

The last glaciation maximum climate conundrum and environmental responses of the Australian continent to altered climate states.

This project uses state-of-the-art techniques to develop robust past-climate information for the peak of the last ice age in Australia and to convert that information into understanding of past climate dynamics. The current understanding of climate change at the peak of the last ice age in Australia requires either a) a re-organisation of regional climate systems or b) a major re-evaluation of the inferred climate history. Resolving this problem is of critical importance to help understand environmental responses in Australia to future climate change, whether anthropogenic or natural.

Through the University of Queensland (Professor Jamie Shulmeister and Dr Craig Woodward) a modern lake physiochemical database has been constructed for eastern Australia. A series of cores have been collected from northern New England lagoons. Periglacial sites in northern New England have been monitored for modern freeze-thaw activity for nearly a year, two sites have been sampled for cosmogenic dating and a key site investigated with GPR. Lunettes have been sampled in Northern New England for luminescence dating. Geochronology and stratigraphic studies from the Riverina have demonstrated that rivers had higher flows during the true LGM. Future fluvial chrono-stratigraphy is planned

for 2013 – 2014 as part of a recently started PhD.

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Students:

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