

## Lucy Tweed (Earth Sciences)–Iceland, Summer 2013

For my Masters project I am studying olivines from Icelandic basalts in order to constrain the composition of the mantle beneath Iceland. Luckily for me this involved taking a trip to Iceland to carry out fieldwork and collect samples.

Flying out from Heathrow in mid-July in the midst of a month-long heat wave, I waved goodbye to any notion of summer. Coming into land in Keflavík airport my first impression of Iceland was not particularly promising: a cold desolate landscape whose harsh flat plains of dark basalt were under constant torment from a driving rain.

After one night in a hostel in Iceland's capital Reykjavík, I flew across Iceland to a place boasting the obtusely unpronounceable name (one of Iceland's specialities) of Egilsstaðir. Once setting eyes on the soaring buttresses of the East Fjords I immediately recognised what wonders Iceland's landscape had to offer. Here, along with a few other people from Cambridge, I spent two weeks assisting a researcher from Copenhagen in a palaeomagnetic survey. After this time I had a free week, and being desperate to see as much of Iceland as possible, I hopped on a bus heading south along the ring road. I travelled along the winding road between the fjords to the small fishing village of Höfn (pronounced Hup... obviously). After a one-night stop-over I was westward bound; stopping at the breath-taking Jökulsárlón where ghostly blue Icebergs calve off the vast Vatnajökull glacier and are carried out to sea.

The aptly named Landmannalaugar (“land where farmers bath”). From here I started out on the famous Laugavegur hike, deemed the right-of-passage for any hiking enthusiast in Iceland. I was naturally completely unprepared for 4 days of solid trekking with a 20kg-too-heavy pack and 2-days-too-little food. Thankfully the scenery was truly breathtaking and excused any amount of physical discomfort. On arriving in Þórsmörk, I continued trekking over the Fimmvörðuháls pass. This 24km hike takes you up through Godaland (literally “land of the Gods”), which I must say lives up to its self-proclaiming ecclesiastical title, over the newly christened mountains of Magni and Móði, formed during the infamous ashy mess of the 2010 Eyjafjallajökull eruption, and sandwiched between the glaciers of Eyjafjallajökull and Mýrdalsjökull and finally gently descends through the lowlands towards Skógar.

After my hedonistic week of wonders, geology called and I made my way back to Reykjavík to meet with the Cambridge crew. For this part of the trip, we spent two weeks collecting samples from various lava flows from the Northern Volcanic Zone. This part of the trip was a real eye-opener for me in terms of Icelandic geology. On top of the geological lessons I also learnt two things very quickly. Firstly that the near-constant sunshine I had experienced so far was not to be depended on, and secondly the 30° C heat that I had left was not the best condition to pack for a lengthy camping trip in a place comfortably nestled against the Arctic circle. Put short, I was cold and wet most of the time. When the weather did not improve, the planned trip into the interior to look at flows around Kistufell and Askja became unfeasible. Instead we decided to use the time to do some earnest geo-tourism. We completed the clockwise loop of the ring-road, stopping at many geological wonders on the way, and finishing on the Reykjanes peninsula.

After this I spent several days in Reykjavík reintegrating myself back into the world of non-geologists and enjoying the sights and sounds of this vibrant Scandinavian city. My stay in Reykjavik coincided with the Icelandic Gay Pride celebrations which was really fun.

I spent a few days carrying out fieldwork with the Icelandic MET office's volcano monitoring program in the southwest. The initial plan was to carry out gas sampling on top of the Hekla volcano, but wet conditions made this unfeasible. Instead we spent the time servicing seismometers and water sampling stations. We spent quite a large proportion of our time drinking coffee and eating home-baked goods with the farmers on whose land we were working (one of the important lessons I learnt was to *never* refuse an Icelandic farmer's offer of coffee).

Again with a free week, I grabbed the opportunity to do more sightseeing. I hitchhiked around the beautiful Westfjords. The dark towering peaks and shimmering fjords, are really spectacular although from experience are not best enjoyed whilst stood on a wet roadside watching cars pass you at a depressing rate of two cars an hour.

For the last two weeks I worked with two Cambridge post-docs collecting basalt samples from eruptions on the Reykjanes peninsula, around Eyjafjallajökull and in Iceland's moon-like interior. This was another eye-opener in terms of the styles of active volcanism on Iceland.

After eight weeks living out doors in pretty abominable conditions I was certainly ready to return home if only for the luxuries of warm water and a dry bed. However I returned home with many amazing memories and a strong desire to return to this lonely Scandinavian island. I would like to thank Pembroke College for making the trip possible.