

Vegetation change in the Amazon lowlands

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Abstract:

It remains unclear how vegetation in the Amazonian lowland responded to climate change in glacial times. Here, we propose to examine molecular organic matter preserved in the speleothem samples collected from Paraíso Cave in East Amazon. Although total organic carbon in cave deposits is typically low, recent advancements in techniques allow us to extract organics from carbonate rocks more effectively. The organic matter components and their isotopic signature could serve as indicators of cave surface vegetation change. With high precision uranium-series ages, we aim to reconstruct a history of vegetation change in the eastern Amazon lowland, where the current rainforest has been predicted to undergo dramatic change in the near future because of global warming.