

The monitoring of butterflies which fly by day *Butterfly Monitoring Scheme (BMS)*

The programme for monitoring rhopalocerae or butterflies which fly by day(BMS) consists of a network of places where data regarding the abundance of butterflies is collected.

Aims:

To know precisely the changes in the numbers of butterflies by repeating a weekly visual census along fixed transects to relate them subsequently to the different environmental factors

Why are the butterflies tracked?

- Butterflies show great sensitivity with regard to the composition and structure of vegetation, and therefore their populations respond quickly to changes in the ecosystems.
- An important part of the species is sedentary and is greatly affected by the phenomenon of their habitats fragmentation.
- They are extraordinarily sensitive to the weather and respond noticeably to phenomena such as global warming and the changes in thermal and pluviometric systems.
- They play a fundamental part in the ecosystem both for primary consumers (herbivores) as well as being a source of eating for many secondary consumers (predators and parasitoids). Therefore, everything which affects them also affects many other organisms.

BMS Methodology

The BMS technique starts with visual recounts of the adult rhopalocerae along a specific route. The transect is covered once a week, at a constant speed, and only butterflies which are at a distance of 5 m. in front and to the sides of the observers are counted. The route is divided into different sections, each one corresponding to a particular habitat. The procedure is repeated once a week between March and September, making a total of 30 counts, so as to be able to work out the seasonal evolution.

The BMS in Menorca

In 2001 Menorca joined the network of the Catalan BMS with its two research stations and in 2005 another station was added. One of the stations is found in S'Albufera des Grau, and has a route of 1.846 m which crosses over plant communities of dunes to saline thickets, passing through scrubland of heather and rockrose. The second station is situated in the area of "Es Canaló" in the valley of Algendar. With a route of 1.975 m. it crosses allotments of fruit trees, holm oak groves, wild olives and neglected fields until it reaches the top of the valley. The final station is that of Sta. Catalina which is 1.914 m de long and crosses mainly wooded areas, although it also goes through low woodland and neglected fields. The graphs of the flight paths and habitats of each species which is shown on each file of the different butterflies in Menorca are the result of applying the BMS methods in Menorca since 2001.

