
Climate Change; Investigators from University of Texas Austin Report New Data on Climate Change (Dynamic Climatic Changes During the Late Pennsylvanian Icehouse: New Insight From High-resolution Geochemical Records In the Cline Shale, North America)

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2022 JUN 20 (VerticalNews) -- By a News Reporter-Staff News Editor at Global Warming Focus -- Investigators discuss new findings in Climate Change. According to news reporting originating from Austin, Texas, by VerticalNews correspondents, research stated, "The profound glaciations of the Late Paleozoic represent an extreme climatic perturbation during a time when much of the Earth was initially thought to have been covered with an ice cap for a single prolonged period. Recent research has typically interpreted the Late Paleozoic Ice Age as a dynamic climatic regime characterized by multiple short-term glaciations alternating with globally warmer interglacial conditions within a long-term icehouse epoch."

Funders for this research include State of Texas Advanced Resource Recovery program at the **Bureau of Economic Geology**, China Scholarship Council, Geological Society of America Graduate Student Research Grant, Jackson School of Geosciences, The University of Texas at Austin.

Our news editors obtained a quote from the research from the University of Texas Austin, "However, the onset and extent of each glaciation interval are not well constrained, especially for the Late Pennsylvanian period. This study presents high-resolution carbon isotopic signatures and other bulk geochemical datasets for deep marine sediments from the Virgilian and Missourian Stages of the Cline Shale (Midland Basin) for the first time. Significant variations in chemical index of alteration (CIA) and chemical index of weathering (CIW) are interpreted as having been caused by climatic oscillations that drove variations in the intensity of chemical weathering on contemporary province areas. The CIA and CIW variation trends suggest a cycle of six cold and dry glacial periods punctuated by six well-defined, relatively warm and humid interglacial periods during the Late Pennsylvanian. In agreement with climate proxies, the coupling variation of the carbon isotope of marine organic matter ($\delta C-13(\text{org})$) reveals shifts in marine bicarbonate rather than variations of organic matter type."

According to the news editors, the research concluded: "A covariation trend between the carbon isotope signatures of equatorial Russian Platform brachiopods, polar Karoo Basin organic matter, and organic matter in this study indicates a global climate control mechanism was at play, rather than local forcing factors."

This research has been peer-reviewed.

For more information on this research see: Dynamic Climatic Changes During the Late Pennsylvanian Icehouse: New Insight From High-resolution Geochemical Records In the Cline Shale, North America. Gondwana Research, 2022;106:247-258. Gondwana Research can be contacted at: Elsevier, Radarweg 29, 1043 Nx Amsterdam, Netherlands. (Elsevier - www.elsevier.com; Gondwana Research - www.journals.elsevier.com/gondwana-research/)

The news editors report that additional information may be obtained by contacting Junwen Peng, University of Texas Austin, Bur Econ Geol, Univ Stn, Box 10, Austin, TX 78713, United States. Additional authors for this research include Qilong Fu and Xavier Janson.

Keywords for this news article include: Austin, Texas, United States, North and Central America, Climate Change, Climatic Change, Global Warming, University of Texas Austin.

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