

# MEGAN ARLENE RÚA, PH.D.

---

Department of Biological Sciences  
3640 Colonel Glenn Hwy.  
Dayton, OH 45435 USA  
[megan.rua@wright.edu](mailto:megan.rua@wright.edu)

phone: (937) 775-2913  
fax: (937) 775-3320  
<https://meganrua.com>

## ACADEMIC INTERESTS

Plant-pathogen-mutualist interactions, global climate change, invasive plant species, abiotic and biotic sources of selection, coevolution, statistical methods, microbiology

## PROFESSIONAL EXPERIENCE

2016-Present Assistant Professor, Wright State University, Dayton, OH  
2015-2016 Postdoctoral Research Fellow at the National Institute for Mathematical and Biological Synthesis, University of Tennessee, Knoxville, TN.  
Mentors: Drs. Lou Gross and Brian O'Meara  
2012-2015 NSF Postdoctoral Research Fellow in Biology, University of Mississippi, University, MS.  
Mentor: Dr. Jason Hoeksema

## EDUCATION

Ph.D 2007-2012, Curriculum for the Environment and Ecology, University of North Carolina, Chapel Hill, NC.  
Advisor: Dr. Charles E. Mitchell  
B.S. 2002-2006, Ecology and Evolutionary Biology, Rice University, Houston, TX

## RESEARCH EXPERIENCE

2006-2007 Laboratory Technician, Department of Ecology and Evolutionary Biology, Rice University, Houston, TX, Advisors: Drs. Jennifer Rudgers and Kenneth Whitney  
2003-2006 Research Assistant, Department of Ecology and Evolutionary Biology, Rice University, Houston, TX, Advisor: Dr. Evan Siemann

## AWARDS AND FELLOWSHIPS

2015-2016 Postdoctoral Research Fellowship at the National Institute for Mathematical and Biological Synthesis (\$51,000)  
2012-2015 NSF Postdoctoral Fellowship in Biology (\$189,000)  
2011 Soil Ecology Society student poster presentation competition: 2<sup>nd</sup> place  
2009-2012 NSF Graduate Research Fellowship (\$121,500)  
2008 NSF Graduate Research Fellowship Program Honorable Mention  
2007-2008 UNC Alliances for Graduate Education and the Professoriate (AGEP) Research Assistantship (\$25,000)  
2007 UNC Merit Fellowship, University of North Carolina, Chapel Hill, NC (Declined: \$16,000)

## GRANTS

- 2013 New Phytologist Trust Travel Grant (\$400)
- 2011 International Society of Microbial Ecology Parkinson Travel Grant (\$400)
- 2011 UNC-Summer Undergraduate Research Fellowship: “The effect of two nutrient gradients on plant tolerance to viral infection.” Mentee: Briana Whitaker, PI: Charles E. Mitchell (\$3,000)
- 2009 NSF REU Supplement to “Collaborative Research: Predicting the effects of environmental change and host diversity on the dynamics of insect-vectored generalist pathogens.” PI: Charles E. Mitchell. (\$6,000)
- 2009 UNC-Summer Undergraduate Research Fellowship: “Effect of host nutritional status on defense investment.” Mentee: Juan Calderon, co-PIs: Charles E. Mitchell, Miranda E. Welsh (\$3,000)

## PUBLICATIONS

**GOOGLE SCHOLAR PROFILE:** <http://tinyurl.com/ScholarRUA>

**ORCID:** <http://orcid.org/0000-0002-2883-2795>

### \*Undergraduate under my supervision

#### PEER-REVIEWED JOURNAL ARTICLES

- Rúa, M. A.**, L. J. Lamit, C. Gehring, P. M. Antunes, J. D. Hoeksema, C. Zabinski, J. Karst, C. Burns\*, and M. J. Woods\*. 2017. Accounting for local adaptation in ectomycorrhizas: a call to track geographical origin of plants, fungi, and soils in experiments. *Mycorrhiza*. DOI: 10.1007/s00572-017-0811-y
- Hilker, F., L. Allen, V. Bokil, C. Briggs, Z. Feng, K. A. Garrett, L. Gross, F. Hamelin, M. J. Jeger, C. Manore, A. Power, M. Redinbaugh, **M. Rúa**, and N. J. Cunniffe. 2017. Modelling virus coinfection to inform management of maize lethal necrosis in Kenya. *Phytopathology*. doi.org/10.1094/PHYTO-03-17-0080-FI
- Rúa, M.A.**, Antonika, A., Antunes, P.M., Chaudray, V.B., Gehring, C., Lamit, L.J., Piculell, B.P., Bever, J., Zabinski, C., Meadow, J.F., Lajeunesse, M., Milligan, B., Karst, J., Hoeksema, J.D. 2016. Home-field advantage? Mycorrhizal type and geographic origin determine outcomes of local adaptation among plants, soil, and mycorrhizal fungi. *BMC Evolutionary Biology* 16, 1-15. doi: 10.1186/s12862-016-0698-9.
- Chaudhary, V.B., **M.A. Rúa**, A. Antoninka, J.D. Bever, J. Cannon, A. Craig, J. Duchicela, A. Frame, M. Gardes, C. Gehring, M. Ha\*, M. Hart, J. Hopkins, B. Ji, N. C. Johnson, W. Kaonongbua, Ju. Karst, R. Koide, L. Lamit, J. Meadow, B. Milligan, J. Moore, T. Pendergast, B. Piculell, B. Ramsby, S. Simard, S. Shrestha, J. Umbanhowar, W. Viechtbauer, L. Walters, G. Wilson, P. Zee, and J.D. Hoeksema. 2016. “MycoDB, a global database of plant response to mycorrhizal fungi,” *Scientific Data*. 3:160028
- Rúa, M.A.**, Wilson, E.C., Steele, S.\*, Munters, A.R.\*, Hoeksema, J.D., Frank, A.C. 2016. Ectomycorrhizal fungi structure the bacterial needle endophyte microbiota in *Pinus radiata*: implications for biotic selection of microbial communities. *Frontiers in Microbiology*. 7:399. doi: 10.3389/fmicb.2016.00399
- Rúa, M.A.**, Moore, B.\*, Hergott, N., Van, L.\*, Jackson, C.R., Hoeksema, J.D. 2015. Ectomycorrhizal fungal communities and enzymatic activities vary across an ecotone between a forest and field. *Journal of Fungi*. 1(2):185-210.

*Publications continued*

- Nyabadza, F. Bekele, B.T., **Rúa, M.A.**, Malonza, D., Chiduku, N., Kgosi, M., 2015. The implications of HIV treatment on the HIV-malaria coinfection dynamics: a modeling perspective. *BioMed Research International*. Article ID 659651: doi:10.1155/2015/659651.
- Whitaker, B.\*, **Rúa, M.A.**, Mitchell, C.E. 2015. Viral pathogen production in a wild grass host driven by host growth and soil nitrogen. *New Phytologist*. 207(3):760-768.
- Yamamichi, M., Meunier, C.L., Peace, A., Prater, C., **Rúa, M.A.** 2015. Rapid evolution of a consumer stoichiometric trait destabilizes consumer-producer dynamics. *Oikos*. 124:960-969.
- Rúa, M.A.** & Umbanhowar, J. 2015. The effect of mutualists on pathogen-host dynamics. *Theoretical Ecology*. 8(1):133-148.
- Cronin, J.P., **Rúa, M.A.**, Mitchell, C.E. 2014. Why is living fast dangerous? Disentangling the roles of resistance and tolerance of disease. *American Naturalist*. 184:172-187.
- Rúa, M.A.**, McCulley, R.L., Mitchell, C.E. 2014. Climate drivers, host identity, and fungal endophyte infection determine virus prevalence in a grassland ecosystem. *Journal of Ecology*. 102:690-699.
- Rúa, M.A.**, McCulley, R.L., Mitchell, C.E. 2013. Fungal endophyte infection and host genetic background jointly modulate host response to an aphid-transmitted viral pathogen. *Journal of Ecology*. 101:1007-1018.
- Rúa, M.A.**, Umbanhowar, J., Hu, S., Burkey, K., Mitchell, C.E. 2013. "Elevated CO<sub>2</sub> spurs reciprocal positive effects between a plant virus and an arbuscular mycorrhizal fungus." *New Phytologist*. 199:541-549.
- Rúa, M.A.**, Pollina, E.C., Power, A.G., Mitchell, C.E. 2011. The role of viruses in biological invasions: friend or foe? *Current Opinion in Virology*. 1:68-72.
- Rudgers, J.A., Savage, A.M., and **Rúa, M.A.** 2010. Geographic variation in a facultative mutualism alters local arthropod diversity. *Oecologia*. 163:985-996.
- Rudgers, J.A., Afkhami, M.E., **Rúa, M.A.**, Davitt, A.J., Hammer, S., and Huguet, V. 2009. Why ecologists should consider endophytes: broad patterns of endophyte distribution in the grasses. *Ecology*. 90:1531-1539.
- Rúa, M.A.**, Nijjer, S., Johnson, A., Rogers, W.E., and E. Siemann. 2008. Experimental approaches for testing allelopathy: investigating the allelopathic potential of the invader *sapium sebiferum*. *Allelopathy Journal*. 22:1-14.

**CONFERENCE PROCEEDINGS**

- Miller, M. E., W. L. Romine, and **M. A. Rúa**. 2017. What do College Undergraduates Know about Zika and What Precautions Are They Willing to Take to Prevent its Spread? Pages 92-98 in International Conference on Health Informatics and Medical Systems.

**OTHER ARTICLES**

- Hoeksema J & **Rúa M**: F1000Prime Recommendation of [Zimmerman N et al., Front Ecol Environ 2014, 12(4):224-31]. In F1000Prime, 19 May 2014; DOI: 10.3410/f.718384400.793495106. F1000Prime.com/718384400#eval79349510
- Rúa, M.A.** and C.E. Mitchell, 2011. Pathogens, Plant. For *The Encyclopedia of Invasive Introduced Species*, edited by Daniel Simberloff and Marcel Rejmánek. The University of California Press. 520-525.

## PRESENTATIONS AND POSTERS

### *SEMINAR PRESENTATIONS*

- Rúa, M.A.** 2016. Fantastic Fungi! Explorations of the Ecology and Evolution Describing Host-Microbe Interactions. Oral Presentation. Wright State University, Department of Earth and Environmental Sciences Colloquium. 8 November: Dayton, OH (**Invited**).
- Rúa, M.A.** 2016. Exploring the relative importance of biotic and abiotic sources of selection for pine-fungal interactions. Oral Presentation. University of Michigan, Early Career Scientists Symposium. 12 March: Ann Arbor, MI (**Invited**).
- Rúa, M.A.** 2016. Exploring the relative importance of biotic and abiotic sources of selection for pine-fungal interactions. Oral Presentation. National Institute for Mathematical and Biological Synthesis (NIMBioS). Casual Seminar. 5 February: Knoxville, TN.
- Rúa, M.A.** 2015. Fantastic Fungi! Exploring the ecological and evolutionary forces which shape host-microbe interactions. Oral Presentation. NIMBioS. 13 Oct: Knoxville, TN (**Invited**).
- Rúa, M.A.** 2015. All the small things: explorations of the ecological and evolutionary underpinnings describing host-microbe interactions. Oral Presentation. Miami University, Department of Biology. 4 Mar: Miami, FL (**Invited**).
- Rúa, M.A.** 2015. All the small things: explorations of the ecological and evolutionary underpinnings describing host-microbe interactions. Oral Presentation. Wright State University, Department of Biology. 18 Feb: Dayton, OH (**Invited**).
- Rúa, M.A.** 2015. All the small things: explorations of the ecological and evolutionary underpinnings describing host-microbe interactions. Oral Presentation. University of Tennessee, Department of Ecology and Evolutionary Biology. 4 Feb: Knoxville, TN (**Invited**).
- Rúa, M.A.** 2015. All the small things: explorations of the ecological and evolutionary underpinnings describing host-microbe interactions. Oral Presentation. California State University, Long Beach, Department of Biology. 29 Jan: Long Beach, CA (**Invited**).
- Rúa, M.A.** 2015. All the small things: explorations of the ecological and evolutionary underpinnings describing host-microbe interactions. Oral Presentation. Oklahoma State University, Department of Botany. 20 Jan: Stillwater, OK (**Invited**).
- Rúa, M.A.** 2015. All the small things: explorations of the ecological and evolutionary underpinnings describing host-microbe interactions. Oral Presentation. Louisiana Tech University, School of Biological Sciences. 8 Jan: Ruston, LA (**Invited**).
- Rúa, M.A.** 2014. All the small things: explorations of the ecological and evolutionary underpinnings describing host-microbe interactions. Oral Presentation. Bates College, Department of Biology. 8 Dec: Lewiston, ME (**Invited**).
- Rúa, M.A.** 2014. All the small things: explorations of the ecological and evolutionary underpinnings describing host-microbe interactions. Oral Presentation. New College of Florida, Division of Natural Sciences. 17 Nov: Sarasota, FL (**Invited**).
- Rúa, M.A.** 2014. Mutualists, pathogens, and plants oh my!: explorations of the ecological and evolutionary underpinnings describing host-microbe interactions. Oral Presentation. Purdue University, Department of Biology. 22 Jan: West Lafayette, IN (**Invited**).
- Rúa, M.A.** 2013. The role of mutualist microbes in plant responses to pathogens. Oral Presentation. University of Mississippi Department of Biology Seminar Series. 19 Apr: Oxford, MS (**Invited**).
- Rúa, M.A.** 2012. The role of mutualist microbes in plant responses to pathogens. Oral Presentation. UNC Curriculum for the Environment and Ecology. 15 March: Chapel Hill, NC.

*Seminar Presentations continued*

- Rúa, M.A.** 2011. The role of mutualist microbes in plant responses to pathogens. Oral Presentation. UNC Department of Biology Lunch Bunch Series. 8 Apr: Chapel Hill, NC.
- Rúa, M.A.** 2009. The role of nutrients and mutualist microbes in plant responses to pathogens. Oral Presentation. UNC Department of Biology Lunch Bunch Series. 30 Oct: Chapel Hill, NC.

**CONFERENCE PRESENTATIONS***Oral Presentations*

- Rúa, M.A.** 2016. Fantastic Fungi! Explorations of the Ecology and Evolution Describing Host-Microbe Interaction. Oral Presentation. Miami Valley Ecology Symposium. 19 November: Dayton, OH. (**Invited**).
- Rúa, M.A.** & J.D. Hoeksema. 2016. Variation in plant and fungal traits indicate mycorrhizal mediated selection in *Pinus radiata*. Oral Presentation. Evolution: "Species Interaction Spotlight Session." 18 June: Austin, TX. (**Invited**).
- Rúa, M.A.** & J.D. Hoeksema. 2016. Exploring the relative importance of biotic and abiotic sources of selection for pine-fungal interactions. Oral Presentation. Yosemite Symbiosis Workshop. 7 May: Wawona, CA.
- Rúa, M.A.**, 2015. All the Small Things: Explorations of the Ecology and Evolution Describing Host-Microbe Interactions. Oral Presentation. SACNAS. Oct. 31: National Harbor, MD.
- Rúa, M.A.**, Moore, B., Hergott, N., Van, L., Hoeksema, J.D. 2015. Ectomycorrhizal fungal communities and enzymatic activities vary across an ecotone between a forest and field. Oral Presentation. Ecological Society of America. Aug 12: Baltimore, MD.
- Rúa, M.A.**, Antonika, A., Antunes, P.M., Chaudray, V.B., Gehring, C., Lamit, L.J., Piculell, B.P., Bever, J., Zabinski, C., Meadow, J.F., Lajeunesse, M., Milligan, B., Karst, J., Hoeksema, J.D. 2015. Home-field advantage? Mycorrhizal type and geographic origin determine outcomes of local adaptation among plants, soil, and mycorrhizal fungi. Oral Presentation. International Congress on Mycorrhiza. Aug. 6: Flagstaff, AZ.
- M.A. Rúa** & J. Hoeksema. 2014. Genotypic controls on mycorrhizal-host relationships in *Pinus radiata*. Oral Presentation. Ecological Society of America. Aug 14: Sacramento, CA.
- Hoeksema, J.D., Bever, J.D., Chakraborty, S., Housworth, E., Lajeunesse, M., Meadow, J.F., Milligan, B., **Rúa, M.A.**, Umbanhowar, J., Viechtbauer, W. A phylogenetic meta-analysis of biotic and abiotic factors affecting plant response to mycorrhizal fungi. Oral Presentation. Ecological Society of America. Aug 11: Sacramento, CA.
- Bekele, B.T., **M.A. Rúa**, D. Malonza, N. Chiduku, M. Kgosmore, R. Smith?, F. Nyabadza. 2012. Theoretical analysis of HIV-malaria co-infection in the presence of treatment. Oral Presentation. Southern Africa Mathematical Sciences Association. 17 Dec: Lilongwe, Malawi.

*Posters Presentations*

- Karst, J., Burns, C., Cale, J. A., Antunes, P.A., Woods, M.\*\*, Lamit, L.J., Hoeksema, J.D., Zabinski, C., Gehring, C.A., La Fleche, M., & **M. A. Rúa**. Extreme responses to ectomycorrhizas limit geographic range size in trees. Poster Presentation. International Congress on Mycorrhiza. 3 August. Prague, Czech Republic.
- Poppenwimer, T.\*, L. Gross, J. Bailey, & **M.A. Rúa**. 2017. Modelling the Root Age Structure of Perennial Woody Plants. Poster Presentation. International Congress on Mycorrhiza. 3 August. Prague, Czech Republic.

*Conference Presentations continued:*

- Rúa, M.A.** & J. Culbertson\*\*. 2017. Environmental characteristics shape the ectomycorrhizal fungal community of two varieties of *Pinus clausa*. Poster Presentation. International Congress on Mycorrhiza. 31 July. Prague, Czech Republic.
- Poppenwimer, T.\*, L. Gross, J. Bailey, & **M.A. Rúa**. 2017. Modelling the Root Age Structure of Perennial Woody Plants. Poster Presentation. Soil Ecology Society. 6 June. Fort Collins, CO.
- Rúa, M.A. & J. Culbertson\*\*. 2017. Disturbance history and environmental characteristics shape the ectomycorrhizal fungal community of two varieties of *Pinus clausa*. Poster Presentation. Soil Ecology Society. 6 June. Fort Collins, CO.
- Rúa, M.A.**, Umbanhowar, J. 2013. A theoretical exploration of the effect of fungal mutualists on pathogen-plant dynamics. Poster. 32<sup>nd</sup> New Phytologist Symposium: Plant Interactions with other organisms: molecules, ecology and evolution. Poster Presentation. 21 November: Buenos Aires, Argentina.
- Cronin J.P., **M.A. Rúa**, C.E. Mitchell. 2013. Why is living fast dangerous? Disentangling the roles of resistance and tolerance of disease. Poster Presentation. Ecological Society of America. Aug 10: Minneapolis, MN.
- Rúa, M.A.**, B.D. Piculell, J.D. Hoeksema. 2013. The effect of local adaptation on mycorrhizae-host relationships. Poster Presentation. Ecological Society of America. Aug 7: Minneapolis, MN.
- Whitaker, B., **M.A. Rúa**, C.E. Mitchell. 2013. Viral pathogen production and virus-plant interactions are controlled by nitrogen and phosphorus supply. Poster Presentation. Ecological Society of America. Aug 6: Minneapolis, MN.
- Rúa, M.A.**, B.D. Piculell, J.D. Hoeksema. 2013. The effect of local adaptation on mycorrhizae-host relationships. Poster Presentation. Yosemite Symbiosis Institute. 25 May: Wawona, CA.
- Cronin J.P., **M.A. Rúa**, C.E. Mitchell. 2013. Why is living fast dangerous? Separating the roles of resistance and tolerance of disease. Poster Presentation. Ecology and Evolution of Infectious Diseases. 21 May: State College, PA.
- Cronin J.P., M.G. Dekkers, M.E. Welsh, **M.A. Rúa**, C.E. Mitchell. 2012. Effects of host functional traits on pathogen load and tolerance of infection: an experimental test. Oral Presentation. Ecological Society of America. 10 Aug: Portland, OR.
- Rúa, M.A.**, McCulley, R., Mitchell, C.E. 2012. The role of biotic and abiotic factors in altering pathogen dynamics for tall fescue in a managed grassland. Oral Presentation. Ecological Society of America. 6 Aug: Portland, OR.
- Rúa, M.A.**, McCulley, R., Mitchell, C.E. 2012. Host genotype alters endophyte effects in viral infected grasses. Poster. 28<sup>th</sup> New Phytologist Symposium: Functions and Ecology of the Plant Microbiome. 18 May: Rhodes, Greece.
- Rúa, M.A.**, McCulley, R., Mitchell, C.E. 2011. Host genotype alters endophyte effects in viral infected grasses. Poster. Ecological Society of America. 10 Aug: Austin, TX.
- Rúa, M.A.**, Umbanhowar, J., Mitchell, C.E. 2011. The Effect of Mutualists on Pathogen-Host Dynamics. Poster. Ecology and Evolution of Infectious Diseases. 20 June: Santa Barbara, CA.
- Rúa, M.A.**, Umbanhowar, J., Hu, S., Burkey, K., Mitchell, C.E. 2011. Impacts of the interaction between viral pathogens and mutualistic fungi on plant performance under elevated CO<sub>2</sub>. Poster. Soil Ecology Society. 25 May: Kelowna, BC, Canada.

- Rúa, M.A.,** McCulley, R., Mitchell, C.E. 2010. Endophytic fungi and climate change drivers interact to alter virus prevalence in grasses. Poster. Ecological Society of America. 3 Aug: Pittsburgh, PA.

*Conference Presentations continued:*

- Rúa, M.A.,** Barton, J., Mitchell, C.E., Umbanhowar, J., & Hu, S. 2009. Impacts of the interaction between viral pathogens and mutualistic fungi on plant performance under elevated CO<sub>2</sub>. Poster. Ecological Society of America. 3 Aug: Albuquerque, NM.
- Rúa, M.A.,** Barton, J., Mitchell, C.E., Umbanhowar, J., & Hu, S. 2009. Impacts of the interaction between viral pathogens and mutualistic fungi on plant performance under elevated CO<sub>2</sub>. Poster. Ecology and Evolution of Infectious Diseases. 22 May: Athens, GA.
- Rúa, M.A.,** Mitchell, C.E., Umbanhowar, J., Tu, C., & Hu, S. 2008. Impacts of the interaction between viral pathogens and mutualistic fungi on plant performance. Poster. Ecological Society of America. 4 August: Milwaukee, WI.
- Rúa, M.A.,** Rudgers, J.A., & Savage, A.M. 2007. Geographic variation in a facultative mutualism alters local arthropod diversity. Poster. Ecological Society of America. 7 August: San Jose, CA.
- Rúa, M.A.** & Siemann, E. 2006. Herbivore pressures on the invasive plant species Chinese Tallow. Poster. Rice Undergraduate Research Symposium. 20 April: Houston, TX.

## PROFESSIONAL ACTIVITIES

### *TEACHING EXPERIENCE*

2016,2017 Ecology and Evolution of Disease, Wright State University

### *MENTORING EXPERIENCE*

#### *Graduate Students Supervised*

2017-present **Michaela Woods**, masters student

#### *Graduate student dissertation and thesis committees at Wright State University*

2016-present Molly Simonis, masters student, Volker Bahn, chair  
 2017-present Aaron Onufrak, masters student, Katie Hossler, chair  
 2017-present Michele Miller, ES PhD student, Will Romine, chair  
 2017-present Daniel Hoffman, ES PhD student, Silvia Newell, chair  
 2015-2017 Mary Westwood, masters student, Tom Rooney, chair

*Undergraduate students* advised in experimental design, statistics, grant writing  
 Wright State University

- Ling Huang (2017-Present)
- Roselle Almazan (2017-Present)
- Adam Reed (2017-Present)
- Alexis Knicks (2016-2017)
- Christina Dowdy (Summer 2017, Louis Stokes Scholar)
- Risha Annamraju (Summer 2017, Miami Valley High School Summer Intern)

#### *NIMBioS*

- Jeff DeSalu (2016: Summer Research Experience)
- Morganne Igoe (2016: Summer Research Experience)

- E. Joe Moran (2016: Summer Research Experience)
- Teresa Sheets (2016: Summer Research Experience)

*University of Mississippi*

- Lily Van (2012-2013)
- Michelle Ha (2012-2015)
- Sarah Steele (2013-2015: University of Mississippi Honors Fellow)
- Matt Lee (2013-2014)
- Sarah Price-Wright (2014)
- Ashley Parker (2014-2015)
- Jack Culbertson (2014-2015: University of Mississippi Honors Fellow)

*University of North Carolina at Chapel Hill*

- Juan Calderon (2009: UNC-Summer Undergraduate Research Fellow)
- K. Amanda Saunders (2009: NSF-REU)
- Briana Whitaker (2010-2012: NSF-REU, UNC-Summer Undergraduate Research Fellow)

2011-2012 Pre-Graduate Education Advisor, the Graduate School, University of North Carolina, Chapel Hill

**PEER REVIEW***Journal articles*

2008-Present (34 reviews for 23 journals): *Agricultural and Forest Entomology, Allelopathy Journal, Basic and Applied Ecology, BioControl, Biology Letters, Diversity and Distributions, Ecology, Ecology Letters, Evolution, Fungal Ecology, Global Change Biology, Journal of Forestry Research, Journal of Pest Science, Journal of Plant Ecology, Ideas in Ecology and Evolution, Microbial Ecology, New Phytologist, Oecologia, Plant and Soil, Plant Ecology, Plant Molecular Biology, PLOS One, Toxins*

*Grant proposals*

2016 Panelist for NSF Graduate Research Fellowship Program  
 2014 Peer reviewer for Ontario Ministry of Agriculture, Food and Rural Affairs – University of Guelph Research Program  
 2014-2016 Panelist for NSF East Asia Pacific Summer Institute Fellowship Program.  
 2013-present Ad hoc reviewer for NSF Division of Environmental Biology: Population and Community Ecology Program (3 proposals)

*Conference abstracts*

2013-2014, Society for the Advancement of Chicanos/Latinos and Native Americans in  
 2016 Science (SACNAS)

**PROFESSIONAL DEVELOPMENT**

2016 Teaching for Student Success Symposium, Wright State University, Dayton, OH.  
 2015-Present NIMBioS working group participant: “Multiscale vectored plant viruses.” Knoxville, TN  
 2015-2016 University of Tennessee at Knoxville Ecology and Evolutionary Biology Women in Science Discussion Group participant. Knoxville, TN.  
 2015-2016 NIMBioS Professional Development Series participant and leader. Knoxville, TN.  
 2014 Woodstoich III: Peace, Love and Stoichiometry participant. Sydney, Australia.  
 2013 SACNAS Summer Leadership Institute. Palo Alto, CA.



- 2012 US-Africa Research Workshop on Mathematical Modeling of Biological Systems and Biodiversity participant. Lilongwe, Malawi.
- 2012 Participant at the Southern Regional Education Board Junior Faculty Professional Development Institute. Tampa, FL.
- 2012-2015 National Evolutionary Synthesis Center working group participant: “A working group to solve problems in model selection and phylogeny in mixed multi-factor meta-analysis.” Durham, NC
- 2011 Masamu Program Participant (US-Africa Advanced Study Institute and Workshop Series in Mathematical Sciences), Livingstone, Zambia
- 2010-2012 Women in Science Writing Group. Chapel Hill, NC.
- 2010 National Center for Ecological Analysis and Synthesis distributed graduate seminar: “A graduate seminar network to facilitate synthetic research on the mycorrhizal symbiosis.” Santa Barbara, CA
- 2009, 2011 Represented the UNC-Alliances for Graduate Education and the Professoriate Program at the Annual Compact for Faculty Diversity Institute on Teaching and Mentoring
- 2009 Ecology and Evolution of Infectious Disease Workshop Participant. Athens, GA

#### ***DEPARTMENTAL AND UNIVERSITY SERVICE***

- 2013-2014 Ecological and Evolutionary Physiology Search Committee, Department of Biology, University of Mississippi
- 2013 Mentor, Three Minute Thesis Competition, Graduate School, University of Mississippi, University, MS
- 2009-2010 Seminar Committee Chair, Curriculum for the Environment and Ecology, University of North Carolina, Chapel Hill
- 2008-2011 Seminar Committee, Curriculum for the Environment and Ecology, University of North Carolina, Chapel Hill

#### ***PROFESSIONAL SOCIETY SERVICE***

- 2015 Educational talk at Ecology and Evolution seminar, mentored and judged at the SACNAS annual meeting, National Harbor, MD, October 2015
- 2015 Buell/Braun award judge: Ecological Society of America meeting, Baltimore, MD
- 2013 Buell/Braun award judge: Ecological Society of America meeting, Minneapolis, MN

#### ***PUBLIC SERVICE***

- 2013-2015 Mississippi Region VII Science Fair Judge, University, MS
- 2007-2012 Triangle Society for Conservation Biology, Raleigh, NC
- 2007-2012 Sierra Club’s Inner City Outreach program, Raleigh, NC
- 2007 Moorehead Planetarium Bioblitz, Chapel Hill, NC

### **PROFESSIONAL MEMBERSHIPS**

American Naturalist Society  
Ecological Society of America

National Center for Faculty Development and Diversity

Society for the Advancement of Chicanos/Latinos and Native Americans in Science

Soil Ecology Society