

Sean T. Berthrong

Curriculum Vitae

Address

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University program in Ecology
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Education

- Ph.D.*, Ecology (expected 2009), Duke University, Durham, NC
Research Area: Soil Biogeochemistry, Microbial Ecology, and
Effects of Land-use Change on Soil Carbon and Nutrients. Advisor:
Robert Jackson
- M.A.*, Biology (2003, GPA 3.90/4), Boston University, Boston, MA
Thesis: "Organic and Inorganic Nitrogen Cycling in a Temperate
Southern New England Forest." Advisor: Adrien Finzi
- B.A. Cum Laude*, Biology and Classics (2001, GPA 3.34/4)
Boston University, Boston, MA

Professional Experience

- Departmental Fellow*, Department of Biology
Duke University, Durham, NC, 2009
- Graduate Research Fellow*, US Dept. of Energy, Global Change
Education Program
Duke University, Durham, NC, 2006-2009
- Adjunct Faculty*, Environmental Sciences, Biology Department
Elon University, Elon, NC, 2009
- Graduate Research Assistant*, Department of Biology
Duke University, Durham, NC, 2004-2005
- Associate in Research*, Department of Biology
Duke University, Durham, NC, 2003-2004
- Graduate Research and Teaching Fellow*, Biology Department
Boston University, Boston, MA, 2001-2003
- Undergraduate Researcher*, Biology Department
Boston University, Boston, MA, 2000-2001

Grants and Fellowships

Doctoral Dissertation Enhancement Grant (\$15,000)

National Science Foundation, 2006-2009

Departmental Fellowship (\$12,700)

Biology Department, Duke University, 2009

Graduate Research in the Environment Fellowship (\$110,000)

Global Change Education Program, US Dept. of Energy 2006-2009

Conference Travel Grant (\$750)

The Graduate School, Duke University, 2008

Grant-in-aid of Research (\$1,000)

Keever Endowment, Duke University Biology Department, 2006

Field Research Grant (\$1,500)

Tinker Foundation, 2006

Conference Travel Grant (\$750)

The Graduate School, Duke University, 2005

Grant-in-aid-of-Research (\$300)

Sigma Xi, The Scientific Research Society, 2002

Undergraduate Research Opportunity Grant

Undergraduate Research Opportunity Program, Boston University
Awarded twice 1999, 2000

Awards and Honors

Best Student Oral Presentation

6th International Symposium on Ecosystem Behaviour (Biogeomon)
Helsinki, Finland (€300), 2009

Oosting Graduate Student Fellow

In recognition of outstanding Ph.D. research in the field of Ecology
Awarded at the 38th annual Oosting Memorial Lecture
Durham, NC, 2008

Preparing Future Faculty Fellow

The Graduate School, Duke University 2008

Peer-reviewed Publications

Berthrong, S.T., Schadt, C.W., Piñeiro, G, Jackson R.B. 2009 (In Press).

“Afforestation alters soil functional gene composition and biogeochemical processes in South American grasslands.” *Applied and Environmental Microbiology*

Berthrong, S.T., Jobbagy, E.G., Jackson R.B. 2009 (In Press). “A global meta-analysis of soil exchangeable cations, pH, carbon, and nitrogen with afforestation.” *Ecological Applications*

- Fierer, N.**, Morse, J.L., Berthrong, S.T., Bernhardt, E.S., Jackson, R.B., 2007. "Environmental controls on the landscape-scale biogeography of stream bacterial communities." 2007. *Ecology* 88(9):2162-2173
- Berthrong, S.T.** and Finzi, A.C. 2006. "Amino acid cycling in three cold-temperate forests of the northeastern USA." *Soil Biology and Biochemistry* 38(5):861-869
- Finzi, A.C.**, Berthrong, S.T. 2005. "The Uptake of Amino Acids by Microbes and Trees in Three Cold-Temperate Forests." *Ecology* 86(12):3345-335
- Jackson, R.B.**, Berthrong, S.T., Cook, C.W., Jobbágy, E.J., McCulley, R.L. 2004. "Comment on 'A Reservoir of Nitrate Beneath Desert Soils.'" *Science* 503: 51

Presentations

- 94th Annual Meeting of the Ecological Society of America**, August 2009. "A global meta-analysis of soil exchangeable cations, pH, carbon, and nitrogen with afforestation."
- 6th International Symposium on Ecosystem Behaviour**, July 2009, contributed oral presentation entitled, "Afforestation, microbial metagenomics, and biogeochemistry in Southern South American Grasslands." Award prize for the best student oral presentation
- Duke University Ecology Seminar Series**, April 2009. "Forests out of context: effects of afforestation on soils and microbes at multiple scales."
- 93rd Annual Meeting of the Ecological Society of America**, August 2008, contributed oral presentation entitled "Molecular and biogeochemical analyses suggest afforestation in southern South America alters soil processes."
- 38th Annual Oosting Memorial Lecture**, April 2008, Selected for 1st Annual Oosting Graduate Student Symposium. "Changing Forestry in a Changing World: Afforestation and Global Change."
- US Department of Energy, Global Change Education Program, End-of-Summer workshop Oral presentation**, August 2007. "Soil Biogeochemistry and Microbial Ecology of Afforestation in Temperate South American Grasslands."
- 91st Ecological Society of America Annual Meeting**, August 2006. Poster presentation, "Pastures to Plantations: Afforestation Impacts Soil Microbial Community Composition and Biogeochemistry in Temperate South America."

Southeastern Ecology and Evolution Conference, March 2005. Oral presentation, “Eucalyptus or Gauchos? Preliminary data on the Biogeochemical effects of afforestation on temperate South American grassland soils.”

87th Annual meeting of the Ecological Society of America, August 2002. Poster presentation, “Organic nitrogen cycling in a temperate New England forest.”

Teaching and Mentoring

Adjunct Faculty, Elon University, Dept. of Environmental Studies 2009. I designed and co-taught a winter term course, “Ecological Restoration,” to a diverse class of students. The course involved lectures, group discussions, and several field trips to ecological restoration projects in several different areas of North Carolina.

Research Mentor, Duke University 2009. I mentored Kelly Adamski, an undergraduate research assistant, in molecular and soil techniques.

Teaching Assistant, Duke University, Dept. of Biology 2008. I taught a lab section and graded exams for General Microbiology.

Research Mentor, Duke University 2008, I mentored undergraduate student, Catherine Johnson, in soil and molecular lab techniques, and mentored Cole Thompson on a two week field sampling trip to Uruguay.

Teaching Assistant, Duke University, Dept. of Biology 2005. I taught lab sections and graded exams for the upper level undergraduate ecology class at Duke.

Teaching Fellow, Boston University, Dept. of Biology 2001-2003. I taught first and second semester biology labs with material that ranged from ecology and conservation biology to genetics and molecular biology.

Profession Service

2009 Reviewer for the journal *Biogeochemistry*

2009 Reviewer for the journal *Biology and Fertility of Soils*

2008 Reviewer for the journal *Soil Biology and Biochemistry*

2008 Reviewer for Czech Science Foundation

2007-2008-Reviewer for US DOE NICCR Southeast section grant proposals

May 2007-2009. Program in Ecology Seminar Series

Committee Member

September 2005-May 2007. Program in Ecology Seminar Series

Coordinator.

September 2005-May 2007 Nicholas School Graduate Afternoon Seminar coordinator.

September 2004-March 2005-Student representative on faculty search committee.

November 2005-March 2006-Vice-President, Duke University chapter of Sigma Xi.