



"Our environment is our future"

## RESEARCH COLLOQUIUM SERIES

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**Friday**  
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**3:30 - 4:25**

**Weldwood Theater**  
**7-238**

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## FOSSIL SOILS AND THE LEGACY OF ANCIENT WARM CLIMATES

Fossilized ancient soils (paleosols) can be preserved in the geological record, and their properties provide important clues to past terrestrial environments. Rapid warming episodes earlier in Earth's history were likely triggered by disturbances to the carbon cycle, and are being studied for their relevance to current anthropogenic global warming. The most extreme of these events, the Paleocene-Eocene Thermal Maximum (PETM), occurred 56 million years ago, lasted 200,000 years, and involved an estimated global temperature increase of ~ 5-8°C. Although the record of the PETM has been documented most thoroughly for marine sediments, the morphology, geochemistry, and landscape settings of paleosols can tell us much about this extreme event. I'll give some examples of these interpretations, then speculate on the future of Earth's soil cover if the current interglacial is significantly prolonged by anthropogenic climate change.