

Late Glacial Climate Change in Mid-Latitude South America: Temperature and Moisture

Jonathan E. Nichols, Dorothy M. Peteet, Linda E. Heusser
Lamont-Doherty Earth Observatory (jnichols@ldeo.columbia.edu)

Abstract

The Late Glacial transition into the Holocene is an important time in Earth's climate history, and though it is well studied, questions about the deglacial rise in CO₂ and its temporal relationship with warming in the Northern and Southern hemispheres remain (Shakun et al, 2012; He et al., 2013). Of particular interest is the timing of changes in the strength and position of the southern hemisphere westerly winds, as these are important parameters controlling the release of CO₂ from the Southern Ocean (Anderson et al., 2009). We aim to reconstruct hydrological changes at two sites in mid-latitude Chile using the hydrogen isotopes of leaf waxes preserved in the peatland and lake sediments. The climate of these sites is controlled primarily by the westerly winds, and data from these cores is likely to provide key insight into the changes in climate related to the last deglaciation.