MATTHEW A. MCCARY

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EDUCATION

Ph.D. Biological Sciences, University of Illinois at Chicago (UIC), Chicago, IL, 2016
Field of Study: Ecology and Evolution
Title: Evaluating the impacts of invasive plants on the forest-floor food web
Advisor: David H. Wise

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 (UW)
Advisors: Claudio Gratton (Department of Entomology), Anthony Ives (Integrative Biology), Randall Jackson (Department of Agronomy)

PUBLICATIONS

Hoekman, D., **M.A. McCary,** J. Dryer, and C. Gratton. 2019. Reducing allochthonous resources in a subarctic grassland alters arthropod food webs via predator diet and density. *Ecosphere* 10: e02593.

McCary, M.A., M. Zellner, and D.H. Wise. 2019. The role of plant-mycorrhizal mutualisms in deterring plant invasions: Insights from an individual-based model. *Ecology and Evolution* 9: 2018-2030.

McCary, M.A., E. Minor, and D.H. Wise. 2018. Covariation between local and landscape factors influences the structure of ground-active arthropod communities in fragmented metropolitan woodlands. *Landscape Ecology* 33: 225-239.

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 with invited resubmissions:

McCary, M.A., and D.H. Wise. Plant invader alters soil food web via changes to fungal resources. *Oecologia*, revision resubmitted.

Papers in review:

McCary, M.A., M.D. Kasprzak, J.C. Botsch, R.D. Jackson, and C. Gratton. Evidence that soil microbes, not arthropods, mediate effects of allochthonous inputs in a subarctic ecosystem. *Ecosystems*, in review.

Papers in preparation:

McCary, M.A.ǂ, J.S. Phillipsǂ, T. Ramiadantsoa, L.A. Nell, A.R. McCormick, and J.C. Botsch. Transient top-down and bottom-up effects of resources pulsed to multiple trophic levels. To be submitted to *Oikos* in fall of 2019. ǂ co-first authors

AWARDS, HONORS, AND FELLOWSHIPS

1/2020-12/2020	Ford Foundation Postdoctoral Fellowship ($45,000), Forestry and Environmental Science, Yale University
2019-2020	Finalist for the University of California President's Postdoctoral Fellowship Competition
1/2017-12/2019	NSF Postdoctoral Research Fellowship in Biology ($207,000), Department of Entomology, UW
8/2016-12/2016	Dean's Scholar Graduate Fellowship ($22,000), Graduate College, UIC
8/2015-7/2016	Graduate Research Fellowship ($10,000), Department of the Institute for Environmental Science and Policy, UIC
8/2016-9/2016	Biological Sciences Travel Award ($800), Department of Biological Sciences, UIC
7/2016-8/2016	LAS Graduate Travel Award ($800), College of Liberal Arts and Sciences, UIC
8/2014-5/2015	Award for Excellence in Teaching ($100), General Ecology Lab (BIOS 331), Department of Biological Sciences, UIC
5/2014-8/2014	Elmer Hadley Graduate Research Award ($600), Department of Biological Sciences, UIC

8/2013-8/2014 Abraham Lincoln Graduate Fellowship ($25,000), Graduate College, 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), NCC

TEACHING EXPERIENCE

8/2017-12/2017 Co-Instructor, Basic and Applied Insect Ecology Lab (ENTO 451), Department of Entomology, UW (1 semester)

8/2014-5/2016 Teaching Assistantship, General Ecology Lab (BIOS 331), Department of Biological Sciences, UIC (4 semesters)

8/2012-5/2013 Teaching Assistantship, Biology of Populations and Communities (BIOS 101), Department of Biological Sciences, UIC (2 semesters)

8/2010-5/2011 Teaching Assistantship, Biology of Cells and Organisms (BIOS 100), Department of Biological Sciences, UIC (2 semesters)

9/2009-11/2009 Laboratory Assistant, Botany, Department of Biology, NCC, Naperville, IL (1 semester)

MENTORING EXPERIENCE

Primary mentor:

David Castillo (UIC), Christopher Guimney (UIC), Ibraheen Oguntade (UIC), Raed Oweisi (UIC), Ann Sabir (UIC), Heather Tran (UIC), and DeVondre Juzang (UIC), Devon Pierret (UW)

Co-mentor:

Natalie Schmer (UW), Kristin Book (Emory University), Jennifer Harris (Wellesley College), Abigail Lewis (Pomona College), Kelvin Chen (Post-undergraduate), Karen Jorgenson (Post-undergraduate), Aspen Ward (Post-undergraduate), and Bethany Smith (Post-undergraduate)

RESEARCH PRESENTATIONS

Invited symposium presentations:

M.A. McCary. 2018. Emergent aquatic insects alter plant composition and litter decomposition: Lessons from subarctic Iceland. *Wisconsin Ecology Fall Symposium*, University of Wisconsin, Madison, WI.

M.A. McCary. 2017. A mechanistic model to explain how plant-mycorrhizal disruptions can lead to invasion success: Implications for biodiversity conservation and management. *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. *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.

McCary, M.A. 2013. The Chicago Wilderness Land Management Program: A Long-term Evaluation of Restoration Management in the US Midwest. *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.

Invited research seminars:

M.A. McCary. February 2019. Understanding how aquatic insects can influence terrestrial food webs: an Icelandic case study. Center for Limnology Research Seminar, University of Wisconsin, Madison, WI.

M.A. McCary. 2018. Feast or Famine: How basal resource availability influences terrestrial arthropod food webs. Department of Entomology Research Seminar, Purdue University, West Lafayette, IN.

M.A. McCary. 2018. The impacts of an invasive plant on the soil fungal-based food web. Natural and Applied Sciences Seminar, University of Wisconsin, Green Bay, WI.

M.A. McCary. 2018. The impacts of an invasive plant on the soil fungal-based food web. Department of Entomology Research Seminar, University of Wisconsin, Madison, WI.

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.

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.

Invited classroom lectures and outreach:

McCary, M.A. 2019. Insect food webs and litter decomposition. Guest Lecturer in an undergraduate course, *Soil Science 101*, University of Wisconsin, Madison, WI.

McCary, M.A. 2017. Decomposition and Ecosystem Services. Guest Lecturer in a graduate course, *Basic and Applied Insect Ecology Lecture*, University of Wisconsin, Madison, WI.

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 in a 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.

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.

ACADEMIC AND PROFESSIONAL SERVICE

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

Officer: Ecological Society of America (ESA) Black Ecologist Section Co-founding officer

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

Member: Wisconsin Ecology Executive Committee at UW-Madison

Member: Ecological Society of America

Member: Entomological Society of America