

CURRICULUM VITAE

MARIA N. MIRITI

Department of Evolution, Ecology and Organismal Biology
Room 270 Aronoff Laboratory
318 W. 12th Avenue
Columbus, OH 43210
614-292-6997
FAX 614-292-2030
miriti.1@osu.edu

EDUCATION

Ph. D. Biological Sciences, May 1999 University of Illinois at Chicago
B.A. Ecology and Evolutionary Biology, June 1987 Northwestern University

PROFESSIONAL EXPERIENCE

2002 – present Assistant Professor, Ohio State University
1999 – 2001 Postdoctoral Associate, State University of New York at Stony Brook
1987 – 1990 Research Technician, Chicago State University

AWARDS, HONORS AND GRANTS

NRI- Weedy and Invasive species, “Enhanced invasiveness of crop-wild hybrids: a test for associations between greater fecundity and population growth,” Snow, A. (PI), M. Miriti and S. Mazer. PENDING **\$380,000**
OSU-OARDC Research Enhancement Competitive Grant Program 2004, Interdisciplinary Team Research Proposal, “After the invasion: Developing a mechanistic understanding of ecological and human responses to exotic species to inform restoration decisions,” Rodewald, A. (PI), J. Arvai, V. Bouchard and M. Miriti. **\$100,000**
NSF DEB “CRB: Competitive and demographic trade-offs: Restoration of tallgrass prairie,” Co-PI’s Peter Curtis and Robert Klips, March 1 2004 – February 28, 2007**\$300,000**
Critical Difference for Women. Grant to conduct ongoing desert research. April 2003**\$450.00**
NSF Dissertation Improvement Grant. Research grant funding experimental desert research. August 1994-August 1996**\$4,500**
Philip L. Hawley Award, Sigma Xi Student Research Forum, March 1995
Martin Luther King Jr. Minority Fellowship, University of Illinois at Chicago, Academic Year 1993-1994
University Fellowship, University of Illinois at Chicago, Academic Year 1995-1996, and 1996-1997

Dean's Scholarship, University of Illinois at Chicago, Academic Year 1997-1998 and Academic Year 1998-1999

Conservation, Food and Health Foundation, Inc. Research grant funding tropical forest regeneration project; October 1993-October 1994 **sole PI, \$8,250**

Biological Dynamics of Forest Fragments Project (Smithsonian/INPA(National Institute for Amazonian Research)). Research grant funding regeneration project for Fiscal Year October 1994-October 1995 **sole PI, \$10,000**

PUBLICATIONS

Gerhardt Mazzochini, G., C. Pandolfo Paz, G. Ganade, M. Miriti. Spatial patterns reflecting facilitation and inhibition of *Pinus* and *Araucaria* seedlings in a restoration context. In preparation for *Restoration Ecology*.

Miriti, M.N., S. Kiger, V. Malik, P. Curtis and R. Klips. Density mitigates the competitive superiority of the prairie invasive, *Solidago canadensis*. In preparation for *Ecological restoration*.

Rodríguez-Buriticá, S. and M. N. Miriti. Environmental variation modifies the response of the invasive grass *Schismus barbatus* to Islands of Fertility. In preparation for *Plant Ecology*.

Rodríguez-Buriticá, S. and M. N. Miriti. Interaction between the invasive grass *Schismus barbatus* (Poaceae) and the native perennial *Ambrosia dumosa* (Asteraceae) in the Colorado Desert. In review for *Journal of Vegetation Science*.

Miriti, M. N. 2007. Twenty years of changes in spatial association and community structure in a community of desert perennials. *Ecology*. 88(5):1177-1190.

Miriti, M. N., S. Rodriguez, S. J. Wright and H. F. Howe. 2007. Episodic death across species of desert shrubs. *Ecology* (Report). 88(1):32-36.

Miriti, M. N. 2006. Ontogenetic shift from facilitation to competition in a desert shrub. *Journal of Ecology* 94:973-979.

Howe, H. F. and M. N. Miriti. 2004. When seed dispersal matters. *Bioscience*. 54:651-660.

Dungan JL, Perry JN, Dale MRT, Legendre P, Citron-Pousty S, Fortin MJ, Jakomulska A, Miriti M, Rosenberg MS. 2002. A balanced view of scale in spatial statistical analysis. *Ecography* 25: (5) 626-640.

Perry, J, Liebhold, Andrew S., Rosenberg, Michael S., Dungan, Jennifer, Miriti, Maria, Jakomulska, Anna, Citron-Pousty, Steven I.. 2002. Illustration and guidelines for selecting statistical methods for quantifying spatial patterns in ecological data. *Ecography* 25: (5) 578-600.

- Miriti, M. N., S. J. Wright and H. F. Howe. 2001. The effects of neighbors on a dominant desert shrub (*Ambrosia dumosa*). *Ecological Monographs*. 71(4):491-509.
- Howe, H. F. and M. N. Miriti. 2000. No question: seed dispersal matters. *Trends in Ecology and Evolution*. 15(11):434-436.
- Miriti, M.N., H. F. Howe, and S. J. Wright. 1998. Spatial patterns of mortality in a desert perennial plant community. *Plant Ecology* 136:41-51.
- Miriti, M. N. 1998. Regeneração florestal em pastagens abandonadas na Amazônia Central: competição, predação, e dispersão de sementes. Pages 179-191 in C. Gascon, D. Nepstad and P. Moutinho (eds) *Floresta Amazônica: Dinâmica, Regeneração e Manejo*. Instituto Nacional de Pesquisa da Amazônia, Manaus, Brazil.

INVITED PRESENTATIONS

- Miriti, M.N. 2006. "Population and community dynamics—links between pattern and process." Universidade do Vale dos Sinos, São Leopoldo, Brazil.
- Miriti, M.N. 2005 "A 20-year study of spatial effects on community dynamics in desert perennials." University of Illinois at Chicago, Chicago, IL
- Miriti, M.N. 2005. "A 20-year study of spatial effects on community dynamics in desert perennials." Kenyon College, Gambier, OH
- Miriti, M.N. 2004. "Community dynamics of desert perennials over a 20 year interval," University of Michigan, Ann Arbor, MI.
- Miriti, M. N. 2002. "Spatial variables and plant demography," American Society of Naturalists, Annual Meeting, Banff, Canada
- Miriti, M. 2002. "Miriti, M. N. 2002. "Spatial patterns and plant demography," Indiana State University
- Miriti, M. 2002. "The effects of spatial structure on plant population and community dynamics," OSU School of Natural Resources.
- Miriti, M. 2001. "The effects of spatial structure on plant population and community dynamics," Swarthmore College.
- Miriti, M. 2001. "The effects of spatial structure on plant population and community dynamics," Institute for Ecosystem Studies.
- Miriti, M. 1999. "Spatial interactions and demography within a community of desert perennial plants," Ecology and Evolution Colloquium, SUNY at Stony Brook.

Miriti, M. 1997. "Community ecology of desert perennial shrubs," Ecology and Evolution seminar, University of Illinois at Chicago.

Miriti, M. 1994. "Regeneração florestal em pastagens abandonadas na Amazônia Central: competição, predação, e dispersão de sementes," Workshop on Restoration in the Amazon, University of Amazonas.

Miriti, M. 1993. "Importância da dispersão de sementes na regeneração da floresta tropical," Seminários do PDBFF, Biological Dynamics of Forest Fragments Project, Manaus, Amazonas.

OTHER PRESENTATIONS

Quintero-Vallejo, E M. and M.N. Miriti. 2007. Individual strategies of growth of invasive and native prairie species in different nutrient environments. ESA Annual Meeting, San Jose, California.

Rodríguez-Buriticá, S. and M. N. Miriti. 2007. Environmental variation modifies the response of the invasive grass *Schismus barbatus* to Islands of Fertility. ESA Annual Meeting, San Jose, California.

Kiger, S., J. Herman, V. Malik, R. Klips, P.S. Curtis and **M. N. Miriti**. 2006. Competitive ability and root growth in native and non-native prairie species at contrasting nutrient levels. ESA Annual Meeting, Memphis, Tennessee.

Mulac, K. and **M. Miriti**. 2006. Response of *Packera glabella* (Poir) C. Jeffrey to disturbance and shade. ESA Annual Meeting, Memphis, Tennessee.

Miriti, M. N. 2005. Plant community dynamics: A spatially-explicit perspective from the Colorado Desert. ESA Annual Meeting, Montreal, Canada.

Rodríguez-Buriticá, S. and **M. Miriti**. 2005. Interaction between the invasive grass *Schismus barbatus* (Poaceae) and the native perennial *Ambrosia dumosa* (Astereaceae) in the Colorado Desert. ESA Annual Meeting, Montreal Canada.

Shenoy, A., **Miriti, M.N.**, and Boerner, R.E.J. 2005. Invasion of forests by the exotic Norway maple (*Acer platanoides* L.): Do soil resources matter? 10th Biennial Meeting of the Soil Ecology Society, Argonne, IL. Abstract: In Jastrow, J.D. and Moran, K. (eds), Proceedings, 10th Biennial Soil Ecology Society Meeting, Argonne National Laboratory, Argonne, IL., p. 83.

Shenoy, A., **Miriti, M** and Boerner, REJ. 2004. Invasion of forests by Norway Maple: Do resources matter? ESA Annual Meeting, Portland, OR, Poster presentation

Miriti, M. 2003. "Responses of prairie natives and exotics to addition of soil nitrogen and calcium." Annual Meeting of the Ecological Society of America, Savannah, GA.

Miriti, M. 2003. "Demografia espacial de plantas (Spatial demography of plants)." Universidade do Vale dos Sinos, São Leopoldo, Brazil.

Miriti, M. 2001. "What can distort the identification of landscape spatial pattern." U.S. Chapter of the International Association of Landscape Ecology (US-IALE) Annual Symposium. Special session, "The premises and problems with spatial analysis," co-chaired with M. Fortin.

Miriti, M., "The relative effects of nurse plants, herbivory and granivory on germination and survival of perennial seedlings in the Colorado Desert," Ecological Society of America Annual Meeting, August 1999

Miriti, M., H. F. Howe and S. J. Wright, "Longevity and stability of desert perennial shrubs," Ecological Society of America Annual Meeting, August 1998

Miriti, M. "The significance of germination site on the population dynamics of a common desert shrub, white bur sage (*Ambrosia dumosa*)," Ecological Society of America Annual Meeting, August 1997

Miriti, M. "Forest regeneration in the Central Amazon: competition, predation and seed dispersal," Ecological Society of America Annual Meeting, August 1995

INVITED WORKSHOPS

"Integrating the Statistical Modeling of Spatial Data in Ecology," National Center for Ecological Analysis and Synthesis. June 1999-July 2000

"Scientific Methods Workshop: Ecological and Agronomic Consequences of Gene Flow from Transgenic Crops to Wild Relatives," The Ohio State University, 5-6 March, 2002

PROFESSIONAL SERVICE

NSF Spring 2005 Advisory Panel, NSF Ecology Program

Manuscript review: *Ecology*, *Plant Ecology*, *International Journal of Plant Science*, *Ecological Applications*, *New Phytologist*, *Journal of Ecology*

Grant proposal review: National Science Foundation

PROFESSIONAL SOCIETY MEMBERSHIP

Ecological Society of America
American Institute of Biological Sciences

Sigma Xi
Botanical Society of America

COURSES TAUGHT

OSU

EEOB 413 – Introduction to ecology, Winter 2003, Winter 2004
EEOB 720 – Communities and Ecosystems, Winter 2004, WI 2005
EEOB 881G – Interface between population and community ecology, Spring 2002
EEOB 881 – Matrix Population Methods, Spring 2003
EEOB 881 – The Ecological Detective, Fall 2003

SUNY at Stony Brook

Instructor - Biology 351, General Ecology, SUNY Stony Brook 1999, 2000, 2001
Instructor – Biology 113, General Ecology for non-majors, SUNY Stony Brook 2001
Instructor - Graduate Seminar in restoration ecology, SUNY Stony Brook 2000

UNISINOS, Rio Grande do Sul, Brazil

Spatial analytic methods in Ecology, Continuing education course, 20-31 March 2006

Graduate students

Primary Advisee

Diana Susana Rodriguez—Plant spatial demography, invasive plants
Kathleen Mulac—Invasive plants
Estela Quintero—Plant demography and habitat restoration
Aditi Shenoy – Invasive plants (co-advised with R. E. J. Boerner), M. S. received in 2005.

Committee member

Lesley Campbell (EEOB)—“Taming the wild radish: Rapid evolution of weeds resulting from crop-to-wild gene flow”, Ph. D.
Cadi Schiffer (EEOB) – Meta-analysis of wolf pack size, MS
Jing Luo (H&CS)—Ecology of invasive species, PhD
Su Su (EEOB)—Hybridization between sorghum and shattercane, M.S. received in 2006.
Troy Wilson (EEOB) – Ph. D. received in 2006.
Suzane Bevilacqua Marcuzzo, UNISINOS, Brazil, Tropical forest restoration, M.S. received in 2006.
Lessandra Zanini, UNISINOS, Brazil. Tropical forest restoration, M. S. received in 2003.
Kelly Lotts (EEOB) – M. S. received in 2003.
Adrian Rocha (EEOB) – Canopy responses to climate, M.S. received in 2003.

Undergraduate mentoring

Hillary Sweigard – Spatial and demographic analyses
Terrence Musoni – Germination biology
Sarah Kiger – Competitive ability of native and non-native prairie plants

Administrative responsibilities

EEOB Graduate Admissions Committee

EEOB Social Committee

College Honors Undergraduate Recruiting Committee