

**Zachariah Joel Miller**

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**EDUCATION:**

**2009** PhD., University of Michigan, Department of Ecology and Evolutionary Biology, Ann Arbor, Michigan,

**1998** B.A. Biology Luther College, Decorah, Iowa: G.P.A.-3.96 (*Summa Cum Laude*)

**1994** Gilbert Community High School, Gilbert, Iowa

**RESEARCH INTERESTS:** Disease ecology and evolution, plant community ecology, agroecology.

**RESEARCH EXPERIENCE:**

*5/2009-present: **Agro-ecological Research.** Montana State University, Bozeman, MT.*

*5/2003 to 9/2003: **Agro-ecological Research,** Iowa State University, Ames, IA.*

*Principal Investigator: Dr. Matt Leibman, Departments of Agronomy and Ecology.*

*Area of Research: Effects of crop rotation systems on weed population dynamics.*

*5/2001 to 9/2001: **Ecological Research,** U.S.F.S., Dixie National Forest, Teasdale, UT.*

*Area of Research: Conservation of rare plant species and monitoring change in plant communities.*

*9/2000 to 1/2001: **Tropical Ecology Research,** University of Utah, Iquitos, Peru.*

*Principal Investigator: Dr. Paul Fine*

*Area of Research: The role of a growth-defense trade-off in habitat specialization of Amazonian tree species.*

*10/1998 to 9/2000: **Ecological Research,** Utah State University, Logan, UT.*

*Principal Investigator: Dr. Mark Ritchie*

*Area of Research: the effect of herbivory on plant communities across resource gradients.*

*7/1998 to 10/1998: **Ecological Research,** University of Minnesota, Cedar Creek L.T.E.R., MN*

*Principal Investigators: David Tilman, Johannes Knops, Shahid Naeem, Mark Ritchie*

*Area of Research: Plant biodiversity effects on ecosystem function.*

*12/1997 to 4/1998: **Tropical Ecology Research,** U. of Pitt., Barro Colorado Island, Panama.*

*Principal Investigator: Dr Walter P. Carson*

*Area of Research: Effects of insect and mammalian seed predators on plant community composition.*

**TEACHING EXPERIENCE:**

*2003 to 2009: **Graduate Student Instructor:** University of Michigan.*

*Classes taught: Evolution, Woody Plants of Michigan, Plant Systematics, Ecology and Evolution of Infectious Disease, and Biology and Human Affairs, Parasitology.*

*9/2002 to 6/2003: **Teaching Assistant,** General Chemistry, Iowa State University, Ames, Iowa.*

*10/2001 to 6/2002: **Senior Field Instructor,** Alternative Youth Adventures, Loa, Utah.*

**ACADEMIC SERVICE**

*9/2003 to 6/2004: Departmental graduate employee organization steward*

*10/2004 to 4/2005: Graduate student representative on ecology faculty search committee*

*10/2007 to 4/2008: Graduate student representative on EEB faculty search committee*

*10/2007 to 4/2008 Graduate student representative on EEB admissions search committee*

## **PROFESSIONAL AFFILIATIONS**

*2004-present:* Ecological Society of America and Society for the Study of Evolution

*2009-present:* Weed Science Society

## **RESEARCH GRANTS**

- 2007 Brower fellowship: \$7500  
University of Michigan, M.B.G.N.A. Research Endowment Award \$1500
- 2006 University of Michigan, EEB Block Grant: \$1500  
University of Michigan, Matthei Botanical Gardens Research Award: \$570
- 2005 University of Michigan, Wehmeyer Fellowship in Fungal Taxonomy: \$527  
University of Michigan, Matthei Botanical Gardens Research Award: \$400
- 2004 University of Michigan, EEB Block Grant: \$350

## **HONORS AND AWARDS:**

Rackham Outstanding Graduate Student Instructor Award, UM, 2006

Phi Beta Kappa- Luther College, 1998

National Merit Scholarship- Luther College, 1994-1998

Regents Scholarship- Luther College, 1994-1998

Presidential Scholarship- Luther College, 1994-1998

Graduated Summa Cum Laude- Luther College, 1998

Academic All-American, Cross Country, 1996 and 1997

Academic All-American, Track and Field, 1996 and 1997

## **SELECTED CONTRIBUTED PRESENTATIONS:**

**2010** Miller, Z.J., F. Menalled, M. Burrows. Direct and indirect of plant stressors on winter wheat yields and crop-weed competition. Joint meeting of Weed Science Society and Society of Range Management in Denver CO.

**2009** Miller, Z.J.. Why do some plant species have more pathogens than others? Species-area relationships determine richness of natural enemies attacking plant species. Joint meeting of the Society for the Study of Evolution, Society of Systematic Biologists, and American Society of Naturalists in Moscow, Idaho

**2008** Miller, Z.J.. Janzen-Connell effects for all: The multiple negative effects of a specialist plant pathogen on host plant abundance. Meeting of the Ecological Society of America in Milwaukee, Wisconsin.

**2007** Miller, Z.J., David Allen. The effects of host population size and spatial structure on plant-pathogen dynamics: combining theoretical and empirical approaches. Meeting of the Ecological Society of America in San Jose, California.

## **PUBLICATIONS:**

Fine, Paul .V.A., Zachariah J. Miller, Italo Mesones, Sebastian Irazuzta, Heidi M. Appel, M. Henry H. Stevens, Ilari Sääksjärvi, Jack C. Schultz, and Phyllis D. Coley. 2006. The growth-defense tradeoff and habitat specialization by plants in Amazonian forests. *Ecology* 87(7): S150-S162

## **REFERENCES:**

Dr. John Vandermeer, Department of Ecology and Evolutionary Biology, University of Michigan, LSA, Ann Arbor, Michigan. [jvander@umich.edu](mailto:jvander@umich.edu)

Dr. Beverly Rathcke, Department of Ecology and Evolutionary Biology, University of Michigan, LSA, Ann Arbor, Michigan. [brathcke@umich.edu](mailto:brathcke@umich.edu)

Dr. Christopher Dick, Department of Ecology and Evolutionary Biology, University of Michigan, LSA, Ann Arbor, Michigan. [cwdick@umich.edu](mailto:cwdick@umich.edu)