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The terrestrial response to climatic instability during the latter stages of Marine Isotope Stage 11: Examples from Britain

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The advent of high resolution marine and ice core records spanning Marine Isotope Stage 11 (c. 425-360 ka BP) reveal evidence for more complexity associated with the interglacial than previously demonstrated. Broadly, the pattern consists of: a) an early warming associated with Termination V, b) a main temperate phase, with maximum warmth occurring later in comparison with other interglacials, and c) a series of stadial-interstadial events associated with the progressive decline into MIS 10. Whilst the main phase of MIS 11 has received a lot of attention regarding its potential role as an analogue for the current interglacial, the pattern of climate change associated with the latter stages has received less interest. Furthermore, the understanding of how these changes translate into terrestrial response is difficult, due to the fragmentary nature of many terrestrial archives.

In Britain, there are a number of sites correlated to MIS 11, including a series of long lacustrine records, of which the upper parts, associated with the latter stages of the interglacial, have received little attention. Those deposits which have been studied, however, have revealed evidence for at least one stadial-interstadial event during this period (Ashton *et al*., 2008, Coope and Kenward, 2007). This poster explores these terrestrial archives of MIS 11 in Britain, and discusses how they can be used to understand landscape evolution and sub-stage climatic variability during the latter stages this interglacial. Particular focus will be placed upon the lacustrine record of Marks Tey, eastern England, which has the potential to be the longest and most continuous record of MIS 11 from western Europe. Data is presented from the upper part of the lake sequence, with the preliminary results from 1) sedimentological, 2) stable isotopic and 3) micromorphological investigation. These results will be discussed in terms of understanding the climatic signature of MIS 11 in terrestrial records, and the implications for lacustrine sedimentation during this period.

References

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