

Global Warming To Be More Extreme In Some Areas Than Others

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Serious global climate change is nothing new; in fact, it is quite ancient. One University of Missouri-Columbia researcher has reviewed the earth's temperature patterns from the past 70 million years to predict future patterns. His findings show that regional patterns vary and that means changes caused by modern-day global warming will not simply occur across the board. Some areas of the globe will be hit harder than others.

"It matters what happens in your backyard," said Ken MacLeod, assistant professor of geological sciences. "If you think about the way climate works in a 10-year span, a given year is not cooler or hotter everywhere. Yet, that is the perception of how global warming will progress. In our research, we've found regional patterns that persisted for millions of years."

"This is not just a hot Fourth of July," MacLeod said. "This warming in the North Atlantic occurred over a three-million-year interval."

A well-documented interval of global cooling took place 70 million years ago, dropping temperatures across the earth by 10 degrees Fahrenheit. MacLeod and his team studied rocks in the North Atlantic and discovered while the earth was cooling elsewhere, the North Atlantic was getting warmer.

MacLeod said the scale of this ancient climate change is comparable to predictions for the next 50 years, except the coming decades should see

average warming instead of cooling. In addition to calls for higher temperatures, predictions include a rising sea level and a greater size and frequency of storms.

"The changes to the atmosphere caused by humans over the past 150 years are as large as the changes that occurred naturally over the past 35 million years," MacLeod said. "You have to look back that far to find carbon dioxide levels at what we expect them to be in the next 50 years."

These findings mean that in order to obtain the average global warming that is predicted, regional variances will make some places cooler and others warmer than expected. Those especially warm areas will suffer extreme changes that could be disastrous. MacLeod said until the global cooling that began about 70 million years ago, the earth had been extremely warm for 25 million years.

"There were no glaciers, crocodilians lived in the high arctic, and palm trees grew in Canada," MacLeod said. "That's kind of warm."

The study appears in June's issue of *Geology*, a journal published by the Geological Society of America.

Source: University of Missouri-Columbia

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