

Sean Faulkner

429 Northfield Road
Bernardston, MA 01337
Email: faulkner@geo.umass.edu
Phone: (413) 695-1614

Curriculum Vitae

Education

2011- University of Massachusetts, Department of Geosciences- Ph.D. (*in progress*)

2010 University of Massachusetts, Department of Geosciences- M.Sc.

*Masters thesis: **The Distribution, Composition, and Formation of Sahara Desert Microbialites from the Base of the Meski Plateau, Outside Erfoud, Morocco.*** Advisor: Distinguished University Professor Lynn Margulis

2006 University of Massachusetts, Department of Geosciences- B.Sc. Earth Systems Science

2000 Massasoit Community College, Brockton, MA- A.Sc. General Science

Career goals & research interests

I plan to pursue a career in secondary and post-secondary science education. My research interests include: microbialites; concretions; geomicrobiology; chemoautotrophy and chemically run ecosystems; deep/cold water corals; Mesozoic paleoenvironments and mass extinction events; Cenozoic climate change; origins and early evolution of life; environmental evolution throughout geologic history.

Grants & awards

2008 NASA Planetary Biology Intern

2008 Gloria Radke Memorial Prize (UMass-Amherst Department of Geosciences)

2007 Massachusetts NASA Space Consortium Grant

2006 Massachusetts NASA Space Consortium Grant

2006 Elinor J. Fierman Memorial Prize (UMass-Amherst Department of Geosciences)

2006 National Science Foundation Science Teaching Education Program

(STEP) Noyce Scholars Award

Research Experience

- 2004 University of Massachusetts (Dr. Steve Petsch, advisor): Responsible for sample preparation for whole rock elemental analyses on the Cretaceous Mesa Verde section of Mancos Shale, Mesa Verde, CO. Work helped determine per cent organic carbon and nitrogen, total organic material, and isotopic carbon fractionation values to help determine the paleoceanography of the Western Interior Seaway during the Cretaceous Period.
- 2006-10 University of Massachusetts (Dr. Margulis, graduate advisor): Responsible for sample preparation, data collection, and data analysis pertaining to my graduate thesis titled: "Complex concretions from the base of the Meski Plateau, Erfoud, Morocco: A microbialite hypothesis". Conducted field research in January 2008 at the research site outside of Erfoud, Morocco in collaboration with Dr. Mohammed Et-Touhami of the Universite Premier Mohammed Oujda (Morocco).
- 2008 New Mexico Institute of Mining and Technology (Dr. Penny Boston, primary advisor): Responsible for designing and executing geomicrobiological experiments aimed at inducing and quantifying calcite precipitation in unconsolidated quartz sands using various metabolic pathways. Conducted geomicrobiology field research at the Four Winds lava tube caves in Grants, NM and at the Cueva de Villa Luz cave system in Tabasco, Mexico.

Teaching experience

- 2007 Tutor for the University of Massachusetts Athletic Department. Assisted UMass athletes with tutoring needs related to geoscience-related classes.
- 2004-10 Responsible for coordinating the Extra Credit Program developed by Dr. Lynn Margulis to accompany the Biology 280: Evolution class. Responsibilities include updates of teaching materials, distribution of materials, student assistance and grade recording.
- 2007-10 Teaching assistant for Environmental Evolution (Geo 483/692; Bio 597; OEB 797). Responsibilities include updates of teaching materials, distribution of materials, student assistance, grade recording, class preparation, overseeing film sessions, and teaching.

Additional experience

2008-10 Graduate Student Association President, Department of Geosciences. Responsibilities include organizing events funded by the Department of Geosciences and assisting with the organization of weekly professional seminars.

Certifications

- Massachusetts Communications & Literacy certification
- Massachusetts General Science certification

Special skills

Sample preparation of geological samples for analyses (petrographic, isotope fractionation, SEM, microfossil detection), light microscopy (for petrographic analysis), scanning electron microscopy, limited scanning electron microprobe, image enhancement and design software, video and audio digitization software, advanced computer skills (Mac and PC).

Memberships & Professional organizations

2010 Society for Sedimentary Geology
2008 NASA Planetary Biology Intern
2008 Gloria Radke Memorial Prize (UMass-Amherst Department of Geosciences)
2007 International Society of Protistologists
2007 American Association of Petroleum Geologists
2006 Geological Society of America
2006 American Geophysics Union
2006 Past Global Changes
2006 National Speleological Society
2005 Sigma Xi Scientific Research Society; *UMass-Amherst Chapter Secretary, 2005*