

Alyssa Smith, Portland State University, Portland, OR, for her project: *Regional scale investigation of widespread basaltic andesites of the central Oregon High Cascades.*



Alyssa is a Ph.D. Candidate at Portland State University, working with Dr. Martin Streck. She previously obtained her M.S. in Geology at Northern Arizona University, her B.S. in Geology at Sacramento State, and A.S. degrees in Geology and Chemistry at Modesto Junior College in California.

Alyssa's doctoral research centers on mafic volcanism in the central Oregon High Cascades with particular emphasis on basaltic andesites. She is using a combination of bulk rock geochemistry, microscopy, age dating, and radiogenic isotopes to delve into the petrogenesis of the most voluminous expression of volcanism in the central High Cascades. She has conducted four summers of fieldwork, taking samples from ~120 previously unsampled mafic vents throughout central Oregon. Data from this project will further our understanding of mafic volcanism both spatially and temporally in a portion of the Cascades that has been largely overlooked. The funding from the Lipman Student Research Grant will be used for radiogenic isotope analyses (Sr, Nd, and Pb) for basaltic andesite endmembers in her study area. These data will be crucial for geochemical modeling of petrogenetic processes in the central Oregon High Cascades.

In addition to Alyssa's research emphases in igneous petrology and geochemistry, she is passionate about science communication and furthering accessibility in the geosciences. Her work has allowed her to involve undergraduate field assistants in the research process and to give presentations for local groups of geology enthusiasts. Alyssa thanks the Howard and Jean Lipman Foundation and the GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division for this financial support and looks forward to sharing her findings!