

Edward W. Marshall

Curriculum Vitae (August 2020)

| | | |
|---------------------------------|--|--|
| CONTACT INFORMATION | Askja, Room 150 University of Iceland Sturlugata 7 101 Reykjavik, Iceland | Phone: +354 768 0147 edmarshall@hi.is H-index: tinyurl.com/ybf9jrao Citizenship: United States |
| DEGREES | 2018 Ph.D. in Geology, University of Texas at Austin; <i>Advisors: Jaime Barnes and John Lassiter</i> 2012 B.A.(with honors) in Geology, Earlham College | |
| RESEARCH FIELDS | stable and radiogenic isotope geochemistry, mantle geochemistry, igneous petrology | |
| PROFESSIONAL EXPERIENCE | 2018-present: Rannis Postdoctoral Research Fellow, Institute of Earth Sciences, University of Iceland 2013-2018: Graduate Research Assistant, Jackson School of Geosciences, University of Texas at Austin 2012-2017: Graduate Teaching Assistant, Jackson School of Geosciences, University of Texas at Austin 2011-2012: Undergraduate Teaching Assistant, Department of Geology, Earlham College | |
| JOURNAL ARTICLES | On the (mis)behavior of water in the mantle: controls on nominally anhydrous mineral water contents in mantle peridotites Marshall, E.W. , Lassiter, J.C., Barnes, J.D. (2018) Earth and Planetary Science Letters. A low viscosity lunar magma ocean forms a stratified anorthitic flotation crust with mafic poor and rich units . Dygert, D., Lin, J.F., Marshall, E.W. , Kono, Y. Gardner, J.E. (2017) Geophysical Research Letters. The role of serpentinite-derived fluids in metasomatism of the Colorado Plateau (USA) lithospheric mantle . Marshall, E.W. , Barnes, J.D., Lassiter, J.C. (2017). Geology. Mantle melt production during the 1.4 Ga Laurentian magmatic event: Isotopic constraints from Colorado Plateau mantle xenoliths . Marshall, E.W. , Lassiter, J.C., Barnes, J.D., Luguét, A., Lissner, M. (2017). Geology. Subducted lithosphere controls halogen enrichments in the Iceland mantle plume source . Hall-dorsson, S.A., Barnes, J.D., Sefansson, A., Hilton, D.R., Hauri, E.H., Marshall, E.W. (2016). Geology. | |
| TEACHING EXPERIENCE | Course Co-Coordinator (Spring '20): Solid Earth Geochemistry; Course rating: 9/10 Teaching assistant (fall '17): Earth Materials; TA rating: 4.9/5.0 Teaching assistant (spring '17): Introduction to the Solar System; TA rating: 4.2/5.0 Teaching assistant (spring '15): Igneous and Metamorphic Petrology; TA rating: 5.0/5.0 Teaching assistant (spring '14): Igneous and Metamorphic Petrology; TA rating: 4.9/5.0 Teaching assistant (spring '13): Igneous and Metamorphic Petrology; TA rating: 4.6/5.0 Teaching assistant (fall '12): Earth Materials; TA rating: 4.6/5.0 | |
| RECENT CONFERENCE PRESENTATIONS | Understanding the (Mis)behavior of Water Contents in Nominally Anhydrous Mantle Minerals Marshall, E.W. , Lassiter, J.C., Barnes, J.D. (2018). Goldschmidt Conference, Boston, MA (talk). New Re-Os and Sm-Nd isotopic constraints on the tectonic setting of the 1.4 Ga Laurentian magmatic event . Marshall, E.W. , Lassiter, J.C., Barnes, J.D. (2017). Fall Meeting, GSA, Seattle, WA (talk). | |

Discovery of composite diopside-magnetite lamellae in discrete olivine crystals from Colorado Plateau diatremes: indication of former hydrous ringwoodite. Sakamaki, K., Sato, Y., **Marshall, E.W.**, Ogasawara, Y. (2016). Fall Meeting, AGU, San Francisco, CA (Poster).

Viscosity and Structure of a Late Lunar Magma Ocean Liquid: Implications for the Purity of Ferroan Anorthosites and the Dynamics of a Crystallizing Magma Ocean. Dygert, N.J., Lin, J.F., **Marshall, E.W.**, Kono, Y., Gardner, J.E. (2016). Fall Meeting, AGU, San Francisco, CA, (Poster).

Effects of magma chamber processes on water content and H₂O/Ce ratios in HIMU magmas from the Cook-Austral Islands: New insights from clinopyroxene phenocrysts. Bruce, L.A., Lassiter, J.C., **Marshall, E.W.** (2016). Fall Meeting, AGU, San Francisco, CA, (Poster).

Constraints on the Petrogenesis of the Laurentian 1.4 Ga Pluton Belt: A Sm-Nd and Lu-Hf Isotope Study of Peridotite Xenoliths from the Colorado Plateau. **Marshall, E.W.**, Lassiter, J.C., Barnes, J.D. (2016) Goldschmidt Conference, Yokohama, Japan (Talk).

AWARDS

2019: Rannis Postdoctoral Research Fellowship
 2018: Best Graduate Teaching Assistant 2017
 2016: Goldschmidt Conference travel grant
 2015: Jackson School of Geosciences Petrography Contest 1st place
 2014: Geological Society of America graduate research grant
 2013: Geological Society of America graduate research grant
 2012: Grave fellowship (to a distinguished graduating student in the sciences)
 2010: Geological Society of America undergraduate research grant

RELEVANT TECHNICAL SKILLS

Gas Source Isotope Ratio Mass Spectrometry, Oxygen Isotope analysis by Laser Fluorination, Scanning Electron Microscopy, Thermal Ionization Mass Spectrometry, Clean lab techniques and separation procedures for isotopic analysis of: Rb-Sr, Sm-Nd, Lu-Hf, Re-Os, Pb.
 Laser and Multi-collector Inductively Coupled Plasma Mass Spectrometry, Secondary Ion Mass Spectrometry, Hydrogen isotope analysis via High-Temperature Conversion Elemental analyzer, Electron Probe Microanalysis, Thin Section Preparation, pMelts software.

PROFESSIONAL ACTIVITIES AND AFFILIATIONS

Seminar Coordinator: University of Iceland Institute of Earth Sciences weekly seminar 2019-present
Mentor: **GeoFORCE**, 2016-2018. *Mentor in the GeoFORCE graduate student mentor program. Incoming GeoFORCE freshman are paired with a graduate student that serves as a mentor for undergraduate students throughout their academic tenure.*
Undergraduate Supervisor:
Undergraduate student honors thesis co-supervisor of Danny Anderson 2016-2018.
Graduate Supervisor:
University of Iceland MS thesis co-supervisor for Andri Ingvarsson 2019-present.
Outreach: *Guest scientist for 7th grade at University School*
Central Texas Regional Science Fair judge, 2015-2018.
Weekly "Science Corner" segment on the Telefriends podcast, 2016-2018
Volunteer social media moderator for March for Science 2016
"Drop in" teacher for the Pre-K class at Greene Street Friends School
Student Representative: Petrology search committee, 2013.

FIELD EXPERIENCE

Barberton Greenstone belt, South Africa
 Navajo Volcanic Field, Arizona, USA
 Bancroft, Ontario, Canada
 University of Canterbury field camp, New Zealand
 Black Hills, South Dakota, USA
 Research cruise aboard R/V Thomas G. Thompson for OBS recovery at Endeavor Ridge

PROFESSIONAL
SOCIETIES

| | |
|--------------|----------------------------------|
| 2013-Present | Mineralogical Society of America |
| 2012-Present | American Geophysical Union |
| 2011-Present | Geological Society of America |

MISCELLANEOUS
INTERESTS

hiking, birdwatching, bicycling, board games, beer