

SUSAN M. NATALI

Woods Hole Research Center
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EDUCATION

B.S. Biology, Villanova University, 1991
Ph.D. Ecology and Evolution, Stony Brook University, 2008
Thesis: Effects of elevated CO₂ on trace metal cycling in plants and soils
Advisors: Manuel Lerdaу and Sergio Sañudo-Wilhelmy
Postdoctoral advisor: Ted Schuur, University of Florida
Field/Lab Courses: Radiocarbon in Ecology and Earth System Science, UC Irvine, 2009
Likelihood Methods in Ecology, Institute of Ecosystem Studies, 2006
Stable Isotope Ecology, University of Utah, 2005
School for Field Studies, Kenya, 1990

PROFESSIONAL APPOINTMENTS

Assistant Scientist, Woods Hole Research Center, 2012-present
Postdoctoral Fellow, National Science Foundation Polar Programs, 2010-2012
Postdoctoral Associate, University of Florida, 2008-2010

RESEARCH INTERESTS

Climate change effects on northern permafrost ecosystems
Plant and ecosystem responses and feedbacks to global change
Ecological controls over cycling of carbon, nutrients and contaminants
Application of stable and radioisotopes in studying ecosystem carbon dynamics

RECENT GRANTS

Effects of warming and drying on ecosystem carbon balance in Alaskan tundra. NSF Office of Polar Programs (OPP), 2012-2015, \$600K
Vegetation permafrost dynamics in the context of changing climate. National Geographic Society, 2012-2014, \$21K
Fire regime influences on carbon dynamics of Siberian boreal forests. NSF OPP, 2013-2017, \$370K

FELLOWSHIPS & AWARDS

National Science Foundation, Polar Programs Postdoctoral Fellowship, 2010-2012
U.S. Permafrost Association, AGU Travel Grant, 2011
National Science Foundation, Graduate Research Fellowship, 2004-2008
National Science Foundation, Doctoral Dissertation Improvement Grant, 2007-2008
U.S. Department of Energy, Global Change Education Program Graduate Fellowship, 2006-2007
Association for Women in Science, Ruth Satter Pre-doctoral Award, 2006

PUBLICATIONS

Natali SM, Schuur EAG, Webb E, Hicks Pries CE, Crummer, CG (*In press*) Ecosystem warming and permafrost degradation alter carbon dynamics in Alaskan tundra. *Ecology*
Hicks Pries CE, Schuur EAG, Vogel JG, Natali SM (2013) Moisture drives surface decomposition in thawing tundra. *Journal of Geophysical Research: Biogeosciences*, 118:1-11, doi:10.1002/jgrg.20089

- Schuur EAG, Abbott BW, Bowden WB, Brovkin V, Camill P, Canadell JP, Chanton JP, Chapin III FS, Christensen TR, Ciais P, Crill PM, Crosby BT, Czimczik CI, Grosse G, Harden J, Hayes DJ, Hugelius G, Jastrow JD, Jones JB, Kleinen T, Koven CD, Krinner G, Kuhry P, Lawrence DM, McGuire AD, Natali SM, O'Donnell JA, Ping CL, Riley WJ, Rinke A, Romanovsky VE, Sannel ABK, Schädel C, Schaefer K, Sky J, Subin ZM, Tarnocai C, Turetsky M, Waldrop M, Walter-Anthony KM, Wickland KP, Wilson CJ, Zimov SA (2013) Expert assessment of potential permafrost carbon feedbacks to climate change. *Climatic Change*, 119: 359-374, doi:10.1007/s10584-013-0730-7
- Trucco C, Schuur EAG, Natali SM, Bracho R, Belshe F, Vogel J (2012) Seven-year trends of CO₂ exchange in a tundra ecosystem affected by permafrost thaw. *Journal of Geophysical Research, Biogeosciences*, 117: G02031, doi:10.1029/2011JG001907
- Natali SM, Schuur EAG, Rubin RL (2012) Increased plant productivity in Alaskan tundra as a result of experimental warming of soil and permafrost. *Journal of Ecology*, 100: 488-498, doi:10.1111/j.1365-2745.2011.01925.x
- Schuur EAG, Abbott BW, Bowden WB, Brovkin V, Camill P, Canadell JP, Chapin III FS, Christensen TR, Chanton JP, Ciais P, Crill PM, Crosby BT, Czimczik CI, Grosse G, Hayes DJ, Hugelius G, Jastrow JD, Kleinen T, Koven CD, Krinner G, Kuhry P, Lawrence DM, Natali SM, Ping CL, Rinke A, Riley WJ, Romanovsky VE, Sannel ABK, Schädel C, Schaefer K, Subin ZM, Tarnocai C, Turetsky M, Walter-Anthony KM, Wilson CJ, Zimov SA (2011) High risk of permafrost thaw. *Nature*, 480: 32-33, doi:10.1038/480032a
- Natali SM, Mack MC (2011) News& Views: Fungal feedbacks to climate change. *Nature Climate Change*, 1: 192-193
- Natali SM, Schuur EAG, Trucco C, Pries CEH, Crummer KG, Baron Lopez AF (2011) Effects of experimental warming of air, soil and permafrost on carbon balance in Alaskan tundra. *Global Change Biology*, 17: 1394-1407
- Duval BD, Dijkstra P, Natali SM, Megeonigal JP, Ketterer ME, Drake BG, Lerdau MT, Gordon G, Anbar AD, Hungate BA (2011) Plant-soil distribution of potentially toxic elements in response to elevated CO₂. *Environmental Science and Technology*, 45:2570-2574
- Natali SM, Sañudo-Wilhelmy SA, Lerdau MT (2009) Plant and soil mediation of elevated CO₂ impacts on trace metals. *Ecosystems*, 12: 715-727
- Natali SM, Sañudo-Wilhelmy SA, Lerdau MT (2009) Effects of elevated carbon dioxide and nitrogen fertilization on nitrate assimilation in forest trees. *Plant and Soil*, 314: 197-210
- Natali SM, Sañudo-Wilhelmy SA, Norby R, Zhang H, Finzi A, Lerdau MT (2008) Increased mercury in forest soils under elevated carbon dioxide. *Oecologia*, 158: 343-354
- Mackie J, Natali SM, Levinton JS, Sañudo-Wilhelmy SA (2007) Declining metal levels at Foundry Cove, NY (Hudson River, NY): Response to localized dredging of contaminated sediments. *Environmental Pollution*, 149: 141-148
- Fang W, Taub DR, Fox GA, Landis RM, Natali SM, Gurevitch J (2006) Sources of variation in growth, form and survival in dwarf and normal-stature pitch pines (*Pinus rigida*, Pinaceae), in long-term transplant experiments. *American Journal of Botany*, 93: 1125-1133

PROFESSIONAL MEMBERSHIP AND SERVICE

- Member of American Geophysical Union, Ecological Society of America, US Permafrost Association, Vulnerability of Permafrost Carbon Research Coordination Network
- PolarTREC (Teachers and Researchers Exploring and Collaborating) scientist, 2011-current
- Judge for ESA ecophysiology section travel awards and Billings and New Phytologist awards; AGU Outstanding Student Paper Award, 2011, 2012
- Reviewer for *Biogeochemistry*, *Ecological Monographs*, *Ecology*, *Ecosphere*, *Environmental and Experimental Botany*, *Environmental Research Letters*, *Environmental Science & Technology*, *Geoderma*, *Global Biogeochemical Cycles*, *Global Change Biology*, *JGR-Biogeosciences*, *Methods in Ecology and Evolution*, *New Phytologist*, *Pedosphere*, *Plant Ecology*, *Polar Biology*,

Proceedings of the National Academy of Sciences, ad hoc reviewer for Earthwatch Institute, NSF (OPP, EAR, and AGS Postdoc Fellowship), UAF Global Change Grant Competition, Netherlands Organization for Scientific Research Council for Earth and Life Sciences, panel review for Argonne National Lab Science Focus Area Review, NSF DDIG