Lissie Connors

Ph.D. Candidate • University of Oregon Department of Earth Sciences
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Education

Ph.D. Earth Science, University of Oregon — Expected 2024

Dissertation: Microanalytical investigations of magma sources, storage, and ascent at the flanks of Nyiragongo and Nyamulagira volcanoes
Advisor: Paul J. Wallace

B.S. Geology & Environmental Geosciences, Lafayette College — 2014-2018

Honors in Geology, minor in Environmental Science
Thesis: Apatite as a Monitor of Magmatic Processes at Torfajökull Volcanic Center
Research advisor: Tamara Carley

Research Experience

University of Oregon Department of Earth Sciences
Graduate Research Assistant — 2019 –

Lafayette College Department of Geology & Environmental Geosciences
Honors thesis student — 2017 – 2018

American Museum of Natural History Department of Earth & Planetary Sciences
NSF REU Fellow — 2017

Publications

Connors L, Carley TL, Fiege A (2020) Apatite as a Monitor Of Dynamic Magmatic Evolution At Torfajökull Volcanic Center, Iceland: Chapter 3 In Vetere F. And Fiege A. (Eds): Dynamic Magma Evolution (AGU Geophysical Monograph), John Wiley & Sons. doi.org/10.1002/9781119521143.Ch3

Awards, Grants, & Scholarships

University of Oregon
Earth Science Department Research Recognition Award ($750) — 2023
Warren DuPre Smith Scholarship ($1,000) — 2023
Building computational resources for data-driven petrology
Johnston Scholarship ($1,000) — 2022
3D analysis of melt inclusions using X-ray microscopy
Warren DuPre Smith Scholarship ($1,000) — 2020
Analysis of vapor bubbles in melt inclusions using Raman spectroscopy
Earth Sciences First Year Summer Fellowship ($5,800) — 2019

National Science Foundation
EAR Collaborative Research Award ($227,229 – PI: Paul Wallace, listed graduate student collaborator) — 2021
Volatile sources, eruption triggers, and magma ascent rates for mafic alkaline magmas at Nyiragongo and Nyamulagira volcanoes, DR Congo, East African Rift
Graduate Research Fellowship (Honorable mention, not funded) — 2021

Geological Society of America
Lipman Research Award ($2,000) 2020
Assessing magma storage and volatile fluxes in the Nyiragongo Volcanic Field

Lafayette College
Arthur Montgomery Geology Award 2017

Laboratory & Analytical Techniques

- Electron microprobe analysis (EMP)
- Fourier-Transform Infrared Spectroscopy (FTIR)
- Secondary Ion Mass Spectrometry (SIMS)
- X-ray Absorption Near-Edge Spectroscopy (XANES)
- Laser Ablation ICP MS
- Confocal Raman Spectroscopy
- X-ray microscopy (XRM)
- Scanning Electron Microscopy (SEM)
- X-ray diffraction (XRD)

Teaching Experience

University of Oregon Center Department of Earth Sciences
Teaching Assistant 2019 –
- Introduction to Petrology
- Field Studies in Fire & Ice (2-week summer field camp section)
- Earth Surface & Environment (online)
- The History of Life (online)
- Earth Materials (online)
- Exploring Earth's Environment
- Exploring Planet Earth

Guest lecturer 2022
- Mineralogy

Fort Hays State University Sternberg Museum of Natural History
Teaching Assistant (Virtual middle-school camp) 2020

Lafayette College Department of Geology & Environmental Geosciences
Teaching Assistant 2016 – 2018
- Environmental Geology
- From Fire to Ice: An Introduction to Geology

Service & Leadership

Graduate Teaching Fellows Federation
Vice President of Membership 2023 –
Natural Sciences Lead 2021 – 2022

Inclusivity and Gender Diversity in Earth & Atmospheric Sciences (IgDEAS)
Graduate student organizer 2019 –

Professional Experience

American Physical Society
Science Communication Intern 2019

American Geophysical Union

Talent Pool Intern 2018

National Park Service
Geoscientist-in-the-park 2018

Professional Development

Pre-IAVCEI Conference Workshop: Modeling volatile behavior in magmas 2023
GeoPRISMS Workshop: Volatiles from source to surface 2022
UO workshop: Introduction to supercomputing 2021
Pre-Goldschmidt Conference Workshop: Diffusion modeling 2020

Invited Presentations

Volcanology Students of Oregon (VolcOR) Conference
A first look at primitive melt inclusions from the flanks of Nyiragongo & Nyamulagira 2023

University of Southern California Lithospheric Dynamics Seminar
Apatite as an indicator of pre-eruptive volatile behavior in magmatic systems 2019

Conference Presentations

Sims K, Stark GJ, Phillips E , Blichert-Toft J, Reagan M, Scott SR, Tedesco D, Wallace P, **Connors L** (2023) Lithospheric controls on alkaline volcanism: evidence from Nyiragongo and Nyamulagira volcanoes, virunga volcanic province, DR Congo, Geological Society of America Abstracts with Programs. Vol. 55, doi: 10.1130/abs/2023RM-388091

Connors L, Sublett DM, Wallace PJ, Sims KWW, Bodnar RJ, (2023) Rapid eruption run-up & magma ascent at flank vents of Nyiragongo & Nyamulagira: perspectives from diffusion in olivine, 2023 International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI) Scientific Assembly, oral, 9C

Cashman KV, Bussard R, **Connors L**, Harper C (2022) How is Magma Stored Beneath, and Supplied to, Regions of Distributed Volcanism? (Invited), *AGU Chapman Conference on Distributed Volcanism and Distributed Volcanic Hazards*, oral, I-3

Connors L, Sublett DM, Wallace PJ, Sims KWW, Bodnar RJ (2022) Examining volatiles and pre-eruptive storage histories of Nyiragongo's most primitive magmas, *Goldschmidt Annual Meeting 2022*, poster, 5fP3

Connors L, Sublett DM, Wallace PJ, Sims KWW, Bodnar RJ (2021) Investigating magma storage histories at flank cones of Nyiragongo and Nyamulagira with olivine-hosted melt inclusions and diffusion chronometry, *2021 Fall Meeting, American Geophysical Union*, poster, V15D-0112

Connors L, Wallace PJ, Sims KWW, Sublett DM, Bodnar RJ (2020) Tracing the sources of CO2-rich magmas at Nyiragongo and Nyamulagira using olivine-hosted melt inclusions, *2020 Fall Meeting, American Geophysical Union*, oral (virtual) V026-02

Tate-Jones KM, Muth M, **Connors L**, Dechert AE, Hunter B, Hampton RL & Sahakian VJ, (2020) The IDEAS Initiative: a department-wide collaboration to promote gender equity in the earth sciences, *Geological Society of America Abstracts with Programs,* Vol. 52, No. 6 (virtual) doi: 10.1130/abs/2020AM-358408

Rein IMT, **Connors L**, Ruger EV, Carley TL, Gross J. (2020) Apatite as an indicator of pre-eruptive destabilization at Icelandic volcanoes, *Geological Society of America Abstracts with Programs,* Vol. 52, No. 6, (virtual) doi: 10.1130/abs/2020AM-358977

Carley TL, **Connors L**, Rein IMT, Ruger E, Gross J, Burger P, (2020) Major and trace element geochemistry of Icelandic apatite: A case study at Torfajökull Volcano, *Goldschmidt Abstracts*, No. 323 (virtual) *Conference moved to a virtual platform due to COVID-19

Rein I, **Connors L**, Ruger E, Carley TL, (2020) Apatite Geochemistry Across the Neovolcanic Zones of Iceland: Establishing a Baseline and Searching for Spatial LLSignificance, *Northeastern Geological Society of America Abstracts with Programs,* poster (Reston, VA) doi: 10.1130/abs/2020SE-344922 *Conference events canceled due to COVID-19

Ruger E, Rein I, **Connors L,** Carley TL (2020), Using Icelandic apatites to investigate elevated contents of Rare Earth Elements within Iceland, *Northeastern Geological Society of America Abstracts with Programs,* poster (Reston, VA) doi: 10.1130/abs/2020SE- 344930 *Conference events canceled due to COVID-19

Connors ME, Carley TL, & Fiege A, (2019), Compositional Evolution of Torfajökull Central Volcano, Iceland: Perspectives from the Apatite Record, *Northeastern Geological Society of America Abstracts with Programs,* paper 23-6, oral (Portland, ME) doi: 10.1130/abs/2019NE-328361

Connors L, Carley TL, & Fiege A, (2018) Apatite as a Monitor of Volatile and Trace Element Evolution at Torfajökull Central Volcano, Iceland, *2018 Fall Meeting, American Geophysical Union*, V11F-1313, poster (Washington, D.C.) V11F-0075C

Connors ME, Fiege A, & Carley TL (2018) Using Apatite to Investigate the Volatile History of Torfajökull Central Volcano, Iceland *Geological Society of America Abstracts with Programs,* Vol 50, No. 6, poster (Indianapolis, IN*)* doi: 10.1130/abs/2018AM-324303

Connors ME, Tailby ND, & Fiege A (2017) Using High-Resolution Mapping of Crystallized Melt Inclusions to Understand the Evolution of S and I-Type Volcanics from the Lachlan Fold Belt, Australia. *Geological Society of America Abstracts with Programs* Vol. 49, No. 6, paper 255-8, poster (Seattle, WA) doi: 10.1130/abs/2017AM-306207

Connors ME, & Hampton SJ (2017) Relative Age and Formation of a Phreatomagmatic Diatreme in the Mandamus Igneous Complex, New Zealand. *Northeastern Geological Society of America Abstracts with Programs,* Vol. 49, No. 2, paper 26-3, poster (Pittsburgh, PA*)* doi: 10.1130/abs/2017NE-290385