

# 2021-2022 Assistant Professor Excellence (APeX) Speaker Series

## "Using soils of the past to reconstruct the landscapes of human evolution"

Wednesday, September 22, 2021

12:15 - 1:15 pm

via Microsoft Teams

*Dr. Emily Beverly*

Assistant Professor

Department of Earth and Atmospheric Sciences

College of Natural Sciences and Mathematics



Soils are an integral part of our modern lives – supplying our food and controlling many global biogeochemical cycles. In my research, I study the chemistries of modern soils to better understand the biogeochemical cycles affecting modern humans, but also to understand the evolution of our species, *Homo sapiens*, and the evolution and extinction of our close relatives known as hominins. My research focuses on soils that are hundreds of thousands to millions of years old and have since been buried beneath the earth's surface. These buried soils of the past – called paleosols – are where we find many hominin fossils and stone tools. We can apply what we know about modern soils to these paleosols to provide snapshots of past landscapes used by our ancestors. The geochemical data from these paleosols provide us information about past climates and environments, such as temperature, precipitation, and vegetation that we can use to reconstruct these snapshots. We know that climate changes have likely driven hominin adaptations and extinctions, but over such long time scales there is much debate over the timing and importance of events. With these soils of the past, I seek to illuminate the role of climate history in the evolution of our own species.

### Speaker Biography

Dr. Emily Beverly began working as an Assistant Professor in 2018 in the Department of Earth and Atmospheric Sciences. She received her doctorate in geology at Baylor University in 2015. At the University of Houston, she leads the Human-Environment Interactions Research Group (HEI), which studies interactions between humans and their environment on a variety of temporal and spatial scales from hominins (our extinct relatives) to modern humans. We are focused on using stable isotopes and geochemistry to answer questions about past climates or environments locally in Texas and across the globe.

*The Assistant Professor Excellence Lecture Series (APeX) is intended to showcase the breadth and depth of groundbreaking research, scholarship, and creative activity being undertaken by UH early career faculty across disciplines, as well as to offer opportunities for cross-disciplinary networking.*



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