

Jacob L. Zeldin

Research Ecologist
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Education

Northwestern University

M.Sc in Plant Biology and Conservation, October 2017

Functional composition in prairie plant communities: implications for invasion resistance, restoration, and conservation.

University of Wisconsin – Madison

B.A in Botany, May 2013

Functional trait syndromes of native and introduced Wisconsin plant species.

Research and Professional Experience

Chicago Botanic Garden

Research Ecologist and Micropropagation Coordinator, November 2017 – Present

Researcher working on projects related to ecological restoration and rare plant conservation. Projects include investigations of intraspecific trait variation and landscape-scale ploidy variation in restoration plant materials, low-input management of degraded grasslands, and *in vitro* propagation of restoration-relevant and rare plant species.

Roosevelt University

Adjunct Instructor – Ecology, January 2018 – May 2018

Adjunct instructor responsible for designing and teaching the laboratory section of an upper-level ecology course for undergraduates. Lab activities included data collection in the field, simulated mesocosm experiments, and introductory statistical analysis.

Chicago Botanic Garden

Research Assistant - Ecology, May 2016 – October 2017

Assisted in the implementation and analysis of various research projects. Responsible for plant propagation, experimental setup and maintenance, data collection and processing, and quantitative analysis.

University of Wisconsin – Madison

Computer Lab and Learning Space Manager, September 2013 – August 2015

Academic technology professional responsible for developing software profiles, administering servers, and purchasing, configuring, and supporting computer equipment and other technologies for the School of Education.

University of Wisconsin – Madison

Research Assistant – Botany, June 2012 – May 2013

Field and laboratory assistant responsible for sampling functional traits in Wisconsin plant species. Performed plant identification, trait measurements, chemical sample preparation, and statistical analyses.

Publications

- **Zeldin, J.**, Lichtenberger, T., Foxx, A., Williams, E., and Kramer, A. (2019) Intraspecific functional trait structure of restoration-relevant species: implications for restoration seed sourcing. *In review*
- Kildisheva, O., Kramer, A.T., Erickson, T., **Zeldin, J.**, and Merrit, D. (2019), Optimizing physiological dormancy break of understudied cold desert perennials to improve seed-based restoration. *Journal of Arid Environments*
- Kramer, A.T., Crane, B., Downing, J., Hamrick, J.L., Havens, K., Highland, A., Jacobi, S. K., Kaye, T. N., Lonsdorf, E. V., Ramp Neale, J. , Novy, A. , Smouse, P. E., Tallamy, D. W., White, A. and **Zeldin, J.** (2019), Sourcing native plants to support ecosystem function in different planting contexts. *Restoration Ecology*, 27: 470-476

Selected Conference Participations

- **Zeldin, J.**, Kramer, A. (2018) Within- and between-population trait variation in three restoration relevant plant species of the Colorado Plateau, Ecological Society of America, New Orleans, LA
- **Zeldin, J.**, (2017) Thinking outside of the box when producing materials to restore locally rare species: micropropagation of *Cirsium hillii* in the Chicago Region, Natural Areas Conference, Fort Collins, CO
- **Zeldin, J.**, (2017) Functional composition and invasion resistance in prairie plant communities: implications for restoration, Ecological Society of America, Portland, OR
- **Zeldin, J.**, (2017) Functional traits and restoration seed mixes: promoting invasion resistance in prairie plant communities, National Native Seed Conference, Washington D.C

Selected Mentorship and Academic Committees

- Master's student committee member, Taran Lichtenberger, Plant Biology and Conservation, Northwestern University, 2018 – Present
- Undergraduate Inter, Sarah Jane Heyman, Lake Forest College, 2018
- Undergraduate Intern, Anthony Zimmerman, Lake Foest College, 2017
- REU co-mentor, Wendy Semski, 2016

Skills and Technical Tools

- Quantitative statistics/analysis and data visualization (R, Stan, JAGS)
- Plant identification, field sampling, and vegetation monitoring
- Micropropagation, plant tissue culture, sterile technique
- Seed collection, cleaning, and banking
- Seed viability and germination assays
- Flow cytometry (Sysmex CyFlow)
- Proficiency in ArcGIS, Adobe Creative Suite, audio and video editing, PC, Mac, and Linux

Selected Collaborators

- Forest Preserves of Cook County
- Cincinnati Zoo and Botanic Garden
- Utah State University
- Institute for Applied Ecology
- University of Western Australia
- Plants of Concern
- Colorado Plateau Native Plant Program
- Mt. Cuba Center