MATTHEW A. MCCARY

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EDUCATION

Ph.D. Biological Sciences, University of Illinois at Chicago (UIC), Chicago, IL, December 2016
Major Field of Study: Ecology and Evolution
Dissertation Title: Evaluating the Impacts of Invasive Plants on the Forest-floor Food Web
Advisor: Dr. David H. Wise
Committee: Drs. Hormoz BassiriRad, Louise Egerton-Warburton, Liam Heneghan, and Emily Minor

B.A. Biology, North Central College (NCC), Naperville, IL, 2010

CURRENT POSITION

1/2017-12/2019 National Science Foundation (NSF) Postdoctoral Research Fellow in Biology,
University of Wisconsin at Madison, Department of Entomology
Advisors: Claudio Gratton, Randall Jackson, and Anthony Ives

PUBLICATIONS

McCary, M.A., E. Minor, and D.H. Wise. 2017. Covariation between local and landscape factors influences the structure of ground-active arthropod communities in fragmented metropolitan woodlands. *Landscape Ecology* doi: 10.1007/s10980-017-0593-9.

McCary, M.A., R. Mores, M. Farfan, and D.H. Wise. 2016. Invasive plants have different effects on trophic structure of green and brown food webs in terrestrial ecosystems: a meta-analysis. *Ecology Letters* 19: 328-335.

McCary, M.A., J.C. Martinez, L. Umek, L. Heneghan, and D.H. Wise. 2015. Effects of woodland restoration and management on the community of surface-active arthropods in the metropolitan Chicago region. *Biological Conservation* 190: 154-166.

Papers submitted or in review:
McCary, M.A., M. Zellner, and D.H. Wise. The role of plant-mycorrhizal mutualisms in deterring plant invasions: Insights from an individual-based model. Submitted to the *Journal of Ecology*.

Papers in preparation:
Hoekman, D., **M.A. McCary,** J. Dryer, and C. Gratton. Midges transport aquatic resources and enrich terrestrial arthropod food webs. To be submitted in winter 2018.

McCary, M.A., and D.H. Wise. Plant invader re-structures belowground food web via changes to soil fungal resources. To be submitted in spring 2018.

McCary, M.A., J.S. Phillips, A. McCormick, L. Nell, and A. Ives. Duration and magnitude of resource pulses influence terrestrial food-web dynamics: Modeling dynamics from northeastern Iceland. To be submitted spring 2018.

PROFESSIONAL EXPERIENCE

8/2017-12/2017 Co-Instructor, Basic and Applied Insect Ecology Lab, UW-Madison
8/2014-5/2016 Teaching Assistantship, General Ecology Lab, UIC
8/2012-5/2013 Teaching Assistantship, Biology of Populations and Communities, UIC
7/2012-8/2012 Contractor (Entomologist), U.S. Army Corps of Engineers, Chicago, IL
8/2010-5/2011 Teaching Assistantship, Biology of Cells and Organisms, UIC
9/2009-11/2009 Laboratory Assistant, Botany, NCC, Naperville, IL
6/2009-8/2009 U.S. Environmental Protection Agency (EPA) Intern, Newport, OR

AWARDS, HONORS, AND FELLOWSHIPS

1/2017-12/2019 NSF Postdoctoral Research Fellowship in Biology ($207,000), UW-Madison
8/2016-12/2016 Dean's Scholar Graduate Fellowship ($22,000), UIC
8/2015-7/2016 Institute for Environmental Science and Policy Fellowship ($10,000), UIC
8/2014-5/2015 Award for Excellence in Teaching ($100), UIC
5/2014-8/2014 Elmer Hadley Graduate Research Award ($600), UIC
8/2013-8/2014 Abraham Lincoln Minority Graduate Fellowship ($25,000), UIC
9/2008-6/2009 Tracy and Derrick Malone Minority Scholarship ($5,000), NCC
9/2006-6/2010 Associated Colleges of Illinois Liberal Arts Scholarship ($12,000)

RESEARCH PRESENTATIONS

Invited symposia lectures and workshop presentations:

M.A. McCary. August 2017. A mechanistic model to explain how plant-mycorrhizal disruptions can lead to invasion success: Implications for biodiversity conservation and management. In Symposium on "Linking Management, Biodiversity, and Ecosystem Services Via Mechanistic Models", Ecological Society of America (ESA) Meeting, Portland, OR.

M.A. McCary. 2016. Consequences of invasion: Evaluating how invasive alien plants alter the structure of food webs in woodland ecosystems. In Symposium on "Invaders in Food Webs: Using Trophic Structure to Predict Invasibility and Invader Impact", Ecological Society of America (ESA) Meeting, Fort Lauderdale, FL.

M.A. McCary. 2015. The cascading effects of invasive alien plants on the structure of belowground food webs in woodland ecosystems. "Invasive Plant Symposium: Biotic Interactions with Invasive Species", Annual North Weed Science Society, Indianapolis, IN.

Heneghan, L., L. Umek, **M.A. McCary**, J.C. Martinez, and D.H. Wise. 2013. A celebration of Chicago's biodiversity: How many species in our region? DePaul University, Chicago, IL.

McCary, M.A. 2013. The Chicago Wilderness Land Management Program: A Long-term Evaluation of Restoration Management in the US Midwest. In Symposium on "New Science in Response to Perennial Challenges: Social Ecological Research in the Chicago Wilderness Region and Its Implications for Regional Restoration", Fifth World Conference on Ecological Restoration, Madison, WI.

Wise, D.H., L. Heneghan, **M.A. McCary**, and J.C. Martinez. 2013. Updates from Field and Lab: Some Recent Projects Conducted as Part of the Chicago Wilderness Science Team. Chicago Wilderness Wild Things Conference, Chicago, IL.

Contributed papers:

McCary, M.A. 2010. The effects of nitrogen and phosphorus application on vegetation in a salt marsh in Yaquina Bay, Oregon. National Conference for Undergraduate Research, Missoula, MT.

Invited lectures:

McCary, M.A. 2015. Meta-analysis of ecological studies. Guest Lecturer in a graduate course, *Analyzing Ecological Data*, University of Illinois, Chicago, IL.

McCary, M.A. 2015. Life as a young scientist: school, teaching, and research. Science Alumni Seminar, North Central College, Naperville, IL.

McCary, M.A. 2015. Surviving in an urban landscape: evaluating the impacts of human activity on soil invertebrates. Guest Lecturer, graduate course, *Soil Ecology*, Northwestern University, Evanston, IL.

McCary, M.A. 2015. Impacts of an invasive plant on the belowground fungal-based food web. Elmer Hadley Research Fund Seminar. University of Illinois, Chicago, IL.

McCary, M.A. 2013. How to be a successful biology student in college. Guest Lecturer, Bremen High School, Midlothian, IL.

ACADEMIC AND PROFESSIONAL SERVICE

Currently a serving member of the Wisconsin Ecology Executive Committee at UW-Madison

Strategies for Education in Ecology, Diversity and Sustainability (SEEDS) mentor for the 2017 Ecological Society of America (ESA) Meeting in Portland, OR

Manuscript Reviewer: *Basic and Applied Ecology, Oikos*, *Ecology, Ecology Letters, Biological Invasions, Journal of Insect Conservation*

Supervised ecological research conducted by undergraduate/post-undergraduates:
David Castillo (UIC), Christopher Guimney (UIC), Ibraheen Oguntade (UIC), Raed Oweisi (UIC), Ann Sabir (UIC), Heather Tran (UIC), Devondre Juzang (UIC), Devon Pierret (UW), Natalie Schmer (UW), Kristin Riley Book (Emory University), Aspen Ward (Post-undergraduate), and Bethany Smith (Post-undergraduate)

CROSS-INSTITUTIONAL RESEARCH COLLABORATIONS (Past and Present)

Academic and research institutions:

Chicago Botanic Garden, Chicago Wilderness Science Team, DePaul University, Morton Arboretum, Northwestern University, Mývatn Research Station (Iceland)

Land-management agencies:

Forest Districts of Cook, DuPage, Lake, and McHenry Counties (Illinois, United States), Lake Forest Open Lands, U.S.D.A. Forest Service Northern Research Station, U.S. Army Corps of Engineers