Kaitlyn E. Horisk
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Education

PhD Student (expected 2023)
The Pennsylvania State University

Department of Geosciences
Advisor: Dr. Sarah Ivory
Research focus: Reconstructing past climate and environmental change during the Holocene in Dhofar, Oman using fossil pollen and leaf wax isotopes; using the paleoecological and archaeological records to understand climate-vegetation dynamics and human interactions with the landscape.

BS Geology, BA Anthropological Perspectives (2019)
State University of New York at Binghamton
Magna Cum Laude
Senior Thesis: An 800 kyr cyclostratigraphic framework for continental rise site U1524, Ross Sea Antarctica

Publications in prep.

Horisk, K., Ivory, S., McCorriston, J., Anderson, S., Cole, K., Mehri, A., and Kathiri, A. Interactions between plants, people, and precipitation in Dhofar, Oman from the mid-Holocene to present. In prep for Quaternary Research.

Grants and Awards

2021	$1500 Marilyn L. Fogel Student Research Fund in Biogeosciences
2021	Honorable Mention NSF Graduate Research Fellowship
2020	€3000 Elsevier Organic Geochemistry Research Scholarship
2020	$4000 RJ Cuffey Fund for Paleontology, Penn State Department of Geosciences
2020	$1000 Michael Loudin Family Graduate Scholarship, Penn State Department of Geosciences
2020	$1000 Cleveland Museum of Natural History John H. Hoskins Grant-in-Aid Program
2015-2019	$27,480 NYS STEM Scholarship
Fall 2017	$250 Binghamton University Undergraduate Conference Travel Fund

Conference Posters and Presentations

Horisk, K., Ivory, S. and McCorriston, J. Complex interactions between plants, precipitation, and people in Dhofar, Oman from the mid-Holocene to present. Geological Society of America, Oct 2021.

Horisk, K. and Ivory, S. Vegetation-climate interactions in Dhofar, Oman from the mid-Holocene to present. American Geophysical Union, Dec 2020 Poster.

Patterson, Molly O., N.V. Valenzuela, B. Romans, J. Ash, D. Kulhanek, B. Keisling, R. McKay, C. Rosenberg, **K. Horisk**, H. Jones, T. van Peer, L. De Santis & IODP Expedition 374 Scientists. "Assessing the orbital response of the WAIS from a Ross Sea deep ocean perspective since the Late Pliocene". XIII International Symposium on Antarctic Earth Sciences. Incheon, Republic of Korea, Jul 2018.

Thiry, J. and **Horisk, K**.; Texan Toys: Children's Playthings as Potential Indicators of Socioeconomic Status at a Texas-Alsatian Homestead in Castroville, TX. Society for Historical Archaeology. New Orleans, LA, Jan 2018 Poster.

Invited Lectures

"Paleoecological insights into drivers of landscape change in Dhofar, Oman" International Geomorphology Week Regional Webinar for North America. International Association of Geomorphologists. March 1, 2022.

"Making an Exhibition: Collaborative Curation of *From the Earth: The Making and Meaning of Maya Tomb Objects*." Curatorial gallery talk. Binghamton University Art Museum, Binghamton, NY. April 10, 2019.

Research and Field Experience

2021	**APD Data Steward:** Participated in large initiative to reformat and upload African Pollen Database datasets to Neotoma Paleoecology Database
2019-2021	**Research Assistantship:** Penn State University, Department of Geosciences
2020	**Pollen Processing:** Used buffered enzyme solution and heavy separation method to conduct pollen extraction from lake core sediments.
2019- Present	**Ancient Socio-ecological Systems in Oman (ASOM) Project:** I am conducting pollen analysis and compound specific stable isotope analysis from leaf wax n-alkanes to constrain paleoenvironmental change in the Holocene in Dhofar, Oman. This project is in collaboration with archaeologists from Ohio State University. Supervisor: Dr. Sarah Ivory

Feb 2020	**Paleoecology Fieldwork in Oman:** 3 weeks of hyrax midden survey and collection in the Nejd (desert), sediment coring in Khor Rori estuary (Dhofar, Oman) Supervisor: Dr. Sarah Ivory
2017-2019	**Time series analysis Ross Sea, Antarctica:** Cyclostratigraphic record developed in R using physical properties data from an International Ocean Discovery Program core taken off the Ross Sea ice shelf, Antarctica. (Binghamton University) Supervisor: Dr. Molly Patterson
2016-2019	**Castro Colonies Archaeology Lab:** Cleaned and catalogued artifacts from a 19th century Texas-Alsatian homestead (Binghamton University) Supervisors: Dr. Ruth Van Dyke and Patricia Markert

Teaching Experience

2022	**Instructor of Record GEOSC 010:** Geology of the National Parks, Penn State University Department of Geosciences.
2020	**Teaching Assistant:** Developed lab materials to be delivered remotely to students for the course GEOSC 204 Geobiology, Penn State University Department of Geosciences.

Mentorship and Outreach

2021	**Co-supervised Senior Thesis:** Working with Dr. Sarah Ivory to co-advise a senior thesis project using a modern pollen dataset from Dhofar, Oman.
2021-Present	**Association for Women Geoscientists PSU Chapter Mentor-Mentee Program Mentor:** Meet monthly with an undergraduate student to answer any questions they may have about a variety of topics. These may include their undergraduate studies, pursuing a graduate degree, or career options. Serve as a resource and support system for undergraduate mentees.
2021-Present	**Graduate Student Representative to the Museum Advisory Board, EMS Museum & Art Gallery:** Attend meetings of the Museum Advisory Board, serve as a liaison between the museum and graduate students, opportunity to facilitate outreach programs using museum collections.
2021	**Association for Women Geoscientists PSU Chapter President:** Oversee the coordination of programs and events, serve as a liaison for the organization and the department, participate in outreach.
Nov 2021	**Upward Bound Programs "Climate Change Day", Penn State University:** Participated as an interviewee for a program on climate

	change for lower income and first-generation high school students and attended a Q&A panel.
Nov 2021	**K-12 Student Project Interview:** Created a video to answer interview questions posed by a K-12 student interested in Paleonotology.
Aug 2021	**Cleveland Museum of Natural History "Current Science" Presenter:** Curated a selection of photos and microscope slides from the Livingstone Pollen Reference Collection to display to interested patrons in the museum. Presented on how to identify pollen and the information scientists can learn with palynology. Had museum patrons interact with the collection and identify pollen from the microscope slide using the photos from the reference collection.
Aug 2021	**Cleveland Museum of Natural History Collection Tour:** Gave a presentation to a group of high school students which involved displaying photos and microscope slides from the Livingstone Pollen Reference Collection and discussing the science of Palynology.
2019-2021	**Association for Women Geoscientists PSU Chapter Mentor-Mentee Program Executive:** Coordinated the pairing of graduate student mentors with undergraduate student mentees based on scientific and personal interests. Additionally ran a Grad School Panel Event wherein graduate students with diverse backgrounds and paths were selected to answer questions from undergraduate students about graduate school and potential careers in Geosciences.
Jan 2017	**Boys and Girls Club of America STEM Event:** Curated a collection of personally collected rocks and fossil specimens with the Binghamton University Undergraduate Geology Club and presented at a science fair for K-12 students. Discussed rock and mineral identification as well as fossils and the geologic history of New York.

Professional Affiliations

Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS), American Geophysical Union (AGU), Geological Society of America (GSA)

Skills

Pollen processing, pollen identification, Tilia, R (basic)