Michelle Muth
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Education

Ph.D. Earth Science, University of Oregon, Eugene, OR 2021 (expected)
Research advisor: Paul Wallace

B.S. Earth Science, Rice University, Houston, TX 2015
Research advisor: Rajdeep Dasgupta
Distinction in Research and Creative Work
Thesis: The effect of variable Na/K on CO_2 solubility in slab-derived rhyolitic melts

Sea Education Association, Woods Hole, MA Fall 2013
6 weeks oceanography coursework, 6 weeks at sea in Eastern Pacific
Project: Effect of Low pH on the Growth of Phytoplankton in the Eastern Pacific Ocean

Work and Research Experience

Graduate Teaching Fellow, University of Oregon Sept. 2017- Present

First Year Graduate Fellow, University of Oregon 2016- 2017

Geoscientist, AECOM, Philadelphia Area Remediation Services Group 2015- 2016

Outdoor Education Instructor, Texas Parks and Wildlife Department Fall 2014

Undergraduate Researcher, Rice University Experimental Petrology Group 2013- 2015

Student Consultant, Rice University Center for Communication 2012- 2015

NSF-REU Intern, University of Minnesota Institute for Rock Magnetism Summer 2013
Research advisor: Josh Feinberg
Conducted

Presentations

Muth, M., Wallace, P. J. Sulfur, Copper, and the Oxidation State of the Southern Cascade Arc. *Presented at 2017 CIDER Subduction Zone Workshop, Berkeley, CA, 19 June – 21 July.*

Muth, M., Duncan, M. S., Dasgupta, R. Effect of variable Na/K ratio on CO_2 solubility in slab-derived rhyolitic melts- An experimental study. *Presented at 2014 Fall Meeting, AGU, San Francisco, CA, 15-19 December.*

Muth, M., Feinberg, J., Frahm, E., Stillinger, M. Magnetic Differentiation of Obsidian Volcanism at Glass Buttes, Oregon. *Presented at NSF-REU University of Minnesota Earth Sciences Summer Internship Poster Session, 9 August 2013.*

Feinberg, J. M., Frahm, E., **Muth, M**. Magnetic studies of archaeological obsidian: Variability of eruptive conditions within obsidian flows is key to high-resolution artifact sourcing. *Presented at 2013 Fall Meeting, AGU, San Francisco, CA, 9-13 December.*

Publications

Frahm, E., Feinberg, J. M., Schmidt-Magee, B. A., Wilkinson, K., Gasparyan, B., Yeritsyan, B., Karapetian, S., Meliksetian, K., **Muth, M.**, & Adler D. S. (2014). Sourcing geochemically identical obsidian: multiscalar magnetic variations in the Gutansar volcanic complex and implications for Palaeolithic research in Armenia, *Journal of Archaeological Science,* 47, 164-178.

Field Experience

Lassen Volcanic Field, CA July 2017

Field sampling of tephra deposits at selected cinder cones with the goal of collecting olivine hosted melt inclusions for subsequent analysis.

Long Valley Caldera, CA August 2017

Assisted with detailed field sampling of inter-layered ignimbrite and fall deposits.

Lab Experience

Fourier Transform Infrared Spectroscopy (FTIR)

Electron Microprobe (EPMA)

Laser Ablation ICP-MS

End-loaded Piston Cylinder Apparatus

Awards Received

Emeritus Faculty Tribute Award (2017)

First Year Graduate Student Fellowship (2016)

Torkild Rieber Award in Earth Science (2015)

The Eugen Merten Memorial Prize in Geology and Geophysics (2013)

Chevron Earth Science Minority Scholarship (2013)

Organizations and Service

CIDER (Cooperative Institute for Dynamic Earth Research)
Participant Summer 2017

- Participated in collaborative research project: "The ins and outs of mélange diapirs: a multidisciplinary approach to formation, ascent, and observation".
- Abstract accepted to present results at 2017 AGU Fall meeting.

University of Oregon CMiS (Community for Minorities in STEM)
Member 2016- Current
Social and Outreach Chair 2017- Current

"Mad Duck" Science Outreach Program

- Organized and lead 4-hour long science outreach module for local middle school students.
- Facilitated module design collaborations between Mad Duck and UO CMiS.

Mineralogical Society of America
Member 2017- Current

Geological Society of America
Member 2016- Current

American Geophysical Union
Member 2014- Current