New CO2 data helps unlock the secrets of Antarctic formation
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The link between declining CO2 levels in the earth's atmosphere and the formation of the Antarctic ice caps some 34 million years ago has been confirmed for the first time in a major research study.

A team of scientists from Cardiff, Bristol and Texas A&M universities braved the lions and hyenas of a small East African village to extract microfossils in samples of rocks which show the level of CO2 in the Earth's atmosphere at the time of the formation of the ice-cap.

Geologists have long speculated that the formation of the Antarctic ice-cap was caused by a gradually diminishing natural greenhouse effect.

The study's findings, published in Nature online, confirm that atmospheric CO2 declined during the Eocene - Oligocene climate transition and that the Antarctic ice sheet began to form when CO2 in the atmosphere reached a tipping point of around 760 parts per million (by volume).

Co-author Dr Gavin Foster from the University of Bristol Earth Sciences Department said: "By using the rather unique set of samples from Tanzania and a new analytical technique that I developed, we have, for the first time, been able to reconstruct the concentration of CO2 across the Eocene-Oligocene boundary - the time period about 34 million years ago when ice sheets first started to grow on Eastern Antarctica."

The new findings offer important lessons for the future and will add to the debate around rising CO2 levels in the earth's atmosphere as the world’s
attention turns to on UN Climate Conference, which
opens in Copenhagen later this year.

Co-author Dr Bridget Wade from Texas A&M
University Department of Geology and Geophysics
added: “This was the biggest climate switch since
the extinction of the dinosaurs 65 million years
ago.

“Our study is the first to provide a direct link
between the establishment of an ice sheet on
Antarctica and atmospheric carbon dioxide levels
and therefore confirms the relationship between
carbon dioxide levels in the atmosphere and global
climate.”

Source: Cardiff University (news: web)

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