PIP at The EcoHealth Alliance, New York - Greg Albery

For my Professional Internship Placement (PIP), I undertook a three-month research placement in at the EcoHealth Alliance in New York. The EcoHealth Alliance is a Non-Governmental Organisation which specialises in the intersection of ecological health, conservation, and public health. The research wing of the organisation studies the ways that human activities and interests impact ecosystems, and possible implications for public health and conservation interests. They also bridge the gap between researchers and policy-makers, advising stakeholders on ecological impact and best practices. The aspect of their research that I became involved in was their fundamental ecological research focussing on the ecology of viruses and their hosts. This research is of vital importance for modern public health, because most emerging human viruses (Ebola, SARS, and HIV to name a few) come from wildlife, and as we continue to change the earth, more are likely to emerge.

For much of the past decade, people at EcoHealth have been collating viral records to build a comprehensive database of mammal-virus associations. This database was published in Nature in 2017, and represents the most thorough and advanced analysis of viral diversity in the current literature. However, this database was only analysed from one perspective: identifying what mammalian traits lead them to host the most viruses, and the implications for human public health. I was given three months to create my own research agenda, and I chose to pursue the question: "what traits lead to sharing of viruses among pairs of mammals?" The resulting analysis picked apart the whole viral sharing network, telling me how genetic similarity and geographic overlap leads to viral sharing.

This research exchange was an excellent experience for many, many reasons. EcoHealth is a world leading authority on the intersection of ecological and human health, and I had a great deal to learn from working with them on something so important. They also have a formidable amount of statistical expertise, and because of the novelty of the work I gained as many statistical skills in the course of this three month placement as I would in a much longer period during my PhD. My PhD is focussed on individual-level research of a small population of wild red deer, and so the opportunity to work with global-scale spatial and genetic data on entire mammal species was very exciting. I learned about collaborative coding, which I have never had the opportunity to do as the only member of my lab, and I started working with types of models that my PhD data would never allow me to use. We are submitting the written-up work to a high-profile journal, and there are a multitude of potential offshoots and collaborations emerging from the project. Finally, I got a perspective on work and life in a non-academic research institution and the implications of working on globally-relevant research topics for stakeholders, and on the channels through which these organisations interact with policymakers and translate their research for use in effecting change.

In summary, I am extremely grateful for this opportunity. The experience of doing a PIP in an entirely new environment and on an alien topic allowed me to broaden my skills as a scientist, and I would (and have) recommend the same experience to absolutely anyone considering it.