

Landslide buries climate change link

New findings by three University of Canterbury researchers could pour cold water on evidence that climate change is happening simultaneously around the world.

The discovery has been made as a result of a study of the Waiho Loop glacial moraine on the plain between Franz Josef township and the sea, and is described by co-author Professor Jamie Shulmeister as throwing "a cat among the paleoclimate pigeons".

A moraine is a ridge which marks the end of an earlier glacier limit. Scientists have believed the Waiho Loop moraine was created during a brief cold snap about 13,000 years ago that also affected Europe and North America, and inspired the Hollywood blockbuster movie *The Day After Tomorrow*.

The Waiho Loop moraine is widely used as evidence for direct inter-hemispheric linkage in climate change. But these new findings suggest the loop - which sits near the South Island's Alpine fault line - was the result of a landslide, not climate change.

Professor Shulmeister, who worked on the research with Associate Professor Tim Davies and honours student Daniel Tovar, says there has been a huge scientific debate on the climatic implications of the Waiho Loop. But no one had ever studied its sediments.

"When graduate student Dan Tovar had a look he discovered to our surprise that it was mainly made up of a rock type known as greywacke which is different to the rocks that make up all the other moraines in front of the Franz Josef glacier.

"This rock type occurs about 13 kilometres up the valley from the Loop. All the other moraines are predominantly composed of schist which outcrops near Franz Josef township. The greywacke was also rather more angular than the rocks in the other moraines, suggesting it had not been transported in water or at the base of a glacier."

As a result of its findings, Professor Shulmeister's team believes a large landslide dumped a huge volume of rock on top of the glacier causing it to advance and, when the advance stopped, the moraine was created.

The findings will be published next week in the prestigious international science journal, *Nature Geoscience*.

To arrange an interview with Professor Shulmeister prior to the embargo lifting at 6am on Monday 30 June please contact:

John MacDonald

Corporate Affairs Manager

University of Canterbury

03 364 2910//021 417 289

john.macdonald@canterbury.ac.nz