

ASHIKA CAPIRALA
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EDUCATION

PH.D., PLANETARY SCIENCE

Purdue University, West Lafayette, IN | *August 2021-present*

ADVISOR: Stephanie Olson

B.S. EARTH AND SPACE SCIENCES (PHYSICS) with Departmental Honors, Minor in Chemistry

University of Washington, Seattle, WA | *September 2018-June 2021*

GPA: 3.7/4.00

RESEARCH EXPERIENCE

PURDUE UNIVERSITY | *August 2021-Present*

Oceanographic Considerations for the Oxygenation of Habitable Worlds: Lessons from Early Earth

Advisor: Dr. Stephanie Olson (Department of Earth, Atmospheric, and Planetary Sciences)

Using a global biogeochemical model (cGenIE) to study the links between ocean circulation patterns and atmospheric oxygenation across a range of planetary scenarios.

UNIVERSITY OF WASHINGTON | *September 2019-June 2021*

Modeling the accumulation of soil carbonates in Myanmar soils using HYDRUS-1D

Advisors: Dr. Alexis Licht & Dr. Julia Kelson (Earth and Environmental Sciences, University of Michigan)

Utilized HYDRUS-1D, a numerical modeling environment for variably saturated media, to investigate formation conditions of carbonates used in clumped isotope analysis. Reviewed literature to choose and improve model parameters. Wrote and modified MATLAB scripts to process and visually represent model data outputs.

Reconstructing the Paleoenvironments of Middle Eocene Anthropoid Primates using Stable Isotope Data of Paleosols from the Pondaung Formation, Myanmar

Advisor: Dr. Alexis Licht (Department of Earth and Space Sciences)

Decarbonated and weighed paleosol samples for nebulizer ICP-MS and kiel analysis; assisted in running ICP-MS analysis. Identified and sampled pedogenic carbonate from thin sections for ¹³C and clumped isotope analysis. Analyzed results in context to estimate mean annual precipitation and soil respiration.

PUBLICATIONS

1. A. Licht, J. R. Kelson, S. J. Bergel, A. Schauer, S.V. Petersen, **A. Capirala**, K. W. Huntington, G. Dupont-Nivet, Z. Win, D. W. Aung (*in review*). Dynamics of pedogenic carbonate growth in the monsoonal tropical domain. *Geochemistry, geophysics, geosystems: G3*.

PRESENTATIONS

UW Mary Gates Undergraduate Research Symposium | May 2021 (virtual poster talk)

Modeling the Accumulation of Soil Pedogenic Carbonates in Myanmar Using HYDRUS-1D

UW ESS Research Gala - Department of Earth and Space Sciences | March 2021 (virtual poster)

Modeling the Accumulation of Soil Pedogenic Carbonates in Myanmar Using HYDRUS-1D

UW Mary Gates Undergraduate Research Symposium | May 2020 (virtual poster talk)

Reconstructing the Paleoenvironments of Middle Eocene Anthropoid Primates using Stable Isotope Data of Paleosols from the Pondaung Formation, Myanmar

WORK EXPERIENCE

Peer Tutor | *September 2020-June 2021*

Odegaard Writing and Research Center, University of Washington, Seattle, WA

Working one-on-one with undergraduate and graduate students from diverse cultural and academic backgrounds and skill levels to improve their writing. Tailoring sessions to the needs of each student by quickly adapting to priorities, objectives, and areas of strength and weakness. Acquired strong interpersonal skills, emotional intelligence, and the ability to break down complex terms and ideas into simple tasks and strategies for individual students.

VOLUNTEERING/LEADERSHIP

UNIVERSITY OF WASHINGTON

Design/Publishing Lead, Contributing Editor | *September 2019-June 2021*

FieldNotes Journal

Editing and reviewing undergraduate research articles for publishing. Writing and conducting journalism-style interviews for community-focused research articles. Creating print and digital edition layouts using Adobe InDesign and Photoshop. Coordinating design team members, hosting mentoring and group review meetings, and creating resources and protocols. Managing publishing logistics.

College of the Environment Student Ambassador | *June 2020-June 2021*

Interacting with prospective, newly admitted, and/or high school students at information sessions and participating in Q&A panels. Participating in the online engagement committee to plan online outreach to prospective students. Representing the College at events.

ESS Curriculum Committee Undergraduate Representative | *June 2020-June 2021*

Attending monthly committee meetings to represent undergraduate student input to departmental curriculum changes and development.

Undergraduate Research Leader | *September 2020-June 2021*

Hosting Undergraduate Research Program information and outreach sessions to increase student involvement in research. Promoting undergraduate research, presenting own research, and helping connect students with opportunities. Reviewing abstracts for the Undergraduate Research Symposium.

Burke Museum Event Assistant Volunteer | *October 2019-June 2021*

K-12 Outreach volunteer with Rockin' Out (ESS), UW OSTEM | *October 2019-March 2020*

AWARDS & RECOGNITIONS

Best Undergraduate Poster (\$500) at UW ESS Research Gala 2021

Woolley-Crooks Endowed Scholarship recipient 2020-21

UW College of the Environment Dean's Office Scholarship recipient 2018-19 and 2020-21

Dean's List (7 quarters)

Annual Dean's List 2019-20