

STEPHEN M. HOVICK

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APPOINTMENTS

- 2015-present Assistant Professor, **The Ohio State University**
Department of Evolution, Ecology and Organismal Biology
- 2013-2015 Senior Research Associate, **The Ohio State University**
Department of Evolution, Ecology and Organismal Biology
- 2009-2013 Postdoctoral Research Associate, **Rice University**
Department of Ecology and Evolutionary Biology
Mentor: Kenneth Whitney

EDUCATION

- 2009 Ph.D. Plant Biology, **University of Georgia**
Concentration: *Invasion ecology: enemy release and nutrient loading*
Advisors: Chris Peterson and Walter Carson
- 2005 M.S. Biological Science, **University of Wisconsin-Milwaukee**
Concentration: *Restoration ecology of invaded habitats*
Advisor: James Reinartz
- 1999 B.S. Environmental Science, **University of Iowa**
Honors Thesis Advisor: Stephen Hendrix
B.A. English

RESEARCH SUPPORT

Awarded

- \$7,500 National Science Foundation. REU Supplement to DEB-1146203 (2015-2016)
- \$6,250 National Science Foundation. REU Supplement to DEB-1146203 (2014-2015)
- \$310,822 National Science Foundation (PI; co-PI K.D. Whitney; DEB-1146203).
Effects of population genetic diversity on colonization success. (2012-2015)
- \$11,662 National Science Foundation Doctoral Dissertation Improvement Grant
(PI; co-PIs CJ Peterson, WP Carson; DEB-0807817). *Enemy release and nutrient enrichment: Population- and community-level effects in experimental wetland plant communities.* (2008-2009)

\$9,500	Mid-Atlantic Panel on Aquatic Invasive Species (co-PIs WP Carson and CJ Peterson). <i>Biological control and nutrient enrichment: Investigating the effectiveness of purple loosestrife control using Galerucella californiensis</i> . (2007-2009)
\$10,141	Pymatuning Laboratory of Ecology McKinley-Darbaker Awards (2008, 2007, 2006)
\$2,000	Society of Wetland Scientists Student Research Grants (2007, 2004)
\$2,000	Zoological Society of Milwaukee Wildlife Conservation Grants (2004, 2003)

PUBLICATIONS

Published or In press (* indicates undergraduate advisee)

Pannell JR, JR Auld, Y Brandvain, M Burd, JW Busch, P-O Cheptou, JK Conner, E Goldberg, A Grant, D Grossenbacher, **SM Hovick**, S Kalisz, T Petanidou, A Randle, RR de Casas, A Pauw, J Vamosi and A Winn. The scope of Baker's law. In Press with *New Phytologist* (Tansley Review). DOI: 10.1111/nph.13539.

Whitney KD, KW Broman, NC Kane, **SM Hovick**, RA Randell and LH Rieseberg. 2015. *Molecular Ecology* 24: 2194-2211. QTL mapping identifies candidate alleles involved in adaptive introgression and range expansion in a wild sunflower. DOI: 10.1111/mec.13044.

Hovick SM and WP Carson. 2015. Tailoring biocontrol to maximize top-down effects: on the importance of underlying site fertility. *Ecological Applications* 25: 125-139. DOI: 10.1890/13-2050.1.

Hovick SM and KD Whitney. 2014. Hybridization is associated with increased fecundity and size in invasive taxa: meta-analytic support for the hybridization-invasion hypothesis. *Ecology Letters* 17: 1464-1477. DOI: 10.1111/ele.12355.

Yang Q, J Carrillo, H Jin, L Shang, **SM Hovick**, S Nijjer, CA Gabler, B Li and E Siemann. 2013. Plant-soil biota interactions of an invasive species in its native and introduced ranges: Implications for invasion success. *Soil Biology and Biogeochemistry* 65: 78-85.

Hovick SM, CJ Peterson and WP Carson. 2012. Predicting invasiveness and range size in wetland plants using biological traits: A multivariate experimental approach. *Journal of Ecology* 100: 1373-1382.

Hovick SM, ED Gumuser* and KD Whitney. 2012. Community dominance patterns, not colonizer genetic diversity, drive colonization success in a test using grassland species. *Plant Ecology* 213: 1365-1380. DOI 10.1007/s11258-012-0097-2

Chamberlain¹ SA, **SM Hovick**¹, CJ Dibble, NL Rasmussen, BG Van Allen, BS Maitner, JR Ahern, L Bell-Dereske, CL Roy, M Meza-Lopez, J Carrillo, E Siemann, MJ Lajeunesse and KD Whitney. 2012. Does phylogeny matter? Assessing the impact of phylogenetic information in ecological meta-analysis. *Ecology Letters* 15:627-636. ¹**Co-first authors**.

Hovick SM, LG Campbell, AA Snow and KD Whitney. 2012. Hybridization alters early life-history traits and increases plant colonization success in a novel region. *American Naturalist* 179: 192-203.

Hovick SM, DE Bunker, CJ Peterson and WP Carson. 2011. Purple loosestrife suppresses plant species colonization far more than broad-leaved cattail: experimental evidence with plant community implications. *Journal of Ecology* 99:225-234.

Maron JL, DE Pearson, **SM Hovick** and WP Carson. 2010. Funding needed for assessments of weed biological control. *Frontiers in Ecology and the Environment* 8:122-123.

Carson WP, **SM Hovick**, AJ Baumert, DE Bunker and TH Pendergast IV. 2008. Evaluating the post-release efficacy of insect biocontrol: A comprehensive approach. *Arthropod-Plant Interactions* 2: 77-86.

Hovick SM and JA Reinartz. 2007. Restoring forest in wetlands dominated by reed canarygrass: The effects of pre-planting treatments on early survival. *Wetlands* 27: 24-39.

Hovick SM and JA Reinartz. 2005. Combination of treatments influence survival of woody species planted to suppress reed canarygrass (Wisconsin). Invited note to *Ecological Restoration* 23: 126.

Bowen B, JJ Hawk, S Sibunka, **SM Hovick** and JM Weiler. 2001. A review of the reported defects in the human C1 esterase inhibitor gene producing hereditary angioedema including four new mutations. *Clinical Immunology* 98: 157-163.

Under revision or review

Hovick SM and KD Whitney. Propagule size but not population genetic diversity impact initial colonization success in a ruderal species. Under revision.

PRESENTATIONS

Invited Seminars and Presentations

- 2015 Ohio Invasive Plants Council Annual Meeting (Feb. 10)
Georgetown University, *Department of Biology* (Feb. 12)
University of Minnesota, *Department of Fisheries, Wildlife & Conservation Biology* (Feb. 17)
- 2014 Miami University, *Department of Biology* (Nov. 13)
Ohio State University, *Department of Evolution, Ecology & Organismal Biology* (Feb. 13)
- 2013 University of Pittsburgh, *Department of Biological Sciences* (Oct. 3)
Ohio State University, *Department of Horticulture and Crop Science* (Sept. 20)
Auburn University, *Department of Biology* (Feb. 21)
University of Miami, *Department of Biological Sciences* (Feb. 18)
Louisiana State University, *Department of Biology* (Feb. 4)
University of Nebraska-Omaha, *Department of Biology* (Jan. 23)
- 2012 Fordham University, *Department of Biological Sciences* (Dec. 17)

- Hofstra University, *Department of Biology* (Dec. 7)
 University of Nevada-Reno, *Ecology, Evolution and Conservation Biology Colloquium* (Apr. 26)
 DePaul University, *Environmental Science and Studies Department* (Jan. 26)
- 2011 Cesar Chavez High School, Houston ISD, *Rice University Civic Scientist Lecture Series* (Nov. 10)
- 2009 Rice University, *Department of Ecology and Evolutionary Biology* (Apr. 16)

Conference Presentations († indicates undergraduate advisee)

SM Hovick and Whitney KD. 2015. When does increased population genetic diversity enhance colonization success? *Ecological Society of America*, Baltimore, MD.

Whitney KD and **SM Hovick.** 2014. Are hybridization and genetic diversity drivers of colonization success? *Invasion Genetics: The Baker and Stebbins Legacy Symposium*; Asilomar, CA.

Hovick SM and KD Whitney. 2014. Hybridization increases fecundity and size in invasive taxa: meta-analytic support for the hybridization-invasion hypothesis. *Society for the Study of Evolution, American Society of Naturalists & Society of Systematic Biologists*; Raleigh, NC.

Hovick SM and KD Whitney. 2014. Simply a numbers game? Disentangling the effects of founder population size and population genetic diversity on colonization success. *American Society of Naturalists*, Asilomar, CA.

Hovick SM, L Rieseberg and KD Whitney. 2012. Replaying the clock in hybrid evolution: A field experimental evolution study with sunflowers. *Ecological Society of America*, Portland, OR.

Gumuser† ED, **SM Hovick** and KD Whitney. 2011. Importance of functional group dominance and colonizer genetic diversity on invasive success. *Ecological Society of America*, Austin, TX.

Hovick SM, LG Campbell, AA Snow and KD Whitney. 2011. Hybridization in wild radish (*Raphanus raphanistrum*) alters early life-history traits and increases colonization success in a novel region. *Ecological Society of America*, Austin, TX.

Hovick SM, CJ Peterson and WP Carson. 2010. Biocontrol targeting purple loosestrife is successful only in low-nutrient sites. *Ecological Society of America*, Pittsburgh, PA.

Carson WP and **SM Hovick.** 2009. Evaluating broad-scale correlates of biocontrol success with purple loosestrife: Management implications and a general protocol for post-release evaluation. *American Society of Agronomy, Crop Science Society of America and Soil Science Society of America*, Pittsburgh, PA.

Hovick SM and CJ Peterson. 2008. Quantifying and predicting invasiveness using plant traits: A multivariate approach with wetland species. *Ecological Society of America*, Milwaukee, WI.

Hovick SM and CJ Peterson. 2008. Quantifying and predicting invasiveness using plant traits: A multivariate approach with wetland species. *Plant Biology Graduate Student Research Symposium*, University of Georgia, Athens, GA. **Best oral presentation award.**

Hovick SM, DE Bunker, CJ Peterson and WP Carson. 2007. Fortuitous invasions into experimental wetland mesocosms: The effects of nitrogen enrichment and canopy-species composition. *Ecological Society of America*, San Jose, CA.

Hovick SM, DE Bunker, CJ Peterson and WP Carson. 2007. Invasions into experimental wetland mesocosms: The effect of nitrogen enrichment and canopy-species composition. *Plant Biology Graduate Student Symposium*, University of Georgia, Athens, GA.

Hovick SM and JA Reinartz. 2006. Restoring forest in wetlands dominated by reed canary grass: The effects of pre-planting treatments on early survival. *Ecological Society of America*, Memphis, TN.

Hovick SM. 2006. Resource supply and enemy release: Integration and prediction with two dominant wetland herbs. *Univ. of Georgia Graduate Student Interdisciplinary Conference*, Athens, GA.

Hovick SM and JA Reinartz. 2004. Initial establishment of trees and shrubs in a reed canary grass (*Phalaris arundinacea*) monoculture. *Natural Areas Conference*, Chicago, IL. **Best student poster award**.

Hovick SM and DR Spuhler. 2002. Integrating native plant production into a traditional municipal greenhouse. *Natural Areas Conference*, Asheville, NC.

Hovick SM and DR Spuhler. 2002. Not just a pretty face: Designing a species list for highly erodible slopes. *Natural Areas Conference*, Asheville, NC.

TEACHING EXPERIENCE

Graduate Courses

Graduate Seminar in Invasion Biology, **Co-Instructor of Record**, *The Ohio State University* (2014)
Designed and lead discussion-based seminar with a colleague in Horticulture and Crop Science that was built to facilitate cross-disciplinary dialogue between EEOB and HCS students.

Seminar in Meta-Analytic Methods, **Co-Instructor**, *Rice University* (2010)
Led discussions and coordinated all activities for class project (published in *Ecology Letters*).

Advanced Ecology, **Instructor of Record**, *Rice University* (2010)
Designed and led discussion-based course, including grant proposal development.

Community Ecology, **Co-Instructor**, *University of Georgia* (2009)
Designed and led survey course with a fellow graduate student.

Plant Variation and Evolution, **Teaching Assistant**, *University of Georgia* (2008)
Guest-lectured and coordinated class project logistics.

Undergraduate Courses

Tropical Field Ecology, **Co-Instructor of Record**, *The Ohio State University* (2014)
OTS-style study abroad course in Panama for advanced and honors EEOB majors.

Laboratory in Field Ecology, **Instructor of Record**, *Rice University* (2009)
Introductory project-based lab and lecture course for EEB majors.

Introduction to Plant Biology, **Teaching Assistant**, *University of Georgia* (2009)

A stand-alone, inquiry-based lab course for non-majors.

Plant Evolution and Systematics, **Teaching Assistant**, *UW-Milwaukee* (2004)

Lab and discussion sections for an upper-level majors course.

Introduction to Biology II, **Teaching Assistant**, *UW-Milwaukee* (2003, 2004)

Lab sections for an introductory majors course; TA coordinator (2004).

Plants in Today's World, **Teaching Assistant**, *UW-Milwaukee* (2003)

Lab sections in an introductory non-science majors course.

Mentoring

Research Experience for Undergraduates (REU), Antonio Losekamp & Andrea McArdle, The Ohio State University (2014, 2015)

Research Experience for Undergraduates (REU), Jonathan Berg, Rice University (2012-2013)

Senior Thesis Co-Advisor, Amy Ewbank, Rice University (2011-2012)

Research Experience for Teachers (RET), Wilmer Naranjo, Rice University & Cesar Chavez H.S. (2011)

Senior Thesis Advisor, Esra Gumuser, Rice University (2010-2011)

Independent Research Advisor, Stephen Beasley, University of Georgia (2007)

Independent Research Advisor, Chandra Goettsch, University of Pittsburgh (2007)

PROFESSIONAL ACTIVITIES

Ad Hoc Journal and Grant Proposal Reviews (42)

American Naturalist; *Animal Conservation* (2); *Arthropod-Plant Interactions* (2); *Basic and Applied Ecology*; *Biological Invasions* (2); *Biotropica*; *Canadian Journal of Forest Research*; *Diversity and Distributions*; *Ecology* (3); *Ecology Letters* (5); *Evolution*; *Evolutionary Ecology* (3); *Ecosphere*; *Frontiers of Biogeography*; *Functional Ecology*; *Global Change Biology*; *International Journal of Plant Sciences* (2); *Journal of Arid Land*; *Journal of Ecology* (2); *Journal of Evolutionary Biology*; *Journal of the Torrey Botanic Society* (2); *Molecular Ecology*; *Oecologia* (2); *Oikos*; *National Science Foundation*; *New Phytologist* (2); *Perspectives in Plant Ecology, Evolution & Systematics*; *PLOS ONE*

Working Groups

NESCent Working Group Participant (2013-2015). *Linking self-fertilization, dispersal and distribution traits of species: Is Baker's law an exception to the rule?* Organized by Susan Kalisz, April Randle and Pierre-Olivier Cheptou.

Professional Memberships

Ecological Society of America; American Society of Naturalists; North Central Weed Science Society