



## **Palaeolimnological records of Holocene environmental change in the Antarctic Peninsula region**

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The CACHE-PEP project at the British Antarctic Survey aims to determine how the Holocene climate of the Antarctic Peninsula is related to global scale patterns and trends, and to determine the significance of current environmental changes in the region. It is doing this using a north-to-south transect of new Holocene records from ice cores, marine sediments, terrestrial and lake sediments. This presentation will focus on recent results from terrestrial and lake sediment records. First we will examine the palaeolimnological record of deglaciation on land including new records from Alexander Island and Marguerite Bay. Second we will examine the palaeolimnological evidence for past warm periods on a transect of sites along the Antarctic Peninsula. Third we will show how these warm periods are linked to past ice shelf collapse events in George VI Sound and Prince Gustaf Channel. Finally we will examine the interaction between past ice sheet thickness and sea level change by presenting some new relative sea level records derived from the Holocene inundation and isolation of coastal lakes. These relative sea level reconstructions help provide regional constraints for the contribution of the Antarctic Peninsula Ice Sheet to eustatic sea level.