

Colleen M. Iversen · Curriculum Vitae

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Education

Ph.D., University of Tennessee (2003 – 2008)

Ecology and Evolutionary Biology

Co-advisors: Richard J. Norby and Aimée T. Classen

Dissertation: Forest responses to rising atmospheric CO₂: Causes and consequences of increased fine-root production in a CO₂-enriched sweetgum plantation

M.S., University of Notre Dame (2001 – 2004)

Biological Sciences

Advisor: Scott D. Bridgham

Thesis: Scaling community nitrogen use- and uptake efficiencies in response to increased nutrient availability in peatlands

B.S. (*cum laude*), Hope College (1997 – 2001)

Biological and Environmental Sciences

Appointments

Post-doctoral research associate (2008 – present)

Environmental Sciences Division

Oak Ridge National Laboratory

Marvin L. Wesely Graduate Research Environmental Fellow (2007 – 2008)

Global Change Education Program

Department of Energy

Refereed publications

Iversen CM, Ledford J, Norby RJ (2008). CO₂ enrichment increases carbon and nitrogen input from fine roots in a deciduous forest. *New Phytologist*. 179: 837-847.

Iversen CM, Norby RJ (2008). Nitrogen limitation in a sweetgum plantation: Implications for carbon allocation and storage. *Canadian Journal of Forest Research* 38: 1021-1032.

Franklin O, McMurtrie RE, Iversen CM, Crous KY, Finzi A, Tissue DT, Ellsworth DS, Oren R, Norby RJ (2008). Forest fine-root production and nitrogen use under elevated CO₂: contrasting responses in evergreen and deciduous trees explained by a common principle. *Global Change Biology* 14: 1-13.

Finzi AC, Norby RJ, Calfapietra C, Gallet-Budynek A, Gielen B, Holmes WE, Hoosbeek MR, Iversen CM, Jackson RB, Kubiske MB, Ledford J, Liberloo M, Oren R, Polle A, Pritchard S, Zak DR, Schlesinger WH, Ceulemans R (2007). Increases in nitrogen uptake rather than nitrogen-use efficiency support higher rates of temperate forest productivity under elevated CO₂. *Proceedings of the National Academy of Sciences, USA* 104: 14014-14019.

Norby RJ, Iversen, CM (2006). Nitrogen uptake, distribution, turnover, and efficiency of use in a CO₂-enriched sweetgum forest. *Ecology* 87:5-14.

Keller JK, Bauers AK, Bridgham SD, Kellogg LE, **Iversen CM (2006)**. Nutrient control of microbial carbon cycling along an ombrotrophic-minerotrophic peatland gradient. *Journal of Geophysical Research* 111: G03006.

Keller JK, Bridgham SD, Chapin CT, **Iversen CM (2005)**. Limited effects of six years of fertilization on carbon mineralization dynamics in a Minnesota fen. *Soil Biology and Biochemistry* 37: 1197-1204.

Grants and fellowships

- 2007 – 2009 Doctoral Dissertation Improvement Grant. Will CO₂ mediated increases in fine-root litter progressively decrease forest N availability by increasing N immobilization in soil organic matter? *National Science Foundation* (\$11,730).
- 2005 – 2008 Graduate Research Environmental Fellowship. Global Change Education Program, *United States Department of Energy* (\$19,600 annually).
- 2005 Ehleringer Stable Isotope Ecology Course at the University of Utah. Tuition grant from Department of Ecology and Evolutionary Biology, *University of Tennessee* (\$1300).
- 2004 Summer Research Grant. Department of Ecology and Evolutionary Biology, *University of Tennessee* (\$1300).

Honors and awards

- 2007 – 2008 Marvin L. Wesely Graduate Research Environmental Fellow. Global Change Education Program, *United States Department of Energy*.
- 2006 Best student poster presentation in the Soil Ecology Section of the Ecological Society of America annual meeting, Memphis, TN.
- 2006 Travel award from Terrestrial Ecosystem Responses to Atmospheric and Climatic Change network to attend forested FACE synthesis in Antwerp, Belgium.
- 2005 Second best student poster presentation. Soil Ecology Society biennial meeting, Argonne National Laboratory, Argonne, IL.
- 2004 Travel award to attend Terrestrial Ecosystem Responses to Atmospheric and Climatic Change annual meeting, Fort Meyers, FL.
- 2003 – 2004 Travel awards from the Society of Wetland Scientists to attend Society of Wetland Scientists annual meeting, New Orleans, LA (2003) and Association of Southeastern Biologists annual meeting, Memphis, TN (2004).

Teaching and mentoring

Instructor

Spring, 2008 “Ecology in a Changing World”
Designed and co-taught 1-credit undergraduate seminar
Department of Ecology and Evolutionary Biology
University of Tennessee

Guest lecturer

2003 – 2007 Multiple-section “General Ecology” course on topics related to
ecosystems, nutrient cycling, and trophic dynamics.
Department of Ecology and Evolutionary Biology,
University of Tennessee

Teaching assistant

2003 – 2004 “Biodiversity” Laboratory
Department of Ecology and Evolutionary Biology
University of Tennessee

2001 – 2002 “General Ecology” Laboratory
Department of Biological Sciences
University of Notre Dame

Undergraduate mentoring

Fall, 2007 Jennifer Burks, Earlham College,
*Mycorrhizal production and decomposition under elevated carbon
dioxide concentrations*

Summer, 2006 Caitlin Guthrie, Pomona College
Elevated carbon dioxide does not affect net nitrogen mineralization

Fall, 2005 Joey Roberts, Middle Tennessee State University
*Disentangling fine-root production under elevated carbon dioxide
concentrations using a stable carbon isotope*

Summer, 2005 Zara Berg, Montana Tech
Nitrogen fertilization effects on a forest understory

Selected presentations (2005-2009)

Iversen CM. 2009. The causes and consequences of increased fine-root production in a CO₂-enriched sweetgum plantation. *Invited talk.* Biosciences Division Seminar, Argonne National Laboratory, Argonne, IL.

Iversen CM. 2009. The causes and consequences of increased fine-root production in a CO₂-enriched sweetgum plantation. *Invited talk.* Department of Biological Sciences Seminar, University of Illinois at Chicago, Chicago, IL.

Iversen CM. 2008. The causes and consequences of increased fine-root production in a CO₂-enriched sweetgum plantation. *Keynote address*. High CO₂ Workshop, University of Western Sydney, New South Wales, Australia.

Iversen CM, Childs J, Norby RJ. 2008. CO₂ enrichment increases carbon and nitrogen input from fine roots in a deciduous forest. Ecological Society of America annual meeting, Milwaukee, WI. Oral presentation.

Iversen CM. 2007. At the root of the response in a CO₂-enriched deciduous forest. M.L. Wesely Graduate Research Environmental Fellow, Global Climate Education Program, annual end-of-year meeting, Washington, D.C. *Oral presentation*.

Iversen CM. 2006. The root of the response: Changes in forest carbon and nitrogen cycling in a CO₂-enriched deciduous forest. *Invited talk*. Smithsonian Environmental Research Center, Edgewater, MD.

Iversen CM, Norby RJ and Classen AT. 2006. Changes in fine-root quantity and quality with elevated CO₂: Implications for decomposition and nitrogen cycling. Ecological Society of America annual meeting, Memphis, TN. **Winner of best student poster award.**

Iversen CM. 2006. Plant nitrogen use from fens to forests: Consequences for carbon storage. *Invited talk*. Oak Ridge National Laboratory weekly "Fishheads" meeting, Oak Ridge, TN.

Iversen CM, Norby RJ and Classen AT. 2006. Nitrogen cycling in a CO₂-enriched deciduous forest: Implications for carbon storage. Global Change Education Program, Graduate Research Environmental Fellowship annual orientation, Portland, OR. *Oral presentation*.

Iversen CM, and Norby, RJ. 2005. Nitrogen cycling and dynamics in a CO₂-enriched deciduous forest: Will nitrogen limitation preclude a sustained productivity response? Soil Ecology Society bi-annual meeting, Argonne National Laboratory, Argonne, IL. **Winner of second-best student poster award.**

Iversen CM, and Norby, RJ. 2005. Nitrogen cycling and dynamics in a CO₂-enriched deciduous forest. Terrestrial Ecosystem Responses to Atmospheric and Climatic Change annual meeting, Fort Meyers, FL. *Poster presentation*.

Professional activities

Ad-hoc reviewer for: *Acta Oecologica*, *Biological Invasions*, *Canadian Journal of Forest Research*, *Global Change Biology*, *New Phytologist*, *Plant and Soil*, and National Science Foundation, Ecosystems Panel.

Public tours: Oak Ridge National Laboratory Free-Air CO₂-Enrichment experiment.

Public outreach: Local NPR interview, web cast for Oak Ridge Associated Universities, and as part of a feature story in the *ORNL Review*, presentation of "Ecosystems" and "Greenhouse effect" concepts to Sevierville 3rd grade classrooms and Environmental Club.

Society memberships: American Association for the Advancement of Science, American Geophysical Union, Association of Southeastern Biologists, Ecological Society of America, Society of Soil Ecologists Society of Wetland Scientists, Soil Science Society of America.

References

Dr. Richard J. Norby

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Dr. Aimée T. Classen

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Dr. Scott D. Bridgham

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