

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) <i>Assessing magma storage and volatile fluxes in the Nyiragongo Volcanic Field</i>	2020
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 –
<ul style="list-style-type: none"> ▪ 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
<ul style="list-style-type: none"> ▪ 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
<ul style="list-style-type: none"> ▪ 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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/10.1130/abs/2018AM-324303)

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](https://doi.org/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](https://doi.org/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](https://doi.org/10.1130/abs/2017NE-290385)