

Thomas S. Tobin
+1-(813)-545-1912
tom@tstobin.com; ttobin@ua.edu
www.tstobin.com

Dept. of Geological Sciences
University of Alabama
Box 870338
Tuscaloosa, AL 35487

Relevant Work Experience

Assistant Professor

University of Alabama (Aug. 2015 – ongoing)
Chair: Dr. Fred Andrus

Visiting Assistant Professor (Aug. 2014 – July 2015)

Lake Superior State University
Supervisor: Dr. Barbara Keller (Dean of Natural and Mathematical Sciences)

ExxonMobil Geoscience Intern (Sep. – Dec. 2013)

Seismic interpretation of hydrocarbon trap presence, size, reservoir quality, and environment of deposition
Supervisor: Randi Cruz

Education

University of Washington (Fall 2008 – Summer 2014)

Ph.D. in Earth & Space Sciences, Astrobiology
Thesis: *Stable isotopes in unstable times: A geochemical investigation of the end Cretaceous mass extinction*

Doctoral Committee: Dr. Peter Ward (adviser/chair), Dr. Eric Steig, Dr. Greg Wilson, Dr. Cecilia Bitz, Dr. Andrew Connolly (Grad school representative)

Macalester College (2004-2008)

B.A. in Geology, Magna Cum Laude, With Honors
Honors Thesis: *Water discharge and glacier hydrology at West Washmawapta Glacier in British Columbia, Canada*

Thesis committee: Dr. Kelly MacGregor (thesis adviser/chair), Dr. Raymond Rogers (academic adviser), Dr. Carrie Jennings (Minnesota DNR)

Teaching Experience

Assistant Professor (Summer 2015)

Lake Superior State University
Advanced Field Geology (GEOL 490)

Assistant Professor (Spring 2015)
Lake Superior State University
Carbonate Systems (GEOL 445) and associated labs

Assistant Professor (Fall 2014, Spring 2015)
Lake Superior State University
Introduction to Geology (NSCI 102) and associated labs

Assistant Professor (Fall 2014)
Lake Superior State University
Physical and Historical Geology I (GEOL 121) and associated labs

Teaching Assistant (Summer 2011, 2012, 2013, 2014)
U. Washington – Field Geology (ESS 400)
Supervisor: Dr. Ralph Haugerud

Seminar Organizer (Winter 2014)
U. Washington – ‘Paleolunch’ – Evolution and Extinction Seminar

Teaching Assistant (Winter 2014)
U. Washington – Stratigraphy (ESS 455)
Supervisor: Dr. Jody Bourgeois

Co-Instructor (Sept. 2013)
U. Washington – Astrobiology Workshop on K-Pg Mass Extinction
With: Dr. Greg Wilson, Dr. Roger Buick

Teaching Assistant and Guest Lecture (Spring 2013)
U. Washington – Depositional Environments (ESS 456)
Supervisor: Dr. Jody Bourgeois

Guest Lecturer (Spring 2012)
U. Washington – Geologic History (213)
Instructor: Dr. Liz Nesbitt

Teaching Assistant (Autumn 2012)
U. Washington – Geobiology (ESS 313)
Supervisor: Dr. Roger Buick

Teaching Assistant (Autumn 2011)
U. Washington – Introductory Geology (ESS 101)
Supervisor: Dr. Terry Swanson

Writing Assistant (Autumn 2007)
Macalester College – Environmental Geology (GEOL 120)
Supervisor: Dr. Kelly MacGregor

Field Work Experience

American Samoa – Spring 2013
~3 weeks on site in field
Assisting field work on modern *Nautilus* led by Dr. Peter Ward and Greg Barord

Northwestern Montana (Dillon area) – Summer 2011, 2012, 2013, 2014, 2015
~3 weeks in Dillon area
Teaching assistant to field methods class

Northeastern Montana (Hell Creek area) – Summer 2010, 2011, 2012, 2014
~4 weeks, combined research and outreach per season
Performing independent and guided research for dissertation, worked with established field group led by Dr. Greg Wilson
Assisted with DIG (Discoveries in Geosciences) Field School

Antarctic Peninsula (Seymour Island area) – Winter (N. Hemisphere) 2009, 2010, 2011
~4 weeks research at field site per season, 2-3 weeks travel time
Performing independent and guided research for dissertation, Co-PI's Dr. Peter Ward, Dr. Joseph Kirschvink, and Dr. Eric Steig. International collaboration with Instituto Antártico Argentino – Dr. Eduardo Olivero

Australian Outback (Kimberly area) – Summer (N. Hemisphere) 2009
~3 weeks on site in field
Assisting field work on Devonian carbonate reef stratigraphy

British Columbia (alpine glacier) – Summer 2007, 2008
~3 weeks on site in field
Performing guided research on proglacial hydrology, and assisting other glacial research led by Co-PI's Dr. Kelly MacGregor and Dr. Kurt Cuffey, Dr. Johnny Sanders was a graduate student at the time leading the field research

Papers

- **Tobin, T. S.;** P. D. Ward (2015). Carbon isotope ($\delta^{13}\text{C}$) discrepancies between Late Cretaceous ammonites and benthic mollusks from Antarctica. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 428, 50-57.

- **Tobin, T. S.;** G. P. Wilson, J. M. Eiler, J. H. Hartman (2014). Environmental change across a terrestrial Cretaceous-Paleogene boundary section in eastern Montana, U.S.A., constrained by carbonate clumped isotope paleothermometry. *Geology*. 42(4), 351-354.
- **Tobin, T. S.;** P. D. Ward, E. J. Steig, E. B. Olivero, I. A. Hilburn, R. N. Mitchell, M. R. Diamond, T. D. Raub, J. L. Kirschvink (2012). Extinction patterns, $\delta^{18}\text{O}$ trends, and magnetostratigraphy from a southern high-latitude Cretaceous - Paleogene section: links with Deccan volcanism. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 350-352, 180-188.
- Ward, P. D.; J. Haggart, R. Mitchell, J. Kirschvink, **T. S. Tobin** (2012). Integration of macrofossil biostratigraphy and magnetostratigraphy for the Pacific Coast Upper Cretaceous (Campanian – Maastrichtian) of North America and implications for correlation with the Western Interior and Tethys. *Geological Society of America Bulletin*. 124, 957-974.
- **Tobin, T. S.;** A. Schauer, E. Lewarch (2011). Alteration of Micromilled Carbonate $\delta^{18}\text{O}$ During Kiel Device Analysis. *Rapid Communications in Mass Spectrometry*. 25, 2149-2152.

Conference Presentations, oral

- **Tobin, Thomas;** Greg Wilson, John Eiler (2011). Reconstructing Paleotemperature Using Clumped Isotope Paleothermometry across the K-Pg Boundary from Garfield County, MT, USA. Geological Society of America Annual Meeting, 2011.
- **Tobin, Thomas;** Peter Ward, Joe Kirschvink, Eduardo Olivero, John Eiler (2010). A High Resolution Paleotemperature Record across The K-Pg Boundary From Seymour Island, Antarctica. Geological Society of America Annual Meeting, 2010.
- Kirschvink, Joe; **Thomas Tobin**, Peter Ward, Eric Steig, Eduardo Olivero, David Smith, Magali Bonifacie, Ross Mitchell, John Eiler, Alberto Rapalini, Isaac Hilburn (2010). Integrated, High-Resolution Magneto-, Bio-, and Chemo-stratigraphy of the Cretaceous-Paleogene Sediments of the James Ross Basin, Antarctica. Meeting of the Americas, 2010.
- **Tobin, Thomas** (2009). *Antarctica by Boat*. Wondrous Cold Exhibit at Burke Museum of Natural History. Invited Speaker.

Conference Presentations, poster

- **Tobin, Thomas;** Peter Ward (2014). Using Systematic $\delta^{13}\text{C}$ Differences Between Ammonites and Benthic Mollusks from Seymour Island, Antarctica to Better Understand Ammonite Lifestyles. Geological Society of American Annual Meeting, 2014.
- **Tobin, Thomas**, Peter Ward, Joseph Kirschvink (2013). Contributions from Deccan Volcanism to the K-Pg Mass Extinction. *Volcanism, Impacts and Mass Extinctions: Causes and Effects*.
- **Tobin, Thomas;** Peter Ward, Joe Kirschvink, Eduardo Olivero, John Eiler, Ben Passey (2009). Carbonate Isotope Chemostratigraphy of the Late Cretaceous – Early Tertiary from Seymour Island, Antarctica. Geological Society of America Annual Meeting, 2009.

- MacGregor, Kelly; Johnny Sanders, Kurt Cuffey, **Thomas Tobin** (2009). Water discharge and glacier hydrology of West Washmawapta Glacier, British Columbia: implications for cirque glacier sediment flux. American Geophysical Union, Fall Meeting, 2009.
- **Tobin, Thomas**; Kelly MacGregor, Johnny Sanders, Kurt Cuffey (2008). Water Discharge and Cirque Glacier Hydrology at West Washmawapta Glacier, British Columbia, Canada. American Geophysical Union, Fall Meeting 2008.

Honors, Awards, and Grants

- David A. Johnston Award for Research Excellence from University of Washington Earth and Space Sciences Department (2014)
- Student Technology Fee – Repair of a Sample Preparation System for Student Training and Environmental Research (2014) – \$3,390
- Harry Wheeler Fund Fellowship (2013) – Funded RA
- Student Technology Fee – Cathodoluminescence Image Capture Equipment (2012) - \$10,600
- Robert and Nadine Bassett Fund and Chevron Graduate Support Fund (2012) - \$2,500
- Antarctic Service Medal of the United States of America (2011)
- John W. Wells Grants-in-Aid of Research Program (2011) - \$500
- Chevron Graduate Support Scholarship (2011) - \$2,200
- NSF IGERT Astrobiology Research Fellowship (2009-2011) – Funded RA
- Goodspeed Geology Scholarship Award (2009) - \$1,400
- Henry Lepp Award for Academic Excellence and Field Studies in Geology (2008)
- Phi Beta Kappa (2008)
- Outstanding Chemistry Freshman (2005)

Service

- Reviewer – GSA Bulletin
- Graduate Student Representative to Faculty Search Committee (Glaciology) 2014
- Co-organizer/chair of ESS Research Gala Committee 2012-2013
- Graduate Student Representative to Prelim Exam Committee 2012
- Graduate Student Representative to the Faculty 2011-2012
- Department Brown Bag Seminar Coordinator 2008-2009

Outreach

- Assistant with the DIG Field School 2010-2014
- Invited Speaker- Burke Museum of Natural History “Wondrous Cold” exhibit 2009

Skills

- Isotope ratio mass spectrometer (IRMS) with coupled Kiel Device (stable isotopic analysis of carbonates)
- IRMS – Carbonate clumped isotope analysis

- Manual vacuum line sample preparation
- PETREL 3D Seismic interpretation software
- VoxelGeo 3D Seismic interpretation software
- RAPID Automated paleomagnetism system
- Cold-cathode cathodoluminescence microscopy
- X-ray diffractometer (XRD) material analysis
- Merchantek Micromill computerized drill