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**Global Change in Alpine Ecosystems project, Pyrenees France**

During the last three years, the Centre for Ecological Research and Forestry Applications (CREAF) at the Autonomous University of Barcelona (Spain), in collaboration with the Earthwatch Institute, has been carrying out a long term research project in the Pyrenees. The main objective of this project is to detect and to analyse changes in the distribution and phenology of different key alpine organisms in response to both direct human pressure and global changes, particularly climate change. To this aim, a wide range of survey and monitoring methods are carried out every year to assess the most representative habitats and species of the Pyrenees along its altitudinal gradient.

As a recent graduate in zoology, with a strong interest in the ecology and biology of alpine communities, I wanted to gain first-hand experience of planning and designing long term projects in alpine environments. Fortunately, in June 2015, and thanks to the support of Dr Bernat Claramunt López (the project's principal investigator) and the Travel Grant awarded by the Royal Society of Biology, I had the unique opportunity to take part in this exciting research project.



This year the research team was based in the beautiful Valley of Arbas, in the French Pyrenees, where we spent a week doing intense field work, which was also complemented by a number of talks and presentations. I had the opportunity to learn about different mammal trapping techniques and, very importantly, how to collect and analyse data for capture-mark-recapture studies of closed populations of small mammals, to estimate species home range, movement, distribution and population density indices.

*Sergio (left) uses a GPS device to record the position of a sign of Pine Marten (*Martes martes*). Photo by Elena Julià.*

We also conducted biodiversity transects covering long itineraries along different altitudinal gradients. A network of trail cameras was located along these routes in order to detect the presence of several species of mammals and birds. I was particularly interested to learn how the data collected from these trail cameras is analysed to study the effect of human activity on the behaviour of mammals, such as Brown Bear (*Ursus arctos*), Wildcat (*Felis silvestris*), Wild Boar (*Sus scrofa*) and Alpine Chamois (*Rupicapra pyrenaica*).

Other survey methods employed during the biodiversity transects included using point counts to detect the presence of bird species and recording breeding activity of passerines and Boreal Owls (*Aegolius funereus*) by checking a large network of nest boxes previously placed by the research team.

This expedition was also a fantastic opportunity not only to improve my understanding of the impact that climate change and anthropogenic actions are having on alpine ecosystems, but also to network and create professional links with other graduates and experienced researchers who specialise in alpine research projects.

I had the chance to experience the valuable collaboration between the research team and local organisations such as the Pays de l'Ours - ADET, which contributes to the project by raising awareness of the environmental, economic and social implications of ecological changes in mountain areas.

Finally, I would like to thank to the Royal Society of Biology for helping me to make this experience possible and I strongly encourage other members to apply for a travel grant, which the society offers every year.



*Field work team in the Valley of Arbas, France, including Sergio (second from the bottom left) and the project's principal investigator Dr Bernat Claramunt (first from the bottom right). Photo by Sergio Tomey*