

Elizabeth Huang

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EDUCATION

University of Maryland, College Park, MD

Expected May 2030

PhD Topic: Biogeochemistry of phosphatic fossilization

Advisor: Dr. Cecilia Sanders

Whitman College, Walla Walla, WA

May 2025

Bachelor of Arts: Geology (Honors), English

Cumulative GPA: 3.929; *summa cum laude*

Thesis Title: Stories of the Sauk Sequence Sandstones: A Petrologic Comparison of the Addy Quartzite and the Flathead Sandstone

RESEARCH INTERESTS

Taphonomic biogeochemistry, phosphorites, stable isotopes, sedimentary petrology, diversity in geosciences

AWARDS AND GRANTS

President's Fellowship – University of Maryland, College Park

Sept 2025 – May 2030

- One of 15 incoming doctoral students awarded \$40,000 as part of a university-wide effort to recruit outstanding students from diverse backgrounds.

Dr. Albert Ripley Leeds Memorial Prize in Geology

May 2025

- One of nine graduating seniors awarded for excellence in geology.

National Science Foundation Graduate Research Fellowship – Honorable Mention

April 2025

Inclusive Excellence in Leadership Student Award

April 2025

- Awarded \$1000 scholarship for excellence as a student leader in fostering inclusivity on campus.

DEIA Cultivation Grant

Feb 2025

- Awarded to the Geo and Environmental Scientists of Color Club to support a project that advances diversity, equity, inclusion, and accessibility at Whitman College.

Top Student in General Chemistry

May 2024

- Awarded for excellence in lecture section of General Chemistry.

Paul J. Jackson Award for Excellence in Literary Study

May 2024

- Awarded for best English essay written in the 2023-2024 academic year.

Arthur Belden Watts Faculty Student Research Award

April 2024

- Awarded to support student research conducted May through August 2024.

Hubbard Research Award	Jan 2024
<ul style="list-style-type: none"> Awarded to support student research conducted in March of 2024. 	
Merit Scholarship, Annual	Aug 2021 – May 2025
<ul style="list-style-type: none"> Awarded for academic excellence as incoming undergraduate. 	
Music Talent Scholarship, Annual	Aug 2021 – May 2025
<ul style="list-style-type: none"> Awarded for musical excellence on bassoon as incoming undergraduate. 	

RESEARCH EXPERIENCE

Whitman College Geology Department , Walla Walla, WA	Jan 2024 – May 2025
Senior Thesis	
<ul style="list-style-type: none"> Conducted detailed analysis of hand sample and thin section of two basal sandstone units from the Sauk Sequence using hand lens, petrographic microscope, and point counts. Interpreted the conditions of deposition and deformational history for each unit based on petrographic analysis and engagement with the relevant literature. Compared samples to better understand the ways in which regional differences create variation in analogous units. Wrote a comprehensive thesis that conforms to the Whitman College honors thesis guidelines. 	
South Dakota School of Mines and Technology , Death Valley, CA	Dec 2024 – Jan 2025
Field Camp	
<ul style="list-style-type: none"> Conducted geologic mapping and stratigraphic profiling in and around Death Valley National Park during a two-week on-site field camp program. Wrote technical reports for three projects, translating detailed field notes into coherent scientific writing and meeting strict deadlines. 	
National Oceanic and Atmospheric Administration , Honolulu, HI; <i>Okeanos Explorer</i>	June – July 2024
Explorer-in-Training	
<ul style="list-style-type: none"> Monitored, collected, and processed real time bathymetric multibeam data during a daily eight hour shift. Monitored water column data and sub-bottom sonar data in real time. Utilized expendable bathythermographs to collect underway sound velocity profiles and applied sound velocity corrections to sonar data. Collected conductivity and temperature profiles utilizing the Conductivity Temperature Depth (CTD) rosette. Collected and processed water samples for environmental DNA (eDNA) analysis. Utilized Qimera and Fledermaus to post-process data and create daily visualizations of multibeam bathymetric, acoustic backscatter, and sub-bottom observations to share with shore-based scientists in real time. 	
Whitman College Belden Watts Faculty Student Research Award , Walla Walla, WA	May – Sept 2024
Student Researcher	
<ul style="list-style-type: none"> Conducted field work in the Columbia River Basin collecting samples and creating stratigraphic columns of Missoula Flood and Bonneville Flood deposits with particular attention to eddies and gravel bars. Performed grain size analyses on collected samples using sieve analysis and hydrometer tests. Executed statistical analyses to evaluate grain size distributions and created visual representations of the data. 	
Whitman College Hubbard Research Award , John Day Fossil Beds National Monument, OR	March 2024
Student Researcher	
<ul style="list-style-type: none"> Conducted field work in the John Day National Monument with a professor and fellow student to evaluate areas of interest for future sedimentologic and stratigraphic research. Hiked several miles a day in rugged terrain to reach areas of interest. 	

- Collaborated with the National Park Service to obtain appropriate permits, safety training, and safety equipment.

Morton Arboretum/Nature Conservancy, Chicago, IL

June – Aug 2022

Research Technician

- Conducted field work in West Chicago logging location and type of tree, evaluating tree health, and documenting tree stewardship utilizing the Healthy Trees, Healthy Cities app and Google Sheets after completing the appropriate training.
- Performed statistical analysis in R using collected data and data from previous field season to create an infographic for the general public about urban tree health, soil compaction, and land use.
- Fostered friendly, transparent relationships with residents to explain the project and gain insight into their perspectives.
- Prioritized safety in city environments by wearing high-vis safety vests, checking in with supervisor upon arrival to and departure from sites, avoiding private property, and involving the authorities when necessary.

PUBLICATIONS

Poulton Kamakura, R., Kazanski, C., Clark, J., Rollinson, C., Johnson, M., Domec, J., **Huang, E.**, Orozco, K., Holmes, R. (in review). Tree type and urban growing conditions influence street tree stress: Lessons from two U.S. cities.

TEACHING EXPERIENCE

Whitman College Academic Resource Center, Walla Walla, WA

April 2024 – May 2025

Peer Tutor

- Tutored students in Chemistry I & II, Introductory Geology, Sedimentology and Stratigraphy, and Igneous and Metamorphic Petrology in a one-on-one format.

Whitman College Geology Department, Walla Walla, WA

Sept – Dec 2024

Teaching Assistant, Igneous and Metamorphic Petrology

- Attended weekly lab periods of an upper level geology course to answer questions and offer support to 15 students.
- Assisted students with usage of the petrographic microscope, including mineral identification, interpretation, taking photomicrographs, and creating petrographic atlas pages.
- Held weekly office hours and scheduled appointments with students as requested.

Whitman College Academic Resource Center, Walla Walla, WA

Student Note-Taker, Earth History

Jan 2025 – May 2025

Student Note-Taker, Structural Geology

Sept – Dec 2024

Student Note-Taker, Igneous and Metamorphic Petrology

Sept – Dec 2023

- Took detailed lecture notes on behalf of a student to aid their learning process, scanning and submitting notes immediately after each class.
- Collaborated with the Director of the Academic Resource Center to distribute notes to the appropriate students while maintaining confidentiality of the students involved.

Whitman College Geology Department, Walla Walla, WA

Sept – Dec 2023

Teaching Assistant, Geologic History of the Pacific Northwest

- Taught 25 students in an introductory geology class basic geologic concepts, skills, and tools during weekly lab periods.
- Fostered a safe, welcoming, and encouraging learning environment to empower first- and second-year students to explore earth sciences regardless of identity, systemic barriers, or stereotypes.

LEADERSHIP, SERVICE, AND ACTIVITIES

Geo and Environmental Scientists of Color Club, Whitman College, Walla Walla, WA

Jan 2024 – May 2025

Founder and President

- Founded a new club to facilitate conversations around diversity and accessibility in the geo and environmental sciences.
- Served as a resource for students of color in these disciplines by offering a community centered on experiences of marginalized communities in STEM, compiling a running list of professional opportunities for students, and fostering meaningful connections between members.
- Planned monthly meetings with a variety of activities such as rock painting, pumpkin carving, and coffee breaks.
- Invited, coordinated, and hosted scientists of color as guest speakers on campus so students can see their identities represented in the field they are intending to pursue.
- Collaborated with faculty, staff, peers, fellow campus leaders, alumni, and other individuals in the earth sciences to brainstorm ideas, plan events, and maximize outreach.

Family Science Night, Walla Walla, WA

March 2024 – April 2025

Volunteer

- Helped set up, run, and clean simple, hands-on science demonstrations (e.g., making slime, using microscopes, DIY fossils) for local elementary students and their families.
- Fostered enthusiasm for science in local schools and encouraged young students to pursue scientific interests.

Whitman College Chamber Music, Walla Walla, WA

Jan 2022 – April 2025

Bassoonist

- Collaborated with 1-5 peers to prepare music to share with the community while balancing a full class load and maintaining a high GPA.
- Practiced individually to prepare for weekly group rehearsals.

SKILLS

Data: Field data collection, petrographic microscope, scanning electron microscope, sample preparation, sediment size analysis, fossil handling, stream profiling, multibeam sonar

Software: Adobe Illustrator, ArcGIS Pro, Microsoft Excel, R

PRESENTATIONS

Huang, E. (2025, April 15). *Stories of the Sauk Sequence sandstones: A comparison of the Addy Quartzite and the Flathead Sandstone* [Conference presentation]. Whitman Undergraduate Conference, Whitman College, Walla Walla, WA.

Huang, E. (2023, April 11). *Exploring the Arab Spring in fiction* [Conference presentation]. Whitman Undergraduate Conference, Whitman College, Walla Walla, WA.