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## EDUCATION

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| University of Wisconsin, Madison | Ph.D. in Zoology (Minor: Ecosystem Ecology), 2005<br>Dissertation Title: Influence of land-use change on the long-term persistence of forest understory herbs in the Southern Appalachian Highlands<br>Advisor: Monica Turner |
| Colorado State University        | M.S. in Ecology, 2000<br>Thesis Title: Effects of low-density residential development on landscape patterns and avian communities in the Rocky Mountains<br>Advisor: John Wiens   |
| University of Wisconsin, Madison | B.S., with distinction, 1997<br>Major: Zoology  |

## RESEARCH PUBLICATIONS

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**Fraterrigo, J.M.**, T.C. Balsler, and M.G. Turner. 2006. Microbial community variation and its relationship with nitrogen mineralization in historically altered forests. *Ecology* 87: 570-579.

**Fraterrigo, J.M.**, M.G. Turner, and S.M. Pearson. 2006. Interactions between past land use, life-history traits and understory spatial heterogeneity. *Landscape Ecology* 21: 777-790.

**Fraterrigo, J.M.**, M.G. Turner, and S.M. Pearson. 2006. Past land use alters plant allocation and growth in the herb layer. *Journal of Ecology* 94: 548-557.

**Fraterrigo, J.M.**, M.G. Turner, S.M. Pearson and P. Dixon. 2005. Effects of past land use on spatial heterogeneity of soil nutrients in southern Appalachian forests. *Ecological Monographs* 75: 215-230.

**Fraterrigo, J.M.** and J.A. Wiens. 2005. Bird communities of the Colorado Rocky Mountains along a gradient of low-density residential development. *Landscape and Urban Planning* 71: 263-275.

Miller, J.R., **J.M. Fraterrigo**, N.T. Hobbs, D.M. Theobald, and J.A. Wiens. 2001. Urbanization, avian communities, and landscape ecology. Pages 117-137 in J.M. Marzluff, R. Bowman, and R. Donnelly, editors. *Avian Ecology and Conservation in an Urbanizing World*. Kluwer, New York.

Westneat, D.F., L.A. McGraw, **J.M. Fraterrigo**, T.R. Birkhead and F. Fletcher. 1998. Patterns of courtship behavior and ejaculate characteristics in male red-winged blackbirds. *Behavioral Ecology and Sociobiology* 43: 161-171.

## In Review

**Fraterrigo, J.M.** and J.A. Downing. Hydrologic conductivity alters the extent to which land use affects water quality.

**Fraterrigo, J.M.**, M.G. Turner, and S.M. Pearson. Plant population persistence on spatially and temporally variable landscapes.

Mabry, C., **J.M. Fraterrigo**, and F. Gephardt. Comparison of emergent and functional response groups from three North American floras.

In Preparation

**Fraterrigo, J.M.**, J.A. Rusak and M.G. Turner. Disturbance-driven changes in the variability of ecological patterns and processes.

**Fraterrigo, J.M.**, J. Compton, and C.L. Goodale. Land-use legacies in temperate and tropical forest soils: their causes and consequences. Intended for Ecosystems.

GRANTS

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2005-07	<b>USDA National Research Initiative:</b> Effects of landscape-weather interactions on biological water quality in agricultural watersheds (\$119,000)
2004	<b>National Science Foundation LTER Network Synthesis Initiative:</b> Disturbance and variance: detecting change in terrestrial and aquatic ecosystems (Co-PI Jim Rusak, \$10,000)
2002-2005	<b>US DOE Global Change Education Program Graduate Research Fellowship:</b> Influence of land-use and climate change on the long-term persistence of forest understory herbs (~\$70,000)
2002	<b>National Fish and Wildlife Foundation:</b> Influence of land-use and climate change on the long-term persistence of forest understory herbs (\$10,000)

FELLOWSHIPS AND AWARDS

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2005-2007	USDA NRI Postdoctoral Fellowship
2002-2005	US DOE Global Change Education Program Graduate Research Fellowship
2004	Vilas International Travel Fellowship, University of Wisconsin
2002	Budweiser Conservation Scholarship, Anheuser-Busch and the NFWF
2001	Davis Award, University of Wisconsin
2000	NASA-MSU Professional Enhancement Award, Michigan State University
	Graduate Travel Award, Colorado State University
1998	Graduate Fellowship, Colorado State University
	Honorable Mention, National Science Foundation Graduate Research Fellowship
1993-1997	University of Wisconsin Alumni Club Scholarship

RESEARCH EXPERIENCE

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2005-present	USDA NRI Postdoctoral Fellow, Iowa State University (Sponsoring Scientist: John Downing)
2002-05	US DOE Graduate Research Fellow, University of Wisconsin, Madison
2000-01	Research Assistant, Department of Forest Ecology and Management (Lab of David Mladenoff)
	Research Assistant, Department of Zoology (Lab of Monica Turner)
2001	Research Assistant, Colorado State University
1997	Research Assistant, Natural Resource Ecology Laboratory, Colorado State University
1996	Research Experience for Undergraduates (NSF-REU), University of Wisconsin (Advisor: Scott McWilliams)

1995-96            Research Experience for Undergraduates (NSF-REU), University of Kentucky (Advisor: David Westneat)

## TEACHING EXPERIENCE

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### Courses Taught

2001            Introductory Biology for Majors (teaching assistant), 1 semester  
1999-00        Principles of Animal Biology (teaching assistant), 2 semesters  
1998-99        Attributes of Living Systems (teaching assistant), 2 semesters

## PROFESSIONAL SERVICE

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### Ad Hoc Grant

Reviewer:     National Sciences and Engineering Research Council of Canada, University of Missouri

### Ad Hoc Journal

Reviewer:     *Biogeochemistry, BioScience, Ecology, Ecology Letters, Journal of Applied Ecology, Journal of Ecology, Landscape Ecology, and Plant and Soil*, as well as several book chapters

2004            Disturbance - Variance Workshop (Co-organizer: Jim Rusak)

2003            Invited Student Participant, Tenth Cary Conference, "Ecosystem Function in Heterogeneous Landscapes" Institute of Ecosystem Studies, Millbrook, NY

2002-04        Invited presenter, U.S. DOE Global Change Ecology Summer Workshop

2001-present   Strategic Planning Committee, U.S. Chapter of the International Association for Landscape Ecology (US-IALE)

2000-02        Graduate Student Representative, US-IALE

## PROFESSIONAL AFFILIATIONS

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Ecological Society of America

U.S. Chapter of the International Association for Landscape Ecology (US-IALE)

## PRESENTATIONS

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### Invited Papers

**Fraterrigo, J.M.** Ecosystem dynamics in anthropogenic landscapes: Recognizing the importance of history and spatial complexity. University of Illinois at Urbana-Champaign, April 2007.

**Fraterrigo, J.M.** Human impacts on the abiotic template: Reconsidering the temporal and spatial dynamics of ecosystems. Indiana University, March 2007.

**Fraterrigo, J.M. and J.A. Downing.** Hydrological conductivity influences the extent to which land use affects lake water quality. National Water Conference, Savannah, GA, January 2007.

**Fraterrigo, J.M.** Soil, plant and microbial legacies of past land use in southern Appalachian forests. University of Wisconsin – Madison, Department of Zoology Colloquium, May 2005.

**Fraterrigo, J.M.** Land-use legacies in the southeastern United States. Murdoch University, Murdoch, Western Australia, July 2004.

**Fraterrigo, J.M.** Understanding ecosystem process in the context of broad-scale spatial heterogeneity. Ecology, Evolutionary Biology Interdepartmental Seminar Series, Iowa State University, Ames, IA, November 2003.

**Fraterrigo, J.M.** Reconciling fine-scale ecosystem processes with broad-scale heterogeneity. Jornada Basin Long Term Ecological Research Site, Las Cruces, NM, October 2003.

**Fraterrigo, J.M.**, M.G. Turner, S.M. Pearson and P. Dixon. Impacts of past land use on spatial heterogeneity of soil nutrients in Southern Appalachian forests. Long-Term Ecological Research All-Scientists Meeting, Seattle, WA, September 2003.

**Fraterrigo, J.M.**, M.G. Turner, S.M. Pearson and P. Dixon. Effects of prior land use on spatial heterogeneity of soil nutrients in southern Appalachian forests. Tenth Cary Conference, Millbrook, NY. April 2003.

#### Contributed Papers

**Fraterrigo, J.M.**, M.G. Turner, and S.M. Pearson. Fine-scale heterogeneity of forest herbs: the role of past land use and life-history traits. US-IALE 19<sup>th</sup> Annual Meeting, Las Vegas, NV, April 2004.

**Fraterrigo, J.M.**, M.G. Turner, S.M. Pearson and P. Dixon. Impacts of past land use on spatial heterogeneity of soil nutrients in Southern Appalachian forests. ESA Annual Meeting, Savannah, GA, August 2003.

**Fraterrigo, J.M.**, M.G. Turner and S.M. Pearson. The effect of prior land use on the spatial distribution of soil chemical properties in southern Appalachian forests. US-IALE 18<sup>th</sup> Annual Meeting, Banff, Alberta, Canada, April 2003.

**Fraterrigo, J.M.**, M.G. Turner, and S.M. Pearson. Legacies of land use in southern Appalachian soils. US-IALE 17<sup>th</sup> Annual Meeting, Lincoln, NE, April 2002.

**Fraterrigo, J.M.** and J.A. Wiens. Low-density human settlement in the Colorado Rocky Mountains: does it matter to bird communities? ESA Annual Meeting, Madison, WI, August 2001.

**Fraterrigo, J.M.** and J.A. Wiens. Low-density residential development in the Rocky Mountain Region: does it matter to bird communities? US-IALE 15<sup>th</sup> Annual Meeting, Fort Lauderdale, FL, April 2000.

Miller, J.R., **J.M. Fraterrigo**, N.T. Hobbs, D.M. Theobald, and J.A. Wiens. 1999. Urbanization, avian communities, and landscape ecology. Annual Meeting of the Cooper Ornithological Society, Portland, OR, March 1999.