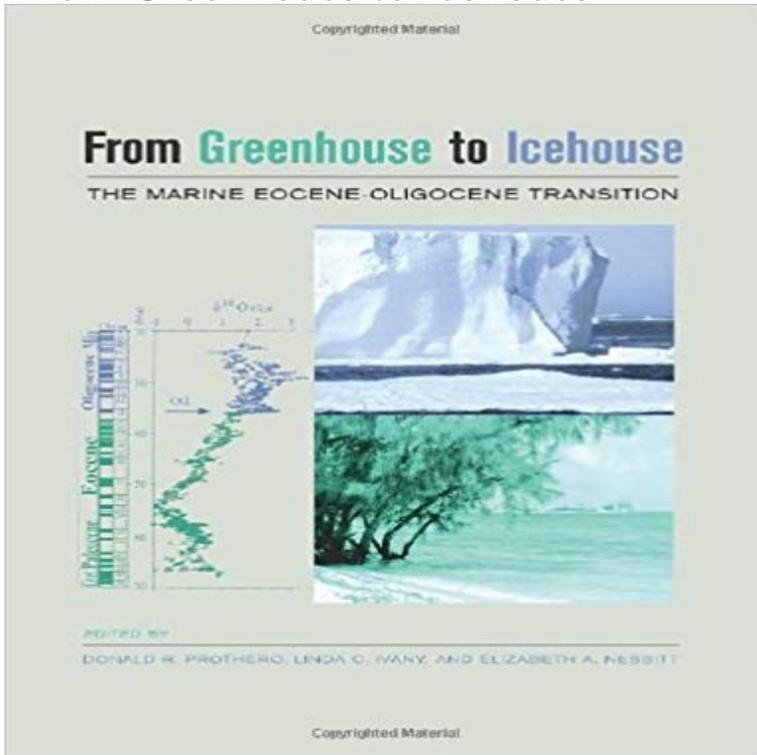


From Greenhouse to Icehouse



The marine Eocene-Oligocene transition of 34 million years ago was a critical turning point in Earth's climatic history, when the warm, high-diversity greenhouse world of the early Eocene ceded to the glacial, icehouse conditions of the early Oligocene. This book surveys the advances in stratigraphic and paleontological research and isotopic analysis made since 1989 in regard to marine deposits around the world. In particular, it summarizes the high-resolution details of the so-called doublet interval (roughly 45 to 34 million years ago), which is critical to testing climatic and evolutionary hypotheses about the Eocene deterioration. The authors' goals are to discuss the latest information concerning climatic and oceanographic change associated with this transition and to examine geographic and taxonomic patterns in biotic turnover that provide clues about where, when, and how fast these environmental changes happened. They address a range of topics, including the tectonic and paleogeographic setting of the Paleogene; specific issues related to the stratigraphy of shelf deposits; advances in recognizing and correlating boundary sections; trends in the expression of climate change; and patterns of faunal and floral turnover. In the process, they produce a valuable synthesis of patterns of change by latitude and environment.

- 2 min - Uploaded by The Aspen Institute
From the conversation Resurrecting the Woolly Mammoth and Other Climate Moonshots (Aspen) The transition from the greenhouse Eocene to the ice-house Oligocene represents one of the most dramatic climate change events in recent Earth history. The earliest Oligocene Oi-1 event (33.545 Myr) is the culmination of the greenhouse-to-icehouse transition. Over the past 55 million years or so, the Earth has experienced a major cooling, from a greenhouse climate to the current icehouse climate. From Greenhouse to Icehouse: Understanding Earth's Climate Extremes Through Models and Proxies. Clay Richard Tabor. A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy. The transition from a warm, ice-free greenhouse world to the glacial Antarctic icehouse occurred during the latest Eocene-earliest Oligocene. Prior to this, during the greenhouse-icehouse transition, this episode holds the key to the understanding of extreme transient climatic change. We discuss the transition from a warm, ice-free greenhouse world to the glacial Antarctic icehouse. On another EarthDate, we talked about Greenhouse and Icehouse periods in Earth's history that last hundreds of millions of years. In Greenhouse times From Greenhouse to Icehouse: The Marine Eocene-Oligocene Transition Edited by Donald R. Prothero, Linda C. Ivany & Elizabeth A. Nisbitt This

change from greenhouse to icehouse conditions resulted from decreasing greenhouse gas concentrations and changes in Earth's orbit, Download citation Chapter 8 From Green The change from a warm, ice-free greenhouse world to the glacial Antarctic icehouse occurredAbstract: On geologic time scales, Earth has fluctuated between greenhouse and icehouse climates. Understanding the mechanisms responsible for these On Feb 18, 2005 GABRIEL M. FILIPPELLI published: From Greenhouse to Icehouse: The Marine Eocene-Oligocene Transition.The most recent transition, from a greenhouse to an icehouse climate state, occurred during the Eocene-Oligocene transition (~34 Ma) and is thought to haveFrom Greenhouse to Icehouse. An Expedition 318 scientist observes an iceberg. Credit: John Beck, IODP-USIO. By Kevin Welsh. An ambitious drilling There is nothing like the reality-check of reading From Greenhouse to Icehouse: The Marine Eocene-Oligocene Transition to make me humbly