

Teagan Maher, Western Washington University, Bellingham, WA, for her project: *Characterizing eruption initiation mechanisms and storage conditions at the high-threat Kolumbo volcano, Greece.*

Teagan Maher is a second-year master's student in Geology at Western Washington University, supervised by Dr. Sue De Bari. Her thesis research focuses on geochemically characterizing the crystal assemblages in tephra erupted from recent eruptions at Kolumbo cored during the International Ocean Discovery Program Expedition 398. She has developed a time-integrated model of the transcrustal magma plumbing system beneath the submarine volcano by inferring pre-eruption magmatic processes and eruption initiation mechanisms, determining magma storage conditions, including pressure, temperature, and H₂O content, and ascertaining whether the magma storage and eruption initiation mechanisms at Kolumbo have changed over time.



With the support of the Lipman Student Research Grant, Teagan can complete the final piece of the puzzle and fund the use of instrumentation, such as the Electron Microprobe, to collect quantitative major and minor element chemistry of magnetite-ilmenite minerals. The collection of these geochemical data is crucial in confirming pre-eruptive temperatures through thermometry calculations and elucidating the pre-eruption initiation mechanism between eruptions.

Teagan grew up in Cape Town, South Africa, and graduated from the University of Hawai'i at Hilo with a B.S. in Geology in 2023, where she developed a passion for volcanoes. Upon completing her master's degree, she aspires to pursue a Ph.D. and a career in hazard mitigation and community awareness related to volcanology.