Colin Averill

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EDUCATION & EXPERIENCE

Postdoctoral Researcher, Boston University, Boston, MA — September 2015 - present
NOAA Climate and Global Change Postdoctoral Fellow
Advisors – Dr. Jennifer Talbot and Dr. Michael Dietze

Ph.D., University of Texas at Austin, Austin, TX — 2010 – 2015
National Science Foundation Graduate Fellow
Advisor – Dr. Christine Hawkes

B.A. Boston University, Boston, MA — 2004 – 2008
Biology, Specialization in Ecology and Conservation
Magna Cum Laude with Distinction in Biology

Senior Research Technician, Boston University, Boston, MA — 2008 – 2010
Ecosystem Ecology
Advisor – Dr. Adrien Finzi

PUBLICATIONS

Averill C. *in press*. Slowed decomposition in ectomycorrhizal ecosystems is independent of plant chemistry. *Soil Biology and Biochemistry*.

Averill C. and Hawkes, C.V. 2016. Ectomycorrhizas slow soil carbon cycling. *Ecology Letters*. 19: 937-947.

Averill C., Waring, B.G. and Hawkes C.V. 2016. Historical precipitation predictably alters the shape and magnitude of microbial functional response to soil moisture. *Global Change Biology*. 22: 1957-1964.

Averill C., Rousk, J. and Hawkes C.V. 2015. Microbial-mediated changes in ecosystem nitrogen partitioning can delay progressive nitrogen limitation. *Biogeochemistry.*126: 11-23.
**featured in the Biogeochemistry Letters section, "manuscripts that present results that substantially advance the field or challenge entrenched ideas."*

Averill C., Turner B.L. and Finzi A.C. 2014. Mycorrhizal mediated competition between plants and decomposers drives soil carbon storage. *Nature.* 505: 543-545.
**Media coverage from TIME Magazine, ThinkProgress, KUT Austin NPR, Mongabay.com*

Averill C. 2014. Divergence in plant and microbial allocation strategies explains continental patterns in microbial allocation and biogeochemical fluxes. *Ecology Letters*. 17: 1202-1210.

Giasson M.A., **Averill C.** and Finzi A.C. 2014. Correction factors for dissolved organic carbon extracted from soil, measured using the Mn (III)-pyrophosphate colorimetric method adapted for a microplate reader. *Soil Biology and Biochemistry*. 78: 284-287.

PUBLICATIONS

Waring B.G., **Averill C.** and Hawkes C.V. 2013. Differences in fungal and bacterial physiology alter soil carbon and nitrogen cycling: insights from meta-analysis and theoretical models. *Ecology Letters*. 16: 887-894.

Kivlin S.N., Waring B.G., **Averill C.** and Hawkes C.V. 2013. Tradeoffs in microbial carbon allocation may mediate soil carbon storage in future climates. *Frontiers in Microbiology.* 4: 261.

Averill C. and Finzi A.C. 2011. Increasing plant dependence on organic nitrogen along an elevation gradient is reflected in nitrogen uptake rates and ecosystem $\delta^{15}N$ at Mount Eisenhower, NH, USA. *Ecology*. 92: 883-891 *(Ecosystem Ecology Faculty of 1000 Selection)*.

Averill C. and Finzi A.C. 2011. Plant regulation of microbial enzyme production in situ. *Soil Biology and Biochemistry*. 43: 2457-2460

PUBLICATIONS IN REVIEW & PREP **can provide upon request*

Averill C. Dietze, M.C. & Talbot, J.M. *in prep*. Continental scale nitrogen pollution has shifted forest mycorrhizal associations driving losses of soil carbon.

AWARDS AND FELLOWSHIPS

National Oceanic and Atmospheric Administration Climate and Global Change Postdoctoral Research Fellowship Mar 2015
$138,000 over two years

National Science Foundation Graduate Research Fellowship Apr 2012
$121,500 over three years

Elizabeth Sulzman Award Aug 2015
Awarded By the Biogeosciences Section of the Ecological Society of America for an outstanding manuscript published by a graduate student: *Averill et al. 2014, Nature*

Outstanding Student Research in Ecology Award Aug 2014
Awarded for the best paper by a graduate student in the field of Ecology by the Student Section of the Ecological Society of America: *Averill et al. 2014, Nature*

Outstanding Student Research in Ecology Award Aug 2011
Awarded for the best paper by an undergraduate student in the field of Ecology by the Student Section of the Ecological Society of America: *Averill and Finzi 2011, Ecology*

Fungal Environmental Sampling Network Graduate Student Travel Award Aug 2013
Ecological Society of America Meeting, $1,000

Young Scientist Travel Award Jul 2011
Enzymes in the Environment Conference, Bad Nauheim, Germany, $1850

University of Texas at Austin Integrative Biology Recruitment Fellowship Sep 2010
$24,000

University of Texas at Austin Preemptive Fellowship Sep 2010
$12,000

University of Texas at Austin Deans Excellence Award Sep 2010
$6,000

Boston University Honors Thesis Work for Distinction Award Apr 2008

Boston University Undergraduate Summer Research Fellowship Jun 2007
$3,500

GRANT FUNDING

NSF Macrosystems Biology: the Near-term Ecological Forecasting Initiative. Aug 2016
*$1,704,922. *I made substantial intellectual contributions, as well as wrote substantial components of this grant, however I am not officially listed as a co-PI.*

National Science Foundation Doctoral Dissertation Improve Grant (DDIG) *$20,085* Mar 2014

University of Texas at Austin Department of Ecology Evolution and Behavior Dissertation Improvement Grant *$5,000* Mar 2014

University of Texas at Austin Graduate Program in Ecology Evolution and Behavior Start-up Grant *$2,000* Mar 2012

Texas Ecolab Research Grant: Decomposition along the Edward's Plateau- separating the effects of rainfall, microbial biomass, and extra-cellular enzymes *$9,000* Apr 2011

Boston University Undergraduate Research Opportunities Grants *$1,000* 2007-2008

INVITED PRESENTATIONS

Microbial life in the ecosystem context: molecular interactions at macro scales. Mar 2016
University of Arizona, Tuscon AZ

Linking microbial ecology to ecosystem and Earth element cycles. Nov 2015
University of Pennsylvania Department Seminar, Philadelphia PA

Enzyme production as a key mycorrhizal trait. Aug 2015
Ecological Society of America Annual Meeting, Baltimore MD

Linking microbial ecology to ecosystem and Earth element cycles. Jan 2015
University of Maryland Department Seminar, Frostburg MD

Stoichiometric vs. growth optimization in decomposer microbial ecosystems. Aug 2014
Ecological Society of America Annual Meeting, Minneapolis, MN

Differences in fungal and bacterial physiology alter soil carbon and nitrogen cycling: synthesizing effects of microbial community structure using the Fungi and Bacteria (FAB) model. Dec 2013
American Geophysical Union Annual Meeting, San Francisco, CA

The effect of mycorrhizal type on soil carbon storage across ecosystems. June 2012
University of New Hampshire EOS department, Durham, NH

CONTRIBUTED PRESENTATIONS

Quantitative inhibition of soil carbon cycling by ectomycorrhizal fungi under field conditions. Dec 2014
American Geophysical Inion Annual Meeting, San Francisco, CA

Competition between ectomycorrhizas and free living decomposers reduces decomposer activity. Aug 2013
Ecological Society of America Annual Meeting, Minneapolis, MN

Using Rayleigh isotope equations to predict foliar ^{15}N signatures and form of nitrogen uptake across biomes Aug 2011
Ecological Society of America Annual Meeting, Austin TX

Organic nitrogen uptake along an elevation gradient at Mount Eisenhower, NH, USA Aug 2009
Ecological Society of America Annual Meeting, Albuquerque, NM

WORKING GROUPS

Invited participant: Do microbes matter? Frontiers in terrestrial climate feedbacks: Integrating models and experiments to explore climate feedbacks in an increasingly managed and warming world. Feb 2016

Invited participant: 2nd International Enzymes in the Environment RCN Workshop: Incorporating Enzymes and Microbial Physiology into Biogeochemical Models. May 2012

OUTREACH AND SERVICE

UT Austin Science Under the Stars 2010-2015

Lead organizer: Science under the Stars presents ecological research to the general public in a family friendly setting. Lectures are free, and held in the Brackenridge Field lab, an urban ecology lab in downtown Austin. I help coordinate and promote these events. I was the lead organizer of this group for the Fall 2014 and Spring 2015 academic semesters. www.scienceunderthestars.org

UT Austin Ecolunch Seminar Series Organizer Sept 2013-2015

Lead Organizer: EcoLunch is an opportunity for grad students, post docs, faculty and others to give a talk or get feedback on a new project or idea from a room full of ecologists in an informal setting. We encourage talks that are more interactive or discussion based that can take advantage of the audience's expertise. I facilitate booking speakers and sending emails to the group as well as promoting the series within the department and university.

Boston University Bio Bugs April 2009-10

Panel Speaker: Biobugs puts Boston-area high school students in a lab setting, exposes them to cutting edge scientific equipment, and provides interactions with professional scientists. I talked with several high school biology classes about potential career paths in the natural sciences.

Peer Review: Biogeochemistry, Biogeosciences, Ecology, Ecology Letters, Ecological Monographs, FEMS Microbial Ecology, Global Change Biology, Journal of Ecology, Oecologia, New Phytologist, Plant and Soil, PLOS One, Soil Biology and Biochemistry

Professional Memberships: American Geophysical Union, Ecological Society of America, Soil Ecology Society