

Kerri M. Crawford

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Professional Appointments

Assistant Professor University of Houston, Houston, TX	September 2014 – Present
National Science Foundation Postdoctoral Research Fellow Washington University, St. Louis, MO and Indiana University, Bloomington, IN Advisors: James Bever, David Fike, Pierre-Andre Jacinthe	January 2012 - January 2014
Tyson Postdoctoral Fellow Washington University, St. Louis, MO Advisors: Tiffany Knight, Jonathan Chase	May 2011 - January 2012 & January 2014 - May 2014

Education

Ph.D. Ecology & Evolutionary Biology Rice University, Houston, TX Advisor: Jennifer Rudgers Committee: Kenneth Whitney, Evan Siemann, Carrie Masiello	May 2011
B.S. Ecology & Evolutionary Biology with Honors University of Tennessee, Knoxville, TN <i>Summa cum laude</i> , University Honors Student Thesis directors: Nathan Sanders, Greg Crutsinger	May 2006

Publications * Indicates undergraduate co-author

- Rudgers, J. A., L. Bell-Dereske, K. M. Crawford, S. M. Emery (*in press*) Fungal symbiont effects on dune plant diversity depend on precipitation. **Journal of Ecology**
- Ampleman*, M. D., K. M. Crawford, and D. A. Fike (2014) Differential soil organic carbon storage at forb- and grass-dominated plant communities, 33 years after tallgrass prairie restoration. **Plant and Soil** 374: 899-913
- Crutsinger, G. M., A. Gonzalez, K. M. Crawford, and N. J. Sanders (2013) Local and latitudinal variation in abundance: the mechanisms shaping the distribution of an ecosystem engineer. **PeerJ** 1: e100
- Crawford, K. M. and J. A. Rudgers (2013) Genetic diversity within a dominant plant outweighs plant species diversity in structuring an arthropod community. **Ecology** 94:1025–1035
- Crawford, K. M. and J. A. Rudgers (2012) Plant species diversity and genetic diversity within a dominant species interactively affect plant community biomass. **Journal of Ecology** 100: 1512-1521
Editor's Choice for issue 100:6; Blog post: <http://jecologyblog.wordpress.com/2012/10/23/editors-choice-1006/>
- Castro, H. F., A. T. Classen, E. E. Austin, K. M. Crawford, and C. W. Schadt (2012) Development and validation of a citrate synthase directed quantitative PCR marker for soil bacterial communities. **Applied Soil Ecology** 61: 69-75

Crawford, K. M., J. M. Land*, and J. A. Rudgers (2010) Fungal endophytes of native grasses decrease insect herbivore preference and performance. **Oecologia** 164: 431-444

Crawford, K. M. and K. D. Whitney (2010) Population genetic diversity influences colonization success. **Molecular Ecology** 19: 1253-1263
Highlighted by a perspective article, Molecular Ecology 19: 1079-1081; Reviewed by Faculty of 1000

Crawford, K. M., G. M. Crutsinger, and N. J. Sanders (2007) Host-plant genotypic diversity mediates the distribution of an ecosystem engineer. **Ecology** 88: 2114-2120

Research Grants and Fellowships

National Science Foundation Postdoctoral Fellowship in the Biological Sciences <i>Intersections of biology and mathematical and physical sciences: The effects of plant diversity on soil development in a primary successional ecosystem</i> (\$123,000)	2012 - 2014
National Science Foundation Doctoral Dissertation Improvement Grant <i>Consequences of plant species and genetic diversity for microbial community composition and function</i> (\$15,000)	2009 - 2011
National Science Foundation Graduate Research Fellowship (\$91,000)	2007 - 2010
Rice University Presidential Fellowship (\$20,000)	2006 - 2010
Great Lakes Research and Education Center Research Grant (\$3,000)	2008
Sigma Xi Grant-in-Aid of Research (\$600)	2008
Explorers Club Redwood Creek Preservation Award (\$3,000)	2007
Garden Club of America Fellowship in Ecological Restoration (\$8,000)	2007
National Science Foundation Graduate Research Fellowship (honorable mention)	2006
Oak Ridge National Laboratory Internship with Aimée Classen and Chris Schadt	2005 - 2006

Awards

Best Dissertation	Rice University, EEB	2011
Education Award, Citation of Merit	Association for Women in Science	2010
Outstanding Graduate Student Publication	Rice University, EEB	2010
Elected Phi Beta Kappa	University of Tennessee	2004

Invited Symposia and Working Groups

Working group: Theory of Plant-Soil Feedback: Phenomenological, Mechanistic and Spatial Models. (2013) National Institute for Mathematical and Biological Synthesis. 31 October – 2 November: Knoxville, TN

Symposium: Framing the cross-continental dialogue on limitations to grassland restoration. (2013) Society for Ecological Restoration World Conference. 6-11 October: Madison, WI.

Invited Talks

Florida State University, Department of Biology, Tallahassee, FL	2014
University of Houston, Department of Biology & Biochemistry, Houston, TX	2014

Indiana University – Purdue University, Department of Earth Sciences, Indianapolis, IN	2013
University of California – Riverside, Department of Biology, Riverside, CA	2013
Mississippi State University, Department of Biology, Starkville, MS	2013
Indiana University, Biology Brown Bag, Bloomington, IN	2011
Washington University in St. Louis, Department of Biology, St. Louis, MO	2010
Trinity University, Department of Biology, San Antonio, TX	2009

Selected Presentations

- Crawford, K. M., and J. A. Rudgers (2013) Effects of plant species diversity and genetic diversity on belowground community structure and function. Ecological Society of America. 9 August: Minneapolis, MN.
- Crawford, K. M., and T. M. Knight (2012) Poster: Effect of an invasive plant on individual species and plant community structure through alteration of abiotic and biotic soil properties. Ecological Society of America. 8 August: Portland, OR.
- Crawford, K. M., and J. A. Rudgers (2011) Poster: Effects of plant species diversity and genetic diversity on aboveground and belowground properties and processes. Ecological Society of America. 11 August: Austin, TX.
- Crawford, K. M., and J. A. Rudgers (2010) Plant species diversity and genetic diversity interactively influence community properties and ecosystem processes. Ecological Society of America. 4 August: Pittsburgh, PA.
- Crawford, K. M., and J. A. Rudgers (2010) Poster: Plant species diversity and genetic diversity influence above-ground and below-ground community structure. Gordon Research Conference on Plant-Herbivore Interactions. 23 February: Galveston, TX.
- Crawford, K. M., and J. A. Rudgers (2009) Poster: The consequences of plant species diversity and genetic diversity for community properties and ecosystem processes. Ecological Society of America. 3 August: Albuquerque, NM.
- Crawford, K. M. (2008) Understanding the combined importance of species diversity and genetic diversity for the restoration of sand dune ecosystems. Sleeping Bear Dunes National Lakeshore: Research in the Park Seminar Series. 29 July: Empire, MI.
- Crawford, K. M., P. Thompson, and K. D. Whitney (2007) Poster: Genetic diversity and invasion success: Testing hypotheses with a model system. Ecological Society of America. 7 August: San Jose, CA.
- Crawford, K. M., G. M. Crutsinger, and N. J. Sanders (2007) Poster: Host-plant genotypic diversity alters community composition by mediating the distribution of an ecosystem engineer. Gordon Conference on Plant-Herbivore Interactions. 18 February: Ventura, CA.
- Crawford, K. M., G. M. Crutsinger, and N. J. Sanders (2005) The causes and consequences of galling by the goldenrod bunch gall midge, *Rhopalomyia solidaginis*. Southern Appalachian Conference on Arthropod Biology. 24 September: Asheville, NC.

Teaching Experience

Instructor and Co-developer	Rice	Spring 2011	Freshman Seminar: Local Biology Research
Assistant	Rice	Spring 2008	Plant Diversity
Assistant	Rice	Spring 2007, Fall 2010	Insect Biology

Teaching Workshops Attended

Mentoring Undergraduate Research	Washington University	2013
Designing and Teaching an Introductory STEM Course	Washington University	2012
Designing and Facilitating Inquiry-Based Laboratory Teaching	Washington University	2012
Increasing Diversity and Improving Learning in STEM	Washington University	2012

