

Jared J. Beck

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EDUCATION

- 2016 – 2020 **Ph.D. Botany – University of Wisconsin-Madison.** Quantitative Methods minor. Dissertation: *Factors shaping the distribution, abundance, and diversity of temperate forest plants.*
- 2010 - 2014 **B.A. Biology – Carleton College.** Graduated *magna cum laude* with Distinction in major. Thesis: *Phylogenetic community structure and the functioning of ecosystems.*

EXPERIENCE

- 2017 – 2020 **National Science Foundation Graduate Research Fellow**, University of Wisconsin-Madison.
- 2016 - 2017 **Teaching Assistant**, University of Wisconsin-Madison. Laboratory Instructor for Zoology 151; instructor of record for 3 lab sections (~60 students each term); assisted curriculum development.
- 2016 **Off-campus Studies Instructor**, Carleton College. Teaching Assistant for ecology program in Australia/New Zealand; coordinated program logistics, coursework, & student research projects.
- 2015 - 2016 **Educational Associate**, Carleton College. Mentored 10 student researchers; assisted with biology courses; led prairie vegetation surveys; managed data for 4 long-term research projects.
- 2014 - 2015 **Lab Manager**, Chicago Botanic Garden. Supervised 19 citizen scientists and 5 undergraduate research interns; developed tools for data management, visualization, and analysis in R.
- 2013 - 2014 **Research Assistant**, Carleton College. Conducted prairie vegetation surveys, soil nutrient assays and statistical analyses; managed 3 long-term data sets; assisted with TORCH outreach program.
- 2013 **Teaching Assistant**, Carleton College. Coordinated two weekend field trips; assisted students with field work and helped design class research projects; reviewed student research papers.
- 2012 - 2014 **Arboretum Research Assistant**, Cowling Arboretum, Carleton College. Conducted species monitoring and breeding bird surveys; authored forest inventory report; managed databases.
- 2010 - 2014 **Cole Student Naturalist**, Cowling Arboretum, Carleton College. Designed tree identification pamphlet; led natural history walks and presentations for students and community members.
- 2010 - 2013 **Arboretum Crew**, Cowling Arboretum, Carleton College. Assisted with invasive species removal, habitat restoration, seed collection, prescribed burns, and other management tasks.

PUBLICATIONS

1. **Beck, J.**, D. Hernández, J. Pasari, & E. Zavaleta. 2015. Grazing maintains native plant diversity and promotes community stability in an annual grassland. *Ecological Applications* 25:1259-1270.
2. **Beck, J.**, M. McKone, & O. McMurtrey. 2016. Edge effects and avian community structure in a restored tallgrass prairie. *Natural Areas Journal* 36:328-333.
3. **Beck, J.**, B. Larget, and D. Waller. 2018. Phantom species: Adjusting colonization and extinction rates for pseudo-turnover. *Oikos* 127:1605-1618.
4. Wagenius, S., **J. Beck** & G. Kiefer. 2020. Fire synchronizes flowering and boosts reproduction in a widespread but declining prairie species. *Proceedings of the National Academy of Sciences* 117:3000-3005.
5. **Beck, J.** and T. Givnish. *In press*. Fine-scale environmental heterogeneity and spatial niche partitioning among spring-flowering forest herbs. *American Journal of Botany*.

PUBLICATIONS (CONTINUED)

6. **Beck, J.** *In press*. Variation in plant-soil feedbacks among temperate forest herbs. *Plant Ecology*.
7. McKone, M., E. Williams, and **J. Beck**. Changes in a planted prairie community across a chronosequence sampled over 16 years. *In review at Journal of Applied Ecology*.
8. **Beck, J.**, D. Rogers, D. Li, S. Johnson, K. Cameron, K. Sytsma, T. Givnish, and D. Waller. Using functional traits and phylogenetic relationships to assess scale-dependent community assembly in temperate forests. *In review at Ecology*.
9. **Beck, J.**, A. Salvi, R. Henderson, and D. Waller. A coexistence conundrum? Integrating physiological, distributional, and demographic data to understand patterns of co-occurrence among close relatives. *In review at Oikos*.

Manuscripts in preparation:

10. Paulson, A., **J. Beck**, A. Paulson, J. Richards, R. Toczydlowski, D. Li, G. Sonnier, S. Johnson, D. Rogers, T. Givnish, K. Cameron, K. Sytsma, and D. Waller. Dimensions of biodiversity change in temperate forests. *In preparation*.
11. **Beck, J.** and J. Richards. Trait-environment relationships and the spatial distribution of microsites shape local plant distributions and diversity in a quartzite glade *In preparation*.

POSTERS AND PRESENTATIONS

1. **Beck, J.**, S. Wagenius & G. Kiefer. *Turning up the heat: Prescribed fire and the reproduction of Echinacea angustifolia*. Society for Ecological Restoration, Midwest-Great Lakes Conference, March 28, 2015.
2. **Beck, J.**, S. Wagenius & G. Kiefer. *Fire promotes reproduction in the fragmented mating scene of Echinacea angustifolia*. Ecological Society of America Conference, August 14, 2015.
3. **Beck, J.** and D. Waller. *The phantom species problem: Accounting for pseudo-turnover in analyses of long-term ecological change*. Riveredge Nature Center Research Symposium, November 4, 2017. *Awarded Best Graduate Student Presentation*.
4. **Beck, J.** and B. Bowser*. *Contagious trees? Exploring patterns in the distribution of temperate forest trees*. UW-Madison Arboretum Research Symposium. February 14, 2019.

Other posters and presentations:

5. Wagenius, S., **J. Beck** & G. Kiefer. *Good years and good days: Mating synchrony at multiple temporal scales in a long-lived organism*. Ecological Society of America Conference, August 14, 2015.
6. McKone, M., **J. Beck** & D. Hernández. *Experimental community assembly with and without dominant grasses in tallgrass prairie. I. Effect on plant community structure at multiple scales*. Ecological Society of America Conference, August 10, 2016.
7. Hernández, D., **J. Beck** & M. McKone. *Experimental community assembly with and without dominant grasses in tallgrass prairie. II. Ecosystem consequences*. Ecological Society of America Conference, August 10, 2016.
8. Waller, D., **J. Beck**, & B. Larget. *Phantom species: Can we estimate pseudo-turnover?* American Society of Naturalists Meeting, January 7, 2018.

* denotes mentored undergraduate student

TEACHING EXPERIENCE

2016 - 2017	Lab Instructor, Introductory Biology, University of Wisconsin-Madison
2016	Off-campus Studies Instructor, Ecology & Evolution in Australia/New Zealand, Carleton College
2015	Lab Instructor, Ecosystems Ecology, Carleton College
2013	Teaching Assistant, Natural History of Minnesota, Carleton College

INVITED TALKS

1. **Beck, J.** *Six decades of forest change in Noe Woods*. University of Wisconsin-Madison Arboretum. February 13, 2020.
2. **Beck, J.** *Plant-soil interactions and the diversity of temperate forest herbs*. UW-Madison Department of Plant Pathology Seminar. January 31, 2020.
3. **Beck, J.** *Using functional traits and phylogenetic relationships to explore the scale-dependent processes driving plant community assembly*. Presentation for UW-Madison Department of Botany. December 14, 2018.
4. **Beck, J.** *Plant biodiversity*. Environmental School, Wisconsin Garden Club Federation. September 21, 2018.
5. **Beck, J.** *What grassland birds can teach us about restoring prairie ecosystems*. Hosted by Northfield, MN chapter of The WildOnes and the Carleton College Cowling Arboretum. January 11, 2012.

AWARDS, HONORS, AND FELLOWSHIPS

Awards, honors, and fellowships for national and state competitions

2019	John Thomson Research Award, Wisconsin Botanical Club
2018	Graduate Student Research Award, Botanical Society of America
2016-2020	National Science Foundation Graduate Research Fellowship

Institutional award, honors, and fellowships

2019	Graduate Student Research Award, University of Wisconsin-Madison Graduate School
2019	Arboretum Research Fellowship, University of Wisconsin-Madison Arboretum
2019	Davis Research Award, University of Wisconsin-Madison Department of Botany
2019	Demeter Summer Research Award, University of Wisconsin-Madison Department of Botany
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2018	Kenneth Raper Travel Support Award, UW-Madison Department of Botany
2016	Graduate Student Support Grant, Wisconsin Alumni Research Foundation
2014	Scott Tyler Bergner Prize, Carleton College
2013	Great Lakes STEM Scholarship
2013	William Muir Fellowship, Carleton College
2012	Exceptional Writing Portfolio, Carleton College
2012	Dean's List, Carleton College
2010 - 2014	Mead Witter Foundation Scholarship
2010 - 2014	Frederick J. Hilgen Scholarship
2010	Richard Cass Art of Writing Scholarship

PROFESSIONAL TRAINING

2016	Diversity and Equity Training, University of Wisconsin-Madison
2017	Software Carpentry Workshop, University of Wisconsin-Madison
2018	S-130/S-190 Wildland Fire Certification (40+ prescribed burns)

UNDERGRADUATE MENTORING EXPERIENCE

2020: B. Bowser (UW-Madison)
2019: B. Bowser, C. Kestel, R. Nelson, K. Hobbins (UW-Madison)
2018: B. Bowser, G. Quirk (UW-Madison)
2016: A. Braeidy, R. Faust & G. Schmitt (Carleton College)
2015: D. Vail, J. Pruszenski, C. Shorb, L. Pflughoeft, M. Vought, & J. Krumholz (Carleton College)
2014: I. Lin, T. Kuhn & A. Petersons (Lake Forest College); J. York & E. Velis (Carleton College)

PROFESSIONAL SERVICE

2017: National Science Foundation Graduate Research Fellowship Panelist, UW-Madison

2017: Student Panelist for Departmental Review, UW-Madison Department of Botany

2018 – 2019: Awards Committee, UW-Madison Department of Botany

2019: Space and Facilities Committee, UW-Madison Department of Botany

Ad-hoc reviewer: Ecosphere, Plant and Soil