

Suzanna L. Richter

Department of Earth and Environmental Science
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Education

Ph.D. 2006, University of Pennsylvania

Department of Earth and Environmental Science
Dissertation: *Interpreting Oxygen Isotope Ratios in Fossil Wood Cellulose*

B.A. 2002, University of Pennsylvania

Major: Geology (minor in Chemistry)
Honors Thesis: *Reconstruction of an Arctic Eocene Fossil Forest: a palynological analysis of a non-coaly facies, Axel Heiberg Island, Canadian High Arctic*

Current Employment

2006-2009. Postdoctoral Research Associate, University of Pennsylvania. Post Agricultural Carbon Accumulation in Soils of Western New England.

Peer-Reviewed Papers & Book Chapters

Richter, S.L. and B.A. LePage. 2005. A high-resolution palynological analysis, Axel Heiberg Island, Canadian High Arctic, Chapter 3 *in*: The Geobiology and Ecology of *Metasequoia*, LePage, B.A., C.J. Williams and H. Yang, eds. Springer, The Netherlands. Pp. 137-158.

Bedison, J., **S. Richter**, A. Moyer, A. Johnson, and S. Willig. Two Decades of Change in Adirondack Spruce-Fir, Northern Hardwood and Pine-Dominated Forest Plots. (accepted with revision). Bull. Torrey Botanical Society.

Richter, S.L., A.H. Johnson, M.M. Dranoff and K.D. Taylor. 2007. Continental-Scale Patterns in Modern Wood Cellulose $\delta^{18}\text{O}$: Implications for Interpreting Paleo-Wood Cellulose $\delta^{18}\text{O}$. *Geochimica et Cosmochimica Acta* (in review).

Richter, S.L., G.I. Omar and A.H. Johnson. 2007. Oxygen Isotope Ratios in Fossil Wood Cellulose I: Using X-Ray Diffraction Crystallography to Evaluate Sample Integrity. *Geochimica et Cosmochimica Acta* (in review).

Richter, S.L., A.H. Johnson, M.M. Dranoff, B.A. LePage, and C.J. Williams. 2007. Oxygen Isotope Ratios in Fossil Wood Cellulose II: Isotopic Composition of Eocene- to Holocene-Aged Cellulose. *Geochimica et Cosmochimica Acta* (in review).

Johnson, A.H., A. Moyer, J. Bedison, **S. Richter**, S. Willig, and M. Boyer. Seven Decades of Calcium Depletion in Organic Horizons of Adirondack Forest Soils. Submitted to Soil Science Society of America Journal (11/06).

Manuscripts in Preparation

Richter, S.L., D.R. Vann, and A.H. Johnson. Effects of N-Fertilization on Productivity of Evergreen Broadleaf and Conifer Forests in the Cordillera Piuchué, Chile.

Richter, S., A. Johnson, A. Andresen, A. Friedland. 26-year changes in Lead and other Heavy Metals in the Organic Horizons of Forest Soils of the Mid-Atlantic Region.

Richter, S. and A. Johnson. 26-year changes in Base Cation Concentrations and the Amount of Carbon and Nitrogen in the Organic Horizons of the Mid-Atlantic Region.

Richter, S., A. Moyer, J. Bedison and A. Johnson. 20-year changes in Heavy Metal Concentrations and Amounts in the Organic Horizons of Adirondack Soils.

Presentations at Meetings & Symposia

Northeastern Ecosystem Research Cooperative Conference, October 2006

Durham, New Hampshire: *Two Decades of Change in Adirondack Spruce-Fir, Northern Hardwood and Pine-Dominated Forest Plots*. Bedison, J., **S. Richter**, A. Moyer, A. Johnson, and S. Willig (poster).

Northeastern Ecosystem Research Cooperative Conference, October 2006

Durham, New Hampshire: *Seven Decades of Calcium Depletion in Organic Horizons of Adirondack Forest Soils*. Johnson, A.H., A. Moyer, J. Bedison, **S. Richter** (poster).

Geological Society of America Annual Meeting, October 2006

Philadelphia, PA: *Interpreting Oxygen Isotope Ratios in Fossil Wood Cellulose* (oral).

Soil Science Society of America Annual Meeting, November 2005

Salt Lake City, Utah: *Mineral Nitrogen and Productivity in Pristine Forests of Southern Chile* (oral).

Ecological Society of America Annual Meeting, August 2005

Montréal, Canada: *Limitations of Wood-Cellulose $\delta^{18}O$ as an Indicator of Climate on > Millennial Time Scales* (oral).

First International *Metasequoia* Symposium, August 2002

Wuhan, China: *Reconstruction of an Arctic Eocene Fossil Forest: a palynological analysis of a non-coaly facies, Axel Heiberg Island, Canadian High Arctic* (oral).

Grants & Awards

University of Pennsylvania William Penn Fellowship, 2002-2006

University of Pennsylvania Summer Stipend in Paleobiology, 2002, 2003, 2004, 2005

Professional Organization Memberships

Soil Science Society of America (SSSA)

Geological Society of America (GSA)

American Geophysical Union (AGU)

Sigma Xi, The Scientific Research Society

Teaching & Mentoring Experience

University of Pennsylvania

Instructor

Introduction to Environmental Analysis (ENVS 200), Spring 2007

Teaching Assistant

Introduction to Environmental Analysis (ENVS 200) (Professors Yvette L. Bordeaux & Robert F. Giegengack), three semesters

Environmental Case Studies (ENVS 301) (Professor Edward L. Doheny), two semesters

Undergraduate Mentorship

Amanda Moyer (B.A., University of Pennsylvania, 2005)

Honors Thesis: *Twenty year changes in the forest floor of the Adirondack Mountains, New York*

Teaching & Research Interests

Soil Biogeochemistry

Isotope Biogeochemistry

Soil Carbon Dynamics

Forest Ecosystem Nutrient Cycling

Heavy Metal Dynamics in Forest Soils

Research Collaborations

F.N. Scatena: Luquillo Critical Zone Observatory, Bisley Experimental Forest, Puerto Rico

H.W. Art: Carbon accumulation in Hopkins Memorial Forest, Williams College

M.A. Scholl, USGS: Linking $\delta^{18}\text{O}$ in rainfall with cellulose $\delta^{18}\text{O}$, Puerto Rico

B.A. LePage, URS Corp.: Canadian Arctic Paleoecology, Axel Heiberg Island, Canadian Arctic

C.J. Williams, F & M: Reconstructing a Miocene forest, Banks Island, Canadian Arctic