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Nov. 3 bring back

## Scientist finds increased plant activity in Arctic lakes

*Last Updated: Oct 31 2005 07:51 AM CST*

Climate change is altering the environment of remote northern lakes, according to a new study by researchers from the University of Alberta.

While studying lake-bed sediments on six remote Baffin Island lakes, Dr. Neal Michelutti found stable levels in the concentration of chlorophyll– a good indicator of overall ecosystem production– until a spike in production that began about 150 years ago.
Michelutti says that coincides with the dawn of the industrial age, and the beginnings of global climate change.
This is the first study to show a whole lake's biological response to warming in the region.
The fact that climate-related changes have been detected in very northern lakes, far removed from any human activity, "tells us that there is no place on earth that the human fingerprint has not reached," Michelutti says.
While recent trends in ocean production have shown increases attributable to climate warming, it still has to be determined if similar trends exist in fresh-water ecosystems.
Remote Arctic regions are ideal for examining the effects of climate warming on aquatic production because they are not directly influenced by human activities.
Michelutti says further research will look at how consistent the changes have been in different regions of the Arctic.
"Increased aquatic production due to climate warming has been predicted for many years, but until now has never been demonstrated," he said. "So, we were not totally surprised by our findings; however, the rate and magnitude of the changes that we recorded are definitely alarming, especially when taken in the context of the last several thousand years of variation."
His findings were published in the current issue of Geophysical Research Letters.

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How do humans influence remote fresh water systems?

What does increased plant activity indicate about the future of northern lakes and the climate in general?

What is the increased plant activity due to - a warmer climate, increased sunlight, precipitation, etc.?

Is this a good indicator of global climate change?