

Elly Thistlethwaite, The University of British Columbia, Vancouver, BC, Canada for her project: *The Trace Element Composition of Deep Mantle Heterogeneities in the Hawaiian Plume Source*

Elly Thistlethwaite is a master's student at the University of British Columbia (UBC), conducting research at the Pacific Centre for Isotopic and Geochemical Research under the supervision of Dr. Dominique Weis. Her master's project focuses on defining the variations in trace element compositions across the Hawaiian Islands. Using a dataset of 1000+ open-source Hawaiian basalt samples, Elly applies supervised machine learning methods to classify these variations. As Hawaiian basalts preserve their mantle source signatures, this research provides insights into compositional heterogeneity in the deep mantle.



Funding from the GSA Lipman Student Research Grant will support the trace element analysis of 43 samples from the West Maui volcano. Increasing the dataset from this relatively understudied Hawaiian volcano will improve machine learning classification accuracy and provide insight into this volcano's unique geochemical characteristics.

Originally from the Sunshine Coast in British Columbia, Elly earned her B.Sc. in Geology from UBC in 2024. As an undergraduate, she completed a thesis under the supervision of Dr. Dominique Weis, also focusing on trace element variations across the Hawaiian Islands.