Jacob L. Zeldin, PhD

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Conservation Scientist – Natural Areas Ecology
Negaunee Institute for Plant Conservation Science and Action
Chicago Botanic Garden

Education

2026 **PhD**
Plant Biology and Conservation
Northwestern University, Evanston IL

2018 **MS**
Plant Biology and Conservation,
Northwestern University, Evanston IL

2013 **BA**
Botany
University of Wisconsin, Madison WI

Positions

2026-Present **Conservation Scientist, Natural Areas Ecology**
David Byron Smith Family Curator of Natural Areas
Negaunee Institute for Plant Conservation Science and Action
Chicago Botanic Garden

2018-2025 **Research Ecologist**
Negaunee Institute for Plant Conservation Science and Action
Chicago Botanic Garden

2018 **Adjunct Instructor, Ecology**
Roosevelt University

Publications

- **Zeldin, J**., Dethlefs, T., Caeiro, S., Puga, D., Kramer, A, 2025, Intraspecific functional trait variation and coordination in Schizachyrium scoparium. Ecology and Evolution, 15, no. 7: e71635. https://doi.org/10.1002/ece3.71635.
- Foxx, A. J., Arango-Caro, S., Bever, J. D., Brown, K. E., Callis-Duehl, K. L., Egerton-Warburton, L., Fahlgren, N., Gehan, M., Hanlon, M., Kaggwa, R. J., Kramer, A., Langewisch, T., McKenna, T., Rquibi, L., Sikes, B., Krug, A. S., Stylianou, A., van der Pol, L., Vogel, L., **Zeldin, J**., … Miller, A. (2026). New Roots for Restoration: Building a foundation for interdisciplinary work in plant organismal biology and ecology to advance restoration in natural and agricultural ecosystems. Plants, People, Planet, 8(2), 580–591. https://doi.org/10.1002/ppp3.70096

- De Vitis, M., Havens, K., MacKechnie, L., **Zeldin, J.** and Kramer, A.T. (2026), Seed pretreatment length when producing seeds for restoration may impact seed dormancy in offspring. Restoration Ecology, 34: e70300. https://doi.org/10.1111/rec.70300
- Li, B., Fant, J., **Zeldin, J.,** Skogen, K., Havens, K., 2023, Genetic and Floral Trait Changes in Oenothera organensis (Onagraceae) during Long-Term Ex Situ Cultivation. International Journal of Plant Sciences; 184:4, 237-251
- Philpott, M., Pence, V. C., Bassüner, B., Clayton, A. S., Coffey, E. E. D., Downing, J. L., Edwards, C. E., Folgado, R., Ligon, J., Powell, C., Ree, J. F., Seglias, A. E., Sugii, N. Zale, P. J., **Zeldin, J.**, 2022. Harnessing the power of botanical gardens: evaluating the costs and resources needed for exceptional plant conservation. Applications in Plant Sciences; 10(5): e11495
- De Vitis, M., Havens, K., Barak, R. S., Egerton-Warburton, L., Ernst, A. R., Evans, M., Fant, J. B., Foxx, A. J., Hadley, K., Jabcon, J., O'Shaughnessey, J., Ramakrishna, S., Sollenberger, D., Taddeo, S., Urbina-Casanova, R., Woolridge, C., Xu, L., **Zeldin, J**., & Kramer, A. T. 2022. Why are some plant species missing from restorations? A diagnostic tool for temperate grassland ecosystems. Front. Conserv. Sci. 3:1028295. doi: 10.3389/fcosc.2022.1028295
- Lamb, N., Havens, K., Holloway, J., Steffen, J. F., **Zeldin, J.,** & Kramer, A. T. 2021. Low passive restoration potential following invasive woody species removal in oak woodlands. Restoration Ecology; 30(4)
- Williams, E. W., **Zeldin, J.,** Semski, W. R., Hipp, A. L., & Larkin, D. J. 2021. Phylogenetic distance and resource availability mediate direction and strength of plant interactions in a competition experiment. Oecologia; 197(2), 459–469.
- **Zeldin, J.**, Lichtenberger, T., Foxx, A., Williams, E., and Kramer, A. 2020 Intraspecific functional trait structure of restoration-relevant species: implications for restoration seed sourcing. Journal of Applied Ecology; 57:864–874
- 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; 170, 104001
- 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

Presentations

- **Zeldin, J.,** Dethlefs, T., Kramer, A.T, *Intraspecific functional trait structure and coordination in Schizachyrium scoparium – evaluating and applying trait variation for ecological restoration.* New Roots for Restoration Invited Symposium, Botanical Society of America Annual Meeting, 2024, Grand Rapids, MI
- Puga, D., Caeiro, S., **Zeldin, J.,** Dethlefs, T., Kramer, A.T, *Do environmental factors of populations of little bluestem (Schizachyrium scoparium) sway trait values?* Poster, Chicago Botanic Garden REU Symposium, 2022, Glencoe, IL
- Hadley, K., Evans, M., **Zeldin, J.,** Kramer, A., *The impacts of canopy loss in oak woodland restoration*, Poster, Chicago Botanic Garden REU Symposium, 2021, Glencoe, IL
- **Zeldin, J.,** Lichtenberger, T. Williams, E. W., Foxx, A., Kramer, A. T., *Within- and between-population trait variation in high-priority native forb species for restoration use in the Colorado Plateau*. Contributed Talk, Ecological Society of America Annual Meeting, 2018, New Orleans, LA

- Lichtenberger, T., **Zeldin, J.,** Williams, E. W., Foxx, A., Kramer, A. T., *Micropropagation of Colorado Plateau native forb species: A valuable tool for research in restoration ecology*. Poster, Ecological Society of America Annual Meeting, 2018, New Orleans, LA
- **Zeldin, J.,** Williams, E. W., Kramer, A. T., *Functional composition and invasion resistance in prairie plant communities: implications for restoration*. Contributed Talk, Ecological Society of America Annual Meeting, 2017, Portland, OR
- **Zeldin, J.,** Fant, J., A., Kramer, A. T., *Thinking outside the box when producing materials to restore locally rare plant species: micropropagation of Cirsium hillii in the Chicago Region*. Contributed Talk, Natural Areas Conference, 2017, Ft Collins, CO
- **Zeldin, J.,** A., Kramer, A. T., *Functional diversity in prairie plant communities: a barrier to invasion modulated by nitrogen.* Contributed Talk, National Native Seed Conference, 2017, Washington D.C

Grants and Awards

2021	NSF Biology Integration Institute, New Roots for Restoration ($12,499,623), Key Personnel
2017	Plant Biology and Conservation Research Award, Northwestern University ($1600)
2017	Ecological Society of America Applied Ecology Section, Travel Award ($400)
2016	Garden Club of America, Field Botany Scholarship ($2,500)
2013	UW Madison, Department of Botany, John T. Curtis Award for Undergraduate Research in Ecology
2013	UW Madison, Department of Botany, Kenneth R. Prize for Academic Acheivment

Mentorship and Academic Committees

2024-2025	*Supervisor/Mentor*: Luke Shimabukuro - Research Associate, Chicago Botanic Garden
2022	*Mentor*: Daniel Puga – Research Experience for Undergraduate (REU), Chicago Botanic Garden & Cal Poly Sand Luis Obispo
2022	*Mentor*: Stacey Caeiro – Research Experience for Undergraduate (REU), Chicago Botanic Garden & Northwestern University
2021-2022	*Supervisor/Mentor*: Tessa Dethlefs – Research Associate, Chicago Botanic Garden
2020-2022	*Committee Member*: Alexis Balog – M.S Student, Northwestern University Plant Biology and Conservation Masters Program
2018- 2020	*Committee Member*: Taran Lichtenberger – M.S Student, Northwestern University Plant Biology and Conservation Masters Program
2019	*Co-Mentor (with Andrea Kramer and Matt Evens):* Kyndall Hadley – Undergraduate Research Grant and Senior Honors Thesis, Northwestern University
2018	*Mentor:* Sarah Jane Heyman – Undergraduate Intern, Lake Forest College & Chicago Botanic Garden
2017	*Mentor:* Anthony Zimmerman – Undergraduate Intern, Lake Forest College & Chicago Botanic Garden
2016	*Co-Mentor (with Evelyn Williams):* Wendy Semski - Research Experience for Undergraduate (REU), Chicago Botanic Garden