

Earth's environmental changes and their influences to biotic system in Geohistory

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Recent Intergovernmental Panel on Climate Change (IPCC) Report describes that average temperature on Earth may increase maximum 4 degree at AD 2100 as far as human activity adds equivalent volumes of greenhouse gases in the air. This prediction has estimated through computer simulation with decadal to centennial climatic records. How can we evaluate results from computer simulation? How can we assess influences of environmental changes to biotic system? Since 4.6 Ba, the Earth has experienced vigorous climatic changes. We can find similar patterns of global warming and biotic responses against climatic changes through analyses of detailed records of environmental changes in geologic past.

During the presentation, I plan to show a couple of examples that may show similar climatic changes to modern global warming and related phenomena such as ocean acidification and others. On the other side, long-term changes in Earth's climate may have been taken place by different mechanisms from modern climate change.