Orkney

The main purpose of this excursion was to act as a research assistant and provide support to John, a fellow QMUL student, who was collecting data for his independent project. His research involved characterising the salinity gradient, between Loch of Harray (marine lake) and Loch of Stenness (Brackish lake), based on the tidal cycle. We did this by measuring salinity using an EC probe; the pH at each sample point was also recorded. During our time in Orkney, we also assisted Professor Dave Horne in collecting Ostracods for an elemental analysis using ICP-OES.

The first day of fieldwork involved travelling around and gathering data from lakes and coasts off the mainland. We did this so we can understand the average pH and EC in both freshwater and marine before heading to the Loch of Harray and Stenness. We were lucky enough to arrive in Orkney while The Ness of Brodgar dig was taking place. The Ness of Brodgar is thin strip of land, in the West Mainland, that separates the Harray and Stenness lochs. In 2002, geophysical survey revealed a large Neolithic complex under the landscape and since then, the excavations have been uncovering a rich history. The archaeological dig revealed a community gathering place for the Neolithic people- we were given tours about the research surrounding these building (Figure 1). However, it wasn’t until the last day of our trip that we learnt that they had uncovered a human female bone which begs the question: what was the main purpose of these buildings?

Figure 1: The Ness of Brodgar dig: gathered volunteers and researchers from across Scotland and USA.
On the second day, we arrived back to the main fieldwork site (Ness of Brodgar), where John gathered more data for his PES and Professor Horne collected ostracods for ICP-OES analysis. After the fieldwork, we went back to the accommodation and analysed the ostracods under the light microscope and sorted them from the various rubble and sediment that were present during the sample collection.

The third day of the fieldwork was much more extensive as it involved a lot more wading across the Loch of Harray and Steness. We collected data from various sampling points to understand the spatial extent of the salinity contamination of the brackish loch. Interesting results were obtained, they gave a really good understanding of the density difference between fresh and saltwater. After the fieldwork, we visited Skara Brae which is a beautifully preserved Neolithic settlement located on the west coast of the mainland. The settlement consisted of 8 dwelling that were linked together by a series of covered passages. The content of the building was very well-preserved (Figure 2). The original stone slabs and its fitting gave a glimpse into life 12,000 years ago, and also showed how versatile one room can be for a Neolithian.

After 3 days of fieldwork, we spent the last day exploring Orkney. We visited the stunning Yesnaby cliffs located in the west coast of Orkney mainland. The cliffs are famous its rich geology, sea stacks and birds, and was a perfect ending to the trip. This expedition would not have been possible without the fund and Professor Horne, whom I’m extremely thankful to. Learning about extensive Neolithic history of the Orkney islands and gaining relevant fieldwork experience was absolute dream, and only furthered my passion for wanting to pursue a career in conservation and nature.

Figure 2: preserved Neolithic building at Skara Brae