

**Alex Nicol-Harper (Natural Sciences) – La Quinta de Sao Pedro Field Centre in Portugal,
March 2014**

In March 2014 I attended a Plant Sciences field course based at La Quinta de Sao Pedro Field Centre near Lisbon, Portugal. The aims of the trip were to consolidate lecture material, learn to identify plant families and complete an experimental project. These could be achieved better in the Mediterranean than the UK due to the greater number of plant species in flower there at that time of year.

On the day we arrived we were introduced to important families such as Brassicaceae, Leguminosae and Asteraceae, and taught their identifying features to allow us to recognise different species in the UK and elsewhere. In groups we explored La Quinta and searched for as many examples of these as we could find. We also saw sclerophylls, which we had investigated in depth in Michaelmas lectures, in their natural habitat.

The next day we visited a cork oak (*Quercus suber*) estate, where the owner explained how cork is harvested and also showed us how pine nuts are extracted from cones of the stone pine (*Pinus pinea*). We then drove to the Troia peninsula to explore the sand dunes and saltmarshes; it was really useful to be able to follow the progression of succession from the foreshore to Macchia (Mediterranean shrubland). We hiked through true Macchia on the Serra Arrabida the next day, noting the impact of fire on the community. Woodland and rocky shore habitats contain different species compositions, so it was interesting to compare these afterwards.

For the rest of the course we worked on our projects. While other groups used equipment brought over from Cambridge to carry out ecophysiological and pathology studies, my group focussed on ecology. Under the guidance of a postdoc from the department, we decided to assess species richness to create species-area curves to inform management of the field centre. This involved using nested quadrats to count the number of species within progressively larger areas in different habitats – meaning we learnt a great deal about plant identification! We then created and analysed the curves on R software on the computer. Further aspects of the project were GPS mapping of the grounds and using pH meters to determine whether soil differed between the sites. On the last day we presented the project to our peers, and learnt about theirs in turn.

Throughout the week, we were also treated to presentations from the postdoc and PhD student demonstrators about their own research. These ranged from pathogen defence through cell biology and photosynthesis to forest mapping. It was very interesting to both expand our botanical knowledge and learn about what it is like to conduct further research.

The trip was a great experience as it not only helped me academically but also brought all the IB Plant Scientists together to socialise and support each other's learning, which is a really important part of a Cambridge education! I would definitely recommend the trip to any budding Plant Scientists as it is a great chance to revise ahead of exam term whilst also gaining skills such as botanical taxonomy and experimental techniques which are difficult to get to grips with in lectures and the lab. Many thanks to college for supporting me with a generous travel grant enabling me to attend the course.