SAERI studies variable water bodies in the Falklands

Dr Stefanie Carter, Wetlands Project Manager for the South Atlantic Environmental Research Institute (SAERI) writes about how different bodies of water in the Falklands vary significantly, the importance of these varied environments, and how SAERI monitors them.

The current low water levels in the Falklands and the possible impact of climate change on wetlands – as recently highlighted in the PN – are a focal point of SAERI's current project 'Falklands wetlands and aquatic habitats', which is funded by the Darwin Initiative. The project focuses on the condition and variability of water bodies (ponds, lakes, streams and rivers) in the Falkland Islands and hydrology, which includes water levels. The project aims to collate existing data and to fill gaps in knowledge through fieldwork campaigns. It will also set-up long-term monitoring of environmental indicators, such as water level and temperature, to understand how our water bodies are changing over time.

The Falkland Islands' water bodies are plentiful and diverse; and the Wetlands Project hopes to capture and understand the extent of this variability, which has become apparent already after only one week of fieldwork on the West. The project fieldwork team encountered two adjacent ponds, both in similar size (ca. 120 across), with similar pH (neutral, around 7) and similar electric conductivity (ca. 1.9 mS/cm), yet one has a very peaty substrate and hosts minnows and the other one contains a more sandy sediment and an abundance of invertebrates – mainly amphipods. In a different location, three adjacent ponds display even more contrasting characteristics. Whilst close to one another and similar in size (300 to 400 m across), the centre pond had a neutral pH of around 7, but the other two were acidic; one of these was particularly acidic with a pH of 3.3 and contained lots of algae (gloves for handling this one). The wildfowl also had common sense and aggregated on the centre one, including white-tufted grebe and chiloé wigeon.

Above: A peaty pond with minnows on the west. Below, right: White-tufted Grebe.

Those two examples highlighted that although many water bodies looked the same, we would not know about their individual ecological characteristics until we took the time to investigate them – and this was only the beginning of the fieldwork! Ponds, lakes, streams and rivers vary greatly in size, seasonal extent, acidity and subsequently in flora and fauna they contain. They all support the uniqueness of the Falklands, which is why experts from the UK Centre for Ecology and Hydrology, University College of London and independent consultants have come together with SAERI and FIG, on the current Wetlands Project to better understand our water bodies, and to monitor their future change. The project will conclude in 2022. In the meantime, there is a lot to be discovered about wetlands in the Falklands!

Dr Stefanie Carter

Below: Amphipods (left) and a diving beetle (right), both from a pond with "abundant invertebrate life. Above: Three adjacent ponds with very different characteristics.