

Jacob Ashton – Field Trip to Portugal, Easter 2016

For the first week of the Easter Vacation 2016, I and around 40 other Plant Science students spent a week in Portugal to examine the unique vegetation found there.

We stayed at the Quinta de Sao Pedro, a plot of land just outside Lisbon containing the accommodation, a research laboratory and library, a small farmstead and a variety of microenvironments within which a large variety of plants could be found. We spent the afternoon that we arrived exploring the Quinta and finding plants from a variety of different families, examining their morphological features in order to be able to classify them. Due to Portugal's Mediterranean climate, the plants there are often subject to periods of high temperature and drought, and as a result of this fires are fairly common. Much of the vegetation is fire-resistant, being able to regrow after fire either from underground tubers (sclerophylls) or from seeds (malacophylls).

The second day entailed a trip to the Troia Peninsula, a spit of land that involved a ferry ride to reach in the morning. There we examined the plants to be found on the salt marshes and sand dunes, and their specialised adaptations to conditions of high salinity, high wind and little soil cohesion. We finished the excursion with a rest on a gorgeous deserted sandy beach – beautiful weather, although the Atlantic was not at its warmest.

The following day we set out for the Sierra de Arrabida, a high plateau shrouded in mist, where many low-lying moisture-loving plants could be found. We then spent the afternoon at Cabo St Michel, a windswept plain abundant with gorses and grasses. We finished with a journey to discover some dinosaur footprints preserved in the rock on a cliffside.

The next three days involved splitting into groups to perform our own projects on the flora to be found on the Quinta. Our group was examining physiological differences in plants from different microenvironments, such as gas exchange and water content. These parameters were measured using sophisticated machines such as the LiCOR infra-red gas analyser. Despite several setbacks, we found that although water relationships were not different between environments, there were differences between different functional groups of plants, indicating different tolerances of water scarcity.

After presenting our projects, the final full day was spent in Lisbon. We first visited an opulent monastery on the riverside, before heading into the centre and trekking to the castle on the hill, containing an assortment of ruins spanning hundreds of years. We even spotted some sclerophylls whilst we were there. The day finished with eating on at a street restaurant, rounded off with authentic Portuguese custard tarts.

The Portugal field trip was not only extremely informative and interesting, but also an intensely enjoyable experience with a fantastic group of people, both students and staff alike. It was a great opportunity, being able to scientifically appreciate the flora of a novel environment but also in learning about upcoming areas of research and discovery.