

# School of Earth and Environmental Sciences

## Colloquium Series

### Dr. Dorothy Peteet

Senior Research Scientist at NASA/Goddard Institute for Space Studies  
Adjunct Professor, Columbia University.

Wednesday, February 22<sup>nd</sup>, 2023  
12:15 – 1:30 PM  
Science Building  
Room C-207

### Hudson Marsh Sediment Archives and the Stories They Tell

Why do we care about coastal marshes? Have humans affected marshes? What is blue carbon and are our Hudson marshes in danger as sea level rises? Our research focuses on these questions through paleoecology and paleoclimatic investigations of marshes in the NYC region from Jamaica Bay northward to Pelham, Piermont, and sites upriver. We use pollen, microfossils, X-ray fluorescence, <sup>14</sup>C dating, and loss-on-ignition to understand the history of climate and human impact in these valuable resources that are so vital for our environment.

**Brief Bio:** Dr. Dorothy M. Peteet directs the Paleocology Division of the New Core Lab at Lamont Doherty Earth Observatory of Columbia and in collaboration with GISS climate modelers and LDEO geochemists is studying the Late Pleistocene and Holocene archives of lakes and wetlands (peatlands, salt marshes, tidal freshwater marshes, bogs, fens). Documenting past vegetational change using pollen and spores, plant and animal microfossils, loss-on-ignition, carbon, and charcoal in conjunction with accelerator mass spectrometry (AMS) radiocarbon dating, her research provides local and regional records of vegetational and climate history and carbon sequestration. Peteet has performed GCM experiments to test hypotheses concerning LGM and abrupt climate change. She is interested in climate sensitivity from past climate changes and ecological shifts with future climate change. Droughts are of recent interest.



Dr. Dorothy Peteet in the field

**\*\*HYBRID SESSION\*\***

Zoom link for remote attendance:

<https://us02web.zoom.us/j/82229858276?pwd=UkNzM2FNY2p6cG42YjBmeHg0dGxNdz09>

Meeting ID: 822 2985 8276

Passcode: 515589