

Erin Nicole DiMaggio

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Academic Training

Arizona State University, Tempe

Ph.D. Candidate, School of Earth and Space Exploration, supervised by Dr. J. Ramón Arrowsmith.

Dissertation title: The Geology of the Eastern Ledi-Geraru, Afar Depression, Ethiopia

Arizona State University, Tempe

M.S. Geological Sciences, 2007, supervised by Dr. Ramón Arrowsmith. Thesis title: Volcanic and Stratigraphic Characterization of Pliocene Tephra from the Ledi-Geraru Region of Afar, Ethiopia.

University of Michigan, Ann Arbor

B.S. Geological Sciences, 2004.

Current Position

2010-2011 NASA/Arizona State University Space Grant Fellow

Additional Research Involvement

- Merging Disparate Data Sources into a Paleoanthropological Geodatabase for Research, Education, and Conservation in the Greater Hadar Region (Ethiopia). *CoPI's: Arrowsmith & Campisano (ASU)*
- Morphologic Assessment of the Penaguila Valley (southeast Spain): Assessing the role of natural and anthropogenic driven change in a Mediterranean landscape. *PI: C. Michael Barton (ASU)*

Grants, Awards and Fellowships

2011 - Philanthropic Education Organization (P.E.O) Scholar Award

2010-2011 - NASA/ASU Space Grant Fellowship

2010 - GeoPRISMS Implementation Workshop: Outstanding Poster Presentation

2010 - AAPG Foundation Arthur A. Meyerhoff Memorial Grant

2009-2010 - NSF Graduate STEM Fellowship in GK-12 Education; ASU Down to Earth Science

2009 - Geological Society of America Student Research Grant

2009 - ASU School of Earth and Space Exploration Comprehensive Exam Proposal Award

2009 - ASU Graduate and Professional Student Association JumpStart Research Grant

2008 - ASU Graduate and Professional Student Association Travel Grant

2007 - ASU Faculty Women's Association Certificate of Distinguished Achievement

2004-2006 - ASU Graduate Scholar Fellowship

2004 - University of Michigan Camp Davis Field Geologist Award

2002 - NASA Undergraduate Student Research Program at JPL/Caltech

2001 - Research Training Program: Smithsonian National Museum of Natural History.

Synergistic Activities

- GeoPRISMS Implementation Workshop: Rift Initiation and Evolution. Santa Fe, NM (*November 2010*).
- Short Course: Volcano-magma systems with emphasis on explosive processes and deposits. University of Potsdam, Germany. Instructor: Dr. Hans-Ulrich Schmincke (*September 2010*).
- NSF GK-12 National Meeting in Washington, DC (*March, 2010*).
- Rupturing Continental Lithosphere: Synthesis and New Perspectives (MARGINS). Charleston, SC (*May 2009*).
- Scientific Drilling for Human Origins: Exploring the Application of Drill Core Records to Understanding Hominin Evolution workshop. Addis Ababa, Ethiopia (*November 2008*).
- IAVCEI General Assembly Meeting in Reykavík, Iceland (*August 2008*).
- International Workshop on East African Geodynamics, Climate, Lakes and Evolution. Potsdam, Germany (*October 2008*).
- Optical Stimulated Luminescence (OSL) short course. Utah State University, Utah (*June 2008*).
- Ologresailie Microstratigraphy and Taphonomy Field Course: Smithsonian National Museum of Natural History (*Summer 2005*).

Field Experience

- 2008 - Geology field investigations in the Afar Depression, Ethiopia (*May*)
- 2009 - Geology field investigations in Penáguila, Spain (*September*)
- 2007 - Geology field investigations in Penáguila, Spain (*August*)
- 2006 - Geology field investigations in the Afar Depression, Ethiopia (*January - February*)
- 2006 - Geology field research on active regional faulting in southern Baja California, Mexico (*July*)
- 2005 - Smithsonian Field Course: Ologresailie Microstratigraphy & Taphonomy in Kenya, Africa (*July*)
- 2004 - Field assistant collecting soil samples for trace metal analysis in Lake Chelan, Washington (*July*)
- 2004 - University of Michigan geology field studies in the Pyrenees Mountains (*June*)

Teaching and Outreach

- 2010 to present - Maintain and create material for a website I developed that provides lessons on current events to K-12 educators around the world: SciNews website (<http://sese.asu.edu/teacher-resources>)
- 2004 to present - Geoscience Education Outreach in K-12 Classrooms: I give talks to K-12 classrooms in AZ on a range of geology topics including Ethiopian geology and culture, mars rovers, and geology field work.
- 2003 to present - Arizona Ambassador in the JPL/NASA Solar System Ambassador Program (<http://www2.jpl.nasa.gov/ambassador>)
- 2010-2011 - NSF Fellow in K-12 Education: Assistant teaching in a 7th grade science class two days per week for one year), created inquiry based lessons, and took graduate level education classes .
- 2008 - Presentation at ASU on geology field work; part of a workshop for Dine College Students; Navajo Nation
- 2004-2005 Introductory Geology (ASU) - Instructor for three sections of undergraduate geology lab class

Memberships

- Association for Women in Science (AWIS) - Central Arizona Chapter
- American Geophysical Union
- Geological Society of America

Publications

- DiMaggio, E.N.**, Campisano, C.J., Arrowsmith, J.R., Reed, K.E., Swisher, C.C., III, and Lockwood, C.A., 2008, Correlation and stratigraphy of the BKT-2 volcanic complex in west-central Afar, Ethiopia, *in* Quade, J., and Wynn, J.G., eds., *The Geology of Early Humans in the Horn of Africa: Geological Society of America Special Paper 446*, doi: 10.1130/2008.2446(07).
- Roman, D.C., Campisano, C.J., Quade, J., **DiMaggio, E.N.**, Arrowsmith, J.R., and Feibel, C., 2008, Composite tephrostratigraphy of the Dikika, Gona, Hadar, and Ledi-Geraru project areas, northern Awash, Ethiopia, *in* Quade, J., and Wynn, J.G., eds., *The Geology of Early Humans in the Horn of Africa: Geological Society of America Special Paper 446*, doi: 10.1130/2008.2446(05).
- Dupont-Nivet, G., Sier, M., Campisano, C.J., Arrowsmith, J.R., **DiMaggio, E.**, Reed, K., Lockwood, C., Franke, C., and Hüsing, S., 2008, Magnetostratigraphy of the eastern Hadar Basin (Ledi-Geraru research area, Ethiopia) and implications for hominin paleoenvironments, *in* Quade, J., and Wynn, J.G., eds., *The Geology of Early Humans in the Horn of Africa: Geological Society of America Special Paper 446*, doi: 10.1130/2008.2446(03).
- DiMaggio, E.N.**, 2007, Volcanic and stratigraphic characterization of Pliocene tephra from the Ledi-Geraru region of Afar, Ethiopia [MS. thesis]: Arizona State University, 120 p.
- Golombek, M.P., Haldemann, A.F.C., Forsberg-Taylor, N.K., **DiMaggio, E.N.**, Schroeder, R.D., Jakosky, B.M., Mellon, M.T., and Matijevic, J.R., 2003, Rock size-frequency distributions on Mars and implications for Mars Exploration Rover landing safety and operations: *Journal of Geophysical Research-Planets.*, 108(E12), 8086 doi:10.1029/2002JE002035.

Professional Meeting and Workshop Abstracts

- DiMaggio, E.N., 2010, Incorporating Science News Into Middle School Curricula: Current Events in the 21st Century Classroom: *EOS Trans. Fall Meet. Suppl.*, Abstract ED21C-0692.
- DiMaggio, E.N., Arrowsmith, J.R., Reed, K., Campisano, C.J., 2009, Filling the temporal gap in Plio-Pleistocene sedimentological records from the southern Afar Depression, Ethiopia: *EOS Trans. AGU*, 90 (52), Fall Meet. Suppl., Abstract EP53A-0622.
- DiMaggio, E.N., Campisano, C.J., Arrowsmith, J.R., Dupont-Nivet, G., Johnson, R.A., Warren, M.B., 2008, Sedimentary Basin Structure of the Hadar Formation's Lacustrine-Dominated Depocenter (Ledi-Geraru, Afar, Ethiopia) and its Relevance for Investigating Hominin Paleoenvironments, *Eos Trans. AGU* 89(53), Fall Meet. Suppl., Abstract PP13E-07.
- Campisano, C.J., DiMaggio, E.N., Arrowsmith, J.R., Kimbel, W.H., Reed, K.E., Robinson, S.E., Schoville, B.J., 2008, Merging Disparate Data Sources Into a Paleoanthropological Geodatabase for Research, Education, and Conservation in the Greater Hadar Region (Afar, Ethiopia), *Eos Trans. AGU* 89(53), Fall Meet. Suppl., Abstract IN32A-05.
- DiMaggio, E.N., Campisano, C.J., Arrowsmith, J.R., Clarke, A.B., 2007, Depositional environments and volcanic characterization of the BKT-2 Volcanic Complex in Afar, Ethiopia: *Geological Society of America Abstracts with Programs*, v. 39, no. 6, p. 173.
- DiMaggio, E. N., La Roca, N., Arrowsmith, J. R., Diez-Castillo, A., Bernabeu, J., Barton, C.M., 2007, Field investigations of landscape development in southeast Spain for use in modeling Holocene (8,000 – 1,5000 yr) agropastoral landuse and landscape interactions: *EOS Trans. AGU*, 88 (52), Fall Meet. Suppl., Abstract GC13A-0946.

- DiMaggio, E. N., Campisano, C. J., Arrowsmith, J R., Reed, K. and Lockwood, C. A., 2006, Geochemistry and Tephrochronology of the BKT-2 and Kada Hadar Tephros in the Middle Ledi Geraru Region of Afar, Ethiopia: EOS Trans. AGU, 87 (52), Fall Meet. Suppl., Abstract V53C-1765.
- DiMaggio, E. N., Arrowsmith, J. R., Barton, C. M, Sarjoughian, H S, Fall, P., Falconer, S. E and Ullah, I.I., 2006, Geomorphic Mapping and Paleoterrain Generation for use in Modeling Holocene (8,000 – 1,500 yr) Agropastoral Landuse and Landscape Interactions in Southeast Spain: EOS Trans. AGU, 87 (52), Fall Meet. Suppl., Abstract GC51A-0453.
- DiMaggio E.N., Schroeder R.D., Golombek M.P., Haldemann A.F.C., and Castle N, 2003, Characterization of Martian rock shape for MER airbag drop tests. Lunar and Planetary Science XXXIV Abst #1589.
- Rougvie, J.R., DiMaggio, E.N., Sorensen, S.S., 2001, Polymetasomatic history of ashflow tuff and geochemical evolution during contact metamorphism, Mammoth Crest, California: Geological Society of America Abstracts with Programs, v. 33, no. 6, p. 18.

Recent Collaborators

K. Reed, C. Campisano, C.M Barton, I. Ullah, (Arizona State University); N. La Roca, A. Diez-Castillo, J. Bernabeu, (Universitat de València); G. Dupont-Nivet (Universiteit Utrecht)