

As an undergraduate geology student at the University of Nevada, Reno, I am pursuing a research-driven academic path with the goal of entering graduate school to study Earth systems through the lenses of paleontology, volcanology, and climate change. My long-term career aspiration is to contribute to research that connects fieldwork, laboratory analysis, and museum curation to better understand Earth's past and its implications for future environmental conditions. Throughout my undergraduate experience, I have pursued interdisciplinary work across geology, archaeology, entomology, and museum studies. I have participated in both paleontological and archaeological excavations, worked on insect population studies in the Amazon, curated and digitized natural history collections, and mentored students through science outreach and education. These experiences have shaped my understanding of the interconnectedness of Earth's systems and sparked my interest in applying scientific research to modern day issues.

This year, my research centers on Axial Seamount, an actively monitored submarine volcano located along the Juan de Fuca Ridge. I am analyzing olivine crystals from its 2011 and 2015 eruptions using electron microprobe imaging and element mapping. My work focuses on identifying chemical zoning and diffusion profiles to reconstruct the pre-eruptive magmatic history and determine magma storage conditions. This research will enhance our understanding of submarine volcanic systems and the processes that precede eruptions, while also contributing to models used to interpret volcanic activity on other planetary bodies. By studying Earth's volcanoes in detail, we gain important insights into similar geological processes on planets and moons across the solar system.