

Interhemispheric climate links revealed by a late-glacial cooling episode in southern Chile

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Understanding the relative timings of climate events in the Northern and Southern hemispheres is a prerequisite for determining the causes of abrupt climate changes. But climate records from the Patagonian Andes¹⁻⁴ and New Zealand⁵⁻⁸ for the period of transition from glacial to interglacial conditions - about 14.6-10 kyr before present, as determined by radiocarbon dating show varying degrees of correlation with similar records from the Northern Hemisphere. It is necessary to resolve these apparent discrepancies in order to be able to assess the relative roles of Northern Hemisphere ice sheets and oceanic, atmospheric and astronomical influences in initiating climate change in the lateglacial period. Here we report pollen records from three sites in the Lake District of southern Chile (41°S) from which we infer conditions similar to modern climate between about 13 and 12.214C kyr before present (BP), followed by cooling events at about 12.2 and 11.414C kyr BP, and then by a warming at