

Geo-scientists provide glimpse into ancient ocean and formation of the Himalayas

October 1 2013

New findings on the geology of southern Tibet by researchers from Trinity College Dublin, Oxford University, University of Hong-Kong, University of Sydney and the NERC (UK) Isotope Geosciences Laboratory have revealed a vast ocean that separated India from Asia more than 250 million years ago and which pre-dates the formation of the Himalayas.

The composition and age of rocks now occurring in southern Tibet along the northern continental margin of India is the subject of a paper recently published in leading international geoscience journal *Gondwana Research*. These rocks represent the remnants of the once extensive ocean. Closure of this ocean, caused by shifting tectonic plates, resulted in the collision of India and Asia and formation of the Himalaya Mountains.

Commenting on the paper, Dr. Quentin Crowley, Ussher Lecturer in Isotopes and Environment and Assistant Professor in the School of Natural Sciences said: "For at least 2,500 km a tectonic suture zone forms the boundary between the Tethyan Himalaya of the Indian plate and a tectonic collage of plates that make up Asia to the north. The oceanic complexes preserved within this suture zone provide the only glimpses of the Neo-Tethyan Ocean in this region.

Their existence has allowed us to describe the events around the time this [ocean](#) began to close. This has provided us with a much better understanding of the events which lead to the collision of India with Asia

and formation of the Himalaya Mountains."

More information: The full paper can be viewed here:
www.sciencedirect.com/science/.../S1342937X13002219

Provided by Trinity College Dublin

Citation: Geo-scientists provide glimpse into ancient ocean and formation of the Himalayas (2013, October 1) retrieved 1 May 2024 from <https://phys.org/news/2013-10-geo-scientists-glimpse-ancient-ocean-formation.html>

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