

Chelsea Mackaman-Lofland

Department of Geological Sciences
University of Texas at Austin
Austin, TX 78712

chelsm42@utexas.edu
office: JGB 3.330

EDUCATION

- 2020 (expected) Ph.D., Structural Geology and Tectonics, University of Texas at Austin
Structural and sedimentary evolution of the Argentine Andes (27–33°S)
Advisor: Prof. Brian K. Horton
- 2012 B.S. (*Summa Cum Laude*), Earth and Space Sciences, University of Washington

PROFESSIONAL POSITIONS

- 2014 - present Graduate Student Fellow and Teaching Assistant, University of Texas at Austin
- 2017 Instructor, GeoFORCE High School Summer Academy (July 15-21)
<http://www.jsg.utexas.edu/geoforce/students/summer-academies/>
- 2010 - 2013 Undergraduate Researcher and Teaching Assistant, University of Washington

HONORS • AWARDS

- 2016 - 2020 National Science Foundation (NSF) Graduate Research Fellowship
- 2016 Jackson School of Geosciences Off-Campus Research Award
- 2015 National Geographic Young Explorers Grant
- 2015 Geological Society of America (GSA) Graduate Student Research Grant
- 2015 GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division Award
- 2015 American Association of Petroleum Geologists Graduate Student Research Grant
- 2014 - 2015 Jackson School of Geosciences Fellowship
- 2009 - 2012 Dovie Samuelson Endowed Scholarship
- 2009 - 2012 Washington NASA Space Grant Consortium Scholarship

PUBLICATIONS

Mackaman-Lofland, C., Horton, B.K., Fuentes, F., Constenius, K.N. and Stockli, D.F. (2018) Mesozoic to Cenozoic retroarc basin evolution during changes in tectonic regime, southern Central Andes (31–33°S): Insights from zircon UPb geochronology. *Journal of South American Earth Sciences*, doi: 10.1016/j.jsames.2018.10.004.

Mackaman-Lofland, C., Brand, B.D., Taddeucci, J. and Wohletz, K. (2014) Sequential fragmentation/transport theory, pyroclast size–density relationships, and the emplacement dynamics of pyroclastic density currents—A case study on the Mt. St. Helens (USA) 1980 eruption. *Journal of Volcanology and Geothermal Research*, 275, 1-13.

Brand, B.D., **Mackaman-Lofland, C.**, Pollock, N.M., Bendaña, S., Dawson, B. and Wichgers, P. (2014) Dynamics of pyroclastic density currents: Conditions that promote substrate erosion and self-channelization—Mount St Helens, Washington (USA). *Journal of Volcanology and Geothermal Research*, 276, 189-214.

TALKS • POSTERS • SEMINARS

Mackaman-Lofland, C., Horton, B.K., Stockli, D.F., Fuentes, F., Constenius, K.N., Alvarado, P., Capaldi, T.N., Orozco, P. (2018) Andean deformation and foreland basin evolution during Neogene changes in subduction zone geometry (32-33°S). Jackson School of Geosciences Student Research Symposium, University of Texas at Austin, Austin, TX, 3 Feb.

Mackaman-Lofland, C., Horton, B.K., Fuentes, F., Constenius, K.N., Stockli, D.F. (2017) Mesozoic-Early Cenozoic retroarc basin evolution in response to changing tectonic regimes, southern Central Andes. Talk T31E-05, AGU Fall Meeting, New Orleans, LA, 13 Dec.

Mackaman-Lofland, C., Horton, B.K., Fuentes, F., Constenius, K.N., Stockli, D.F. (2017) Retroarc basin evolution in response to changing tectonic regimes, southern Central Andes. Jackson School of Geosciences Lithosphere and Deep Earth Seminar, University of Texas at Austin, Austin, TX, 18 Oct.

Mackaman-Lofland, C., Horton, B.K., Fuentes, F., Constenius, K.N., McKenzie, N.R., Orozco, P., Alvarado, P.M. (2015) Preliminary depositional and provenance records of Mesozoic basin evolution and Cenozoic shortening in the High Andes, La Ramada fold-thrust belt, southern-central Andes (32-33°S). Poster T23A-2916, AGU Fall Meeting, San Francisco, CA, 14-18 Dec.

Mackaman-Lofland, C., Brand, B.D., Taddeucci, J. (2012) Particle size-density relationships in pyroclastic deposits: Using component subpopulations to elucidate depositional conditions. Poster V41B-278, AGU Fall Meeting, San Francisco, CA, 3-7 Dec.

Mackaman-Lofland, C., Brand, B.D., Dufek, J. (2010) A closer look at the pyroclastic density current deposits of the May 18, 1980 eruption of Mt St Helens. Abstract V13A-2339, AGU Fall Meeting, San Francisco, CA, 13-17 Dec.

TEACHING EXPERIENCE

Teaching Assistant

- 2018 Structural Geology (GEO 428), University of Texas at Austin
- 2016 Field Camp (GEO 660), University of Texas at Austin
- 2016 Introduction to Field Methods (GEO 420K), University of Texas at Austin
- 2015 Introduction to Geology (GEO 303), University of Texas at Austin
- 2011 Geobiology (ESS 313), University of Washington (undergraduate)
- 2011 History of the Earth (ESS 213), University of Washington (undergraduate)

Guest Lectures

- 2017 “The sedimentary record of mountain building,” Texas State University (invited talk and Geology Club Q&A)

PROFESSIONAL SERVICE

- 2018 Co-Convener and Chair, AGU Session #50493: Mountain Building in Collisional and Cordilleran Orogenic Systems