Hannah Burton - My Background

I graduated from the University of Liverpool with a degree in Marine Biology in 2008. Since then I have worked for a non-government conservation organisation, firstly as an intern, and then as an Assistant Research Officer, helping to manage a marine conservation project in Madagascar. I have also worked as a Field Environmental Scientist in the offshore industry, which involved conducting habitat classification surveys in the North Sea, amongst other various things - before returning to the weird and wonderful world of academia.

My PhD

Supervisors: Prof. Mike Bruford, Prof. Steve Ormerod and Dr Hefin Jones

Working with aquatic and terrestrial invertebrates from freshwater streams and woodland leaf litter across Wales, I will investigate two central aims:

Firstly, I want to investigate the relationship between species diversity and genetic diversity. Theory predicts that underlying processes of these two fundamental levels of biodiversity will cause them to co-vary. However, there is a large gap in knowledge in this area and it has important implications in conservation strategies, with many only taking species diversity into account!

Secondly, by looking at the demographic history of my species via genetic analysis, I want to infer information about the different population's resistance and resilience to disturbance. The way populations respond to a disturbance will affect biodiversity, and loss of biodiversity is important in conservation as well as ecosystem services, especially in light of climate change.

Conducting these experiments across Wales means I have a large amount of environmental heterogeneity across which I can look at my two main aims and it also means I can benefit from a wealth of past data on which I can base my predictions and parameters about each species' demography history.

DURESS- where my work fits in

My aquatic invertebrate research is mainly involved in work package three of DURESS which seeks to identify resilience factors and potential thresholds in service delivery. As well as adding invertebrate genetic data to the biofilm, fish and bird data, allowing the DURESS team to look at genetic diversity over a range of trophic levels!