



University of New Hampshire

Fall 2020 Environmental Sciences Seminar Series

Wednesday, November 18

2:30–3:30pm Online via Zoom—[Register here](#)

Crystal McMichael

**Assistant Professor, Ecosystem and Landscape Dynamics,
University of Amsterdam**

Reconstructing Past Fire Intensities in Paleoecological Records

Charcoal abundance measurements are commonly used to estimate fire activity in palaeoecological studies; however, fire temperature is not directly inferred. Reconstructing past fire temperatures is crucial to understanding fire-vegetation dynamics through time, because the ecological response to fire is partially a function of temperature. Here, we show that charcoal chemistry, as inferred from Fourier Transformed Infrared Spectroscopy (FTIR), is a reliable proxy for fire (combustion) temperature. We also show that an approach called analog matching can be used to infer burn temperatures of charcoal fragments with > 85% success rate.



Seminar Host: [Michael Palace](#) Associate Professor, Earth Sciences/ESRC & NRESS Faculty Series sponsored by the Natural Resources and Earth Systems Science (NRESS) Ph.D. Program, in partnership with the Earth Systems Research Center, and the Natural Resources and the Environment and Earth Sciences Departments.

Free - All are Welcome

Full Series and Registration [HERE](#).