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Work Address:

Woods Hole Oceanographic Institution
266 Woods Hole Rd, MS#4
Woods Hole, MA 02543
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Date of birth: November 7, 1976

Presently:

Postdoctoral Investigator, Woods Hole Oceanographic Institution

Academic Advisors:

Jeffery Seewald (postdoctoral)
Marvin Lilley (primary), Debbie Kelley, Paul Quay (graduate)

Academic Degrees:

- Ph.D. in Chemical Oceanography, University of Washington, 2005
- Masters in Chemical Oceanography, University of Washington, 2001
- BA in Chemistry with High Distinction, Amherst College, MA, 1998
- International Baccalaureate Diploma, South Eugene High School, 1994

Relevant Experience:

- Current Research goal: *To separate and examine the effects of chemical, biological and geological processes on natural fluids through the isotopic and compositional analysis of low molecular weight hydrocarbon gases, molecular hydrogen, carbon dioxide and trace hydrocarbon biomarkers.*
- Proficient use of gas chromatography, isotope-ratio mass spectrometry, GC-IRMS, accelerator mass spectrometry, ion chromatography, and high-precision liquid chromatograph to characterize hydrothermal gases and fluids, organic molecules and petroleum products
- Extensive manipulation and handling of CH₄, H₂, and hydrocarbon gases using cryogenic, high pressure, vacuum, sorption, and thermal techniques
- Participant in 12 ocean-going research expeditions totaling more than one year at sea, all of which involved deep sea objectives utilizing manned and/or unmanned submersibles; one of which I was the Lead Scientist aboard a vessel with a satellite link to the Chief Scientists on shore.
- Chief Scientist, Sea Education Association, *SSV Corwith Cramer* (Jan 2008): Organized and led a 7-day graduate and undergraduate expedition for Duke University, Key West-Key West.
- Guest Oceanography Faculty/Chief Scientist SEA Class C-210 (Feb-May 2007): Taught undergraduate-level intensive 6-week shore oceanography class, and directed individual oceanography projects during a 6-week expedition in the Atlantic aboard the *Corwith Cramer*, a 134-foot brigantine rigged tall ship equipped for oceanographic research. Included the supervision of a three staff scientists onboard the vessel. Cruise report: <http://hdl.handle.net/1912/1760>
- Guest Oceanography Faculty/Chief Scientist SEA Class SAS1 (July 2007): Taught a high school 10 day shore oceanography class with science centered field trips, and directed group projects during a 9-day circumnavigation of Cape Cod aboard the *Corwith Cramer*. Included the supervision of a three staff scientists onboard the vessel.

- Teaching Assistant, Ocean 202, a sophomore/junior level physical oceanography course, Winter Quarter, 2001. Delivered several lectures, ran weekly recitation sections, and created weekly homework and computer laboratory assignments.

Honors/Awards/Grants:

- PI for NSF Award No. OCE-0647800, \$199,659, *Sources of Organic Compounds in Submarine Hot-Springs: An Experimental Investigation*, 2007-2009
- 2007 Oceanic and Atmospheric Research Outstanding Scientific Paper Award, NOAA Office of Oceanic and Atmospheric Research (OAR), “Submarine venting of liquid carbon dioxide on Mariana Arc Volcano”
- WHOI Deep Ocean Exploration Institute Postdoctoral Fellow, 2005-2006
- World Universities Network Fellowship, 2003-2004
- CAMS Mini-Grant Award from Lawrence Livermore National Laboratory, \$5,000 and 200 ¹⁴C samples run in the AMS facility, 2001-2004
- Forris Jewett Moore Graduate Student Fellowship, Amherst College, 1998-2000
- Magna cum Laude, Amherst College, MA, 1998
- Summa cum Laude Senior Thesis in Chemistry, Amherst College 1998
- Howard Waters Dougherty Prize in Chemistry, Amherst College 1998
- National Science Scholar, 1994-1998
- Georgia Pacific Foundation Scholar, 1994-1998
- Most Outstanding Student Award at International High School, 1994
- National Merit Scholar, 1994

Peer-reviewed Publications:

- Proskurowski et al., “Abiogenic Hydrocarbon Production at Lost City Hydrothermal Field”, *Science*, 01 Feb 08.
- Lupton et al., “Submarine Venting of Liquid Carbon Dioxide on a Mariana Arc Volcano”, *Geochemistry, Geophysics, Geosystems*, vol. 7, Q08007, doi:10.1029/2005GC001152, 2006.
- Proskurowski et al., “Low Temperature Volatile Production at the Lost City Hydrothermal Field, Evidence from a Hydrogen Stable Isotope Geothermometer”, *Chemical Geology*, Vol. 299, Issue 4, pp. 331-343, 2006.
- Kelly et al., “A Serpentinite-Hosted Ecosystem: The Lost City Hydrothermal Field”, *Science*, vol. 307, 4 March 2005.
- Proskurowski, Lilley and Brown, “Isotopic evidence of magmatism and seawater bicarbonate removal at the Endeavour hydrothermal system”, *Earth and Planetary Science Letters*, 225/1-2 pp. 53-61, 2004.
- Früh-Green et al., “30,000 Years of Hydrothermal Activity at the Lost City Vent Field”, *Science*, vol. 301, 25 July 2003.
- Von Damm et al., “Extraordinary phase separation and segregation in vent fluids from the southern East Pacific Rise”, *Earth and Planetary Science Letters*, 206/3-4 pp. 365-378, 2003.

Oral Presentations and abstracts:

- Proskurowski et al., AGU December 2007, talk
- Proskurowski, Oregon State University, June 2007, invited talk
- Proskurowski, Idaho National Laboratory, October 2006, invited talk

- Proskurowski, RIDGE Theoretical Institute 2006 Conference, July 2006, poster/abstract
- Proskurowski et al., AGU December 2005, poster/abstract
- Proskurowski, WHOI MC&G Seminar, October 2005, invited talk
- Proskurowski, UW-Chemical Oceanography Seminar, 2005, invited talk
- Proskurowski et al., AGU December 2004, poster/abstract
- Proskurowski, UW-Chemical Oceanography Seminar, 2004, invited talk
- Proskurowski et al., AGU December 2003, poster/abstract
- Proskurowski, UW-Chemical Oceanography Seminar, 2003, invited talk
- Proskurowski et al., AGU December 2002, talk/abstract
- Proskurowski, UW-Chemical Oceanography Seminar, 2002, invited talk
- Proskurowski, Lawrence Livermore National Laboratory- Center for Accelerator Mass Spectrometry, December 2001, invited talk
- Proskurowski, UW-Chemical Oceanography Seminar, 2001, invited talk
- Proskurowski, RIDGE Subsurface Biosphere Conference, July 2000, poster/abstract
- Proskurowski, UW-Chemical Oceanography Seminar, 2000, invited talk
- Proskurowski, RIDGE Field Trip, Cyprus, July 1999, poster/abstract
- Proskurowski, UW-Chemical Oceanography Seminar, 1999, invited talk

Reviews:

- Manuscript reviews for Marine Chemistry (2006), Earth and Planetary Science Letters (2005)
- Proposal reviews for NSF (2007), NASA (2007)

Research:

Scientific career has been centered around collecting, handling, and analyzing hydrogen, methane, and low molecular weight hydrocarbon gases. My focus has been on samples obtained at the bottom of the Pacific and Atlantic oceans, up to 3200m deep, using a variety of manned and unmanned submersibles. Highlights include:

- Design, fabrication, and use of a manifold vacuum line for the preparation and manipulation of gas samples for isotopic analysis, includes a mechanical metal bellows system for adjusting internal pressure.
- Design, fabrication, and use of a manifold vacuum line and mechanical rock crusher for extracting gas from fluid inclusions in whole rocks for isotopic analysis.
- Multiple inline pre-concentration and GC-IRMS methods developed on a Finnigan DeltaPlus XL mass spectrometer
- Inline GC-IRMS method development on a Finnigan 253 mass spectrometer
- Made the initial radiocarbon measurements of hydrothermal vent volatiles at CAMS facility at LLNL
- Extensive shipboard experience in laboratory work, mechanical work, and deep-sea underwater operations
- Intimate familiarity and experience with machine shop design and construction as well as scientific glass blowing techniques and product creation

Employment:

- Postdoctoral Investigator, Woods Hole Oceanographic Institution Department of Marine Chemistry and Geochemistry, May 2007-present
- Contract Faculty/Chief Scientist, Sea Education Association, July-August 2007

- Shipboard experience: Corwith Cramer (Cape Cod coastal waters)
- Contract Faculty/Chief Scientist, Sea Education Association, February-May 2007
Shipboard experience: Corwith Cramer (Sargasso Sea)
- Postdoctoral Fellow, Woods Hole Oceanographic Institution Department of Marine Chemistry and Geochemistry, March 2005-February 2007
Shipboard experience: Melville/Jason II (Lau Basin), Ron Brown/Hercules (Lost City)
- Research Assistant, Oceanography Department, UW, 1998-2005
Shipboard experience: six Atlantis/Alvin cruises, three Alvin dives, two ROV cruises, two open ocean/towed package cruises
- Research Assistant, Physical Chemistry, Amherst College, 1997-1998
- Vegetation Control Engineer, Lane County Public Works, summer 1996
- Trail Design and Construction, North West Youth Corps Backcountry Leadership Program, River of No Return Wilderness, Idaho, June-July 1995
- Chemistry lab assistant, Amherst College, 1994-1995

Sports/Music:

- Ultimate Frisbee team member, Boston Ultimate, 2007
5th place finish, UPA National Championships 2007
- Ultimate Frisbee team member, Twisted Metal, 2006
9th place finish, UPA National Championships 2006
- Ultimate Frisbee team member, Seattle Sockeye, 2002-2005
2005 UPA National Runner-up
2004 UPA National Champion
5th place finish, UPA National Championships 2003
Bronze Medal, UPA National Championships 2002
Bronze Medal, WFDF World Championships 2002
- Extensive backcountry alpine ski experience
- Proficient mountaineering, rock and ice climbing skills
- Pianist: Jazz Ensemble, Reggae Band, Blues Band, Amherst College, 1994-1997
- Laureate of piano competitions, Oregon Music Teachers Association, 1990-1993

Certifications:

- SCUBA
- Red Cross First Aid and CPR
- Emergency Medical Technician (State of Massachusetts, expired 2001)

references provided upon request