak butterflies (*Lycaenidae*). In order to achieve this balance it is crucial that the succession is stopped and solitary scrub left to grow. Trees are important for butterflies such as the Emperor (*Apaturas*) species and both the Purple (*Quercusia quercus*) and Brown (*Thecla betuli*) Hairstreaks which live in tree canopies.

In Zdanice there are lots of nettles present which although not aesthetically pleasing are an additional and essential part of the habitat mosaic for species such as Peacock (*Inachis io*), Small Tortoiseshell (*Aglais urticae*), Red Admiral (*Vanessa atalanta*) and Map (*Araschnia levana*).

The abundance of different butterflies to be seen in the area around Zdanice is due mainly to the prolific, nectar-rich herbs and the availability of the food plants of the particular species.

Not all species of butterfly are mobile and many live in sedentary colonies. Sedentary species include Adonis Blue (*Polyommatus bellargus*), Little Blue (*Cupido minimus*) and Eastern Short-tailed Blue (*Cupido decoloratus*). Some species require very

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exacting conditions. If these conditions are lost because of scrub encroachment wiping out their specific food plant it is likely that localised extinction will occur.

Other threats to butterflies come from predators which feed on eggs, caterpillars, pupae and adults. Predators that prey upon them include other insects, for example Preying Mantis (*Mantis religiosa*), small mammals and birds. The Preying Mantis has a very clever technique for catching unsuspecting butterflies. It camouflages well in grassland and has a highly mobile head which turns to face movement. When its prey comes within easy reach, its two front legs shoot forwards and grasp the prey which is then devoured.

To avoid being eaten some caterpillars and butterflies have warning colours to defend themselves against predators. For example, larvae of the Large White (*Pieris brassicae*) are black and yellow which conveys the message in nature that they are distasteful to eat.

The species of Lepidoptera recorded by the group in Zdanice came from the following families: Skippers (*Hesperiidae*), Whites and Yellows (*Pieridae*), Hairstreaks, Coppers and Blues (*Lycaenidae*), Tortoiseshells, Fritillaries and Browns (*Nymphalidae*) and Swallowtails (*Papilionidae*).



Hungarian Entomologist Janos Toth, cutting down False Acacia (*Robinia pseudoacacia*) using hand loppers

English name	Scientific name
<i>Lepidoptera</i>	
<i>Hesperiidae</i>	
Dingy Skipper	<i>Erynnis tages</i>
Small Skipper	<i>Thymelicus sylvestris</i>
Large Chequered Skipper	<i>Heteropterus morpheus</i>
<i>Pieridae</i>	
Wood White	<i>Leptidea sinapis</i>
Large White	<i>Pieris brassicae</i>
Small White	<i>Pieris rapae</i>
Green-veined White	<i>Artogeia napi</i>
Pale Clouded Yellow	<i>Colias hyale</i>
Clouded Yellow	<i>Colias crocea</i>
Brimstone	<i>Gonepteryx rhamni</i>
<i>Lycaenidae</i>	
Brown Hairstreak	<i>Thecla betuli</i>
Purple Hairstreak	<i>Quercusia quercus</i>
Silver-studded Blue	<i>Plebejus argus</i>
Reverdin's Blue	<i>Plebejus argyrognomon</i>
Common Blue	<i>Polyommatus icarus</i>
Short-tailed Blue	<i>Cupido argiades</i>
Eastern Short-tailed Blue	<i>Cupido decoloratus</i>
Adonis Blue	<i>Polyommatus bellargus</i>
Chalkhill Blue	<i>Polyommatus coridon</i>
Small Blue	<i>Cupido minimus</i>
Meleager's Blue	<i>Polyommatus daphnis</i>
Chapman's Blue	<i>Polyommatus thersites</i>
Mountain Alcon Blue (eggs)	<i>Maculinea alcon rebeli</i>
Scarce Copper	<i>Lycaena virgaureae</i>
Small Copper	<i>Lycaena phlaeas</i>
Brown Argus	<i>Aricia agestis</i>
<i>Nymphalidae</i>	
Red Admiral	<i>Vanessa atalanta</i>
Map	<i>Araschnia levana</i>
Weaver's (Violet) Fritillary	<i>Boloria dia</i>
Silver-washed Fritillary	<i>Argynnis paphia</i>
High-brown Fritillary	<i>Argynnis adippe</i>
Queen of Spain Fritillary	<i>Issoria lathonia</i>
Speckled Wood	<i>Pararge aegeria</i>
Great Banded Grayling	<i>Brintesia circe</i>
Small Heath	<i>Coenonympha pamphilus</i>
Chestnut Heath	<i>Coenonympha glycerion</i>
Large Wall Brown	<i>Lasiommata maera</i>

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Meadow Brown	<i>Maniola jurtina</i>
Ringlet	<i>Aphantopus hyperantus</i>
Dryad	<i>Minois dryas</i>
<i>Papilionidae</i>	
Swallowtail	<i>Papilio machaon</i>
Scarce Swallowtail	<i>Iphiclides podalirius</i>

In conclusion, so far the project has been successful. Czech entomologist David Novotny quotes: “The clearance work achieved by the group this summer was of a very high standard. The various habitats that have been created will be excellent for the future of the butterflies of Zdanice”.



A view of the grassland in Zdanice after clearing. Cut vegetation can be seen stacked up in lines ready to go through the chipper machine.

References

Chinery, M. (1991) Collins Guide To The Insects Of Britain and Western Europe. 2nd ed. Glasgow: William Collins Sons & Co. Ltd.

Chinery, M. (1989) Collins New Generation Guide To The Butterflies and Day-flying Moths Of Britain and Europe. Glasgow: William Collins Sons & Co. Ltd.

Aids to Identification In Difficult Groups of Animals and Plants. (2005) *Guide to the Butterflies of Britain*. Shropshire: Field Studies Council.