

Climate change makes butterflies more frequent flyers

February 8 2011, By Roelof Kleis

Thanks to climate change, butterflies are flying more frequently, further and longer. This makes it easier for them to cope with a fragmented landscape, says Wageningen University doctoral researcher Anouk Cormont in an article in *Biodiversity and Conservation*.

Over the course of a couple of summers, Cormont tracked [butterflies](#) in De Hoge Veluwe national park near Deelen airfield. She studied the small heath butterfly, the meadow brown, the heath fritillary and the silver-studded blue. She followed several hundred butterflies for half an hour each, recording their flight paths with a GPS. Correlating these data with [weather conditions](#) produced interesting insights into the possible effects of climate change.

Fragmentation

And this is Cormont's theme: the effects of the changing climate on the distribution of butterfly species in the Netherlands. The fragmentation of the Dutch landscape poses a threat to biodiversity. Habitats are becoming too small or are disappearing altogether. One attempt to stem this fragmentation is the establishment of the Ecological Main Structure. And it turns out that climate change is lending a helping hand, Cormont's research has suggested.

Fair-weather flyers

Butterflies are fair-weather flyers. And climate change will lead to more dry and sunny periods: perfect butterfly weather, in other words. Cormont shows that butterflies do indeed fly more often and for longer periods, covering greater distances, in this kind of weather. This increases their chances of being able to jump from one area to another, and thus their capacity to colonize new habitats. Cormont also examined the butterflies' flight behavior outside their own habitats. "Butterflies then flit around less and fly a straighter course. Because they are in search of a suitable habitat."

The right direction

The last thing this means, according to Cormont, is that the Ecological Main Structure is superfluous. "That would be the wrong conclusion to draw. The potential distribution of butterflies is enlarged by [climate change](#) and that is important in highly fragmented areas. But butterflies often have no idea where the suitable habitats are. So you have to steer them in the right direction: by creating linked lines of foliage such as flowery field edges and road verges, for example."

Provided by Wageningen University

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