



# Claire Treat

**Graduate Institution:** University of New Hampshire

**Graduate Discipline:** Earth & Environmental Sciences

**Hometown:** Keene, NH

**Relevant SC Research:** Biological and Environmental Research

## Research Interest:

I'm interested in the effects of climate change on nutrient cycling in northern ecosystems in both boreal and arctic regions. Northern ecosystems are experiencing relatively rapid changes in climate and are important to the global carbon cycle due to the large amounts of carbon stored within the soils. I'm focusing on differences in soil carbon storage across wetland ecosystems in Alaska and predicting how this might change in the future with permafrost thaw. I'm investigating the mechanisms responsible for carbon storage as well as the potential magnitude of C losses.

Other projects that I've been working on include analyzing a long-term dataset from a nearby wetland for trends in carbon emissions and collaborating on a study of how changing seasonality (warmer falls and earlier springs) affects nutrient cycling in arctic streams. I'm also interested in modeling and macroscale approaches in soils and hydrology, and follows on-going research regarding Women in Science and Science Ethics.

## About Me:

Claire Treat is a 2010 recipient of the U.S. Department of Energy Office of Science Graduate Fellowship and is in her second year of the Natural Resources and Earth Systems Science (NRESS) PhD program at the University of New Hampshire. Her research focuses on impacts of climate change and permafrost thaw on soil carbon storage in Alaskan

Peatlands. Claire is a 2005 graduate of Mount Holyoke College. As an undergraduate, Claire received a UNH/NASA Research and Discover Fellowship to complete her honors research on factors controlling the net contribution of wetlands to climate change, working closely with Dr. Jill Bubier, Professor of Environmental Science at MHC, and Dr. Ruth Varner, Research Professor in Institute for the Study of Earth, Oceans, and Space at the UNH. A captain of the swim team while at MHC, Claire earned honors as a scholar athlete, as well as for her research and academic achievements.

Following graduation from Mount Holyoke College, Claire worked as a Research & Discover Intern at NASA Goddard Space Flight Center in Greenbelt, MD, a lift operator at Telluride Ski Resort in Colorado, and as a research technician for Dr. Merritt Turetsky at Michigan State University. As a technician, Claire worked extensively in Alaska on the Alaska Peatland Experiment (APEX), where she continued to study the role of northern wetlands in the carbon cycle. She also assisted on a project that studied effects of wildfire on soil carbon.

Claire returned to the University of New Hampshire in September 2008 and completed a Masters Degree in Earth Science in 2010 with Dr. Steve Frolking, Research Professor in the Institute for the Study of Earth, Oceans, and Space. Claire's masters research focused on modeling impacts of climate change on permafrost in wetlands. As a graduate student, Claire

has served on the President's Commission on the Status of Women for 3 years, on the executive board for the University of New Hampshire Graduate Student Organization, as chair of the Stonewall Grads for 3 years, and is involved with the Graduate Women in Science. She is a recipient of the Pink Triangle award from the UNH GLBT Commission.

In her free time, Claire enjoys biking, skiing, swimming, and cooking. She hopes to learn to surf this summer when she's not running experiments. She also enjoys spending quality time with friends and their dogs and is looking forward to the day when she too can have a dog.



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