

Riley D. Thoen

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Education

- 2020 – present Ph.D., Plant Biology; GPA: 4.0/4.0
University of Georgia, Athens, GA
- 2015 – 2019 B.A., Biology Honors, Statistics minor; GPA: 4.0/4.0
Gustavus Adolphus College, Saint Peter, MN

Publications

- 5) **Thoen, RD**, LB Hendricks, GT Bailes, BR Johnson, LE Pfeifer-Meister, PB Reed, BA Roy, and ML DeMarche. 2025. Spatiotemporal variation in population dynamics of a narrow endemic, *Ranunculus austro-oreganus*. *American Journal of Botany* 112(1):e16466
<https://doi.org/10.1002/ajb2.16446>.
- 4) **Thoen, RD**, A Southgate, G Kiefer, RG Shaw, and S Wagenius. 2025. The conservation significance of small population remnants: variability in inbreeding depression and heterosis of a perennial herb, the narrow-leaved purple coneflower (*Echinacea angustifolia*). *Journal of Heredity* 16(1):24-33 <https://doi.org/10.1093/jhered/esae055>.
- 3) Waananen, A, LK Richardson, **RD Thoen**, SW Nordstrom, EG Eichenberger, G Kiefer, AB Dykstra, RG Shaw, and S Wagenius. 2024. High juvenile mortality overwhelms benefits of mating potential for reproductive fitness. *The American Naturalist* 203(6):E188-E199
<https://doi.org/10.1086/730112>.
- 2) Richardson, LK, SW Nordstrom, A Waananen, **RD Thoen**, AB Dykstra, G Kiefer, DE Mullett, EG Eichenberger, RG Shaw, and S Wagenius. 2024. Juvenile survival increases with dispersal distance and varies across years: 15 years of evidence in a prairie perennial. *Ecology* 105(7):e4331 <https://doi.org/10.1002/ecy.4331>.
- 1) Zettlemoyer, ME, SL Ellis, CW Hale, EC Horne, **RD Thoen**, and ML DeMarche. 2022. Limited evidence for phenological differences between non-native and native species. *Frontiers in Ecology and Evolution* 10:983172 <https://doi.org/10.3389/fevo.2022.983172>.

Other research products

- 3) Hanson, D, **RD Thoen**, J Beck, SW Nordstrom, KE Muller, & S Wagenius. 2020. EchinaceaLab. R package. <https://github.com/stuartWagenius/echinaceaLab>
- 2) Kiefer, G, **RD Thoen**, & S Wagenius. 2020. exPt 1 Core. The *Echinacea* Project. Dataset. <http://echinaceaproject.org/datasets/expt1-core/>

1) **Thoen, RD.** 2019. Vigor of *Echinacea angustifolia* and non-native *E. pallida* and their hybrids in a fragmented prairie habitat. Undergraduate Thesis, Gustavus Adolphus College, Saint Peter, MN, USA. <https://archives.gac.edu/digital/collection/irstudents/id/3650>

Presentations

- 2024 Southeastern Partners in Plant Conservation, Atlanta, GA. “Testing the effects of a naturally patchy habitat on reproduction in *Helianthus porteri* (Asteraceae), a Piedmont granite outcrop endemic” (lightning talk)
- 2024 Southeastern Population Ecology and Evolutionary Genetics, Clemson, SC. “Drivers of intraspecific density dependence on population dynamics in *Helianthus porteri*, a granite outcrop endemic” (poster)
- 2024 University of Georgia Ecology, Diversity, Genetics, Evolution Seminar, Athens, GA. “Drivers of population growth in patchy habitats: a case study on *Helianthus porteri*” (50-minute talk)
- 2023 University of Georgia Plant Center Fall Symposium, Young Harris, GA. “Negative density dependence can buffer declining metapopulations of *Helianthus porteri* from extinction” (poster)
- 2023 University of Georgia Ecology, Diversity, Genetics, Evolution Seminar, Athens, GA. “Between a rock and a hard place: effects of climate and patchiness on *Helianthus porteri*” (50-minute talk)
- 2021 University of Georgia Plant Center Fall Symposium, Young Harris, GA. “Time’s up, buttercup: population growth and decline in a narrow endemic” (poster)
- 2019 Gustavus Adolphus College Spring Research Symposium, Saint Peter, MN. “Estimating viability of *Echinacea angustifolia* relative to its non-native congener *E. pallida* and hybrids in a fragmented prairie habitat” (talk)
- 2019 Midwest Ecology and Evolution Conference, Terre Haute, IN. “Native *Echinacea angustifolia* has depressed viability relative to non-native *E. pallida* and reciprocal hybrids in a fragmented prairie habitat” (poster)
- 2018 Gustavus Adolphus College Fall Research Symposium, Saint Peter, MN. “Estimating the invasive potential of *Echinacea pallida* and its hybrids (*E. pallida* x *angustifolia*) in a severely fragmented prairie habitat” (poster)
- 2018 Gustavus Adolphus College Spring Research Symposium, Saint Peter, MN. “Does compensatory growth and photosynthesis occur in response to simulated herbivory in *Phaseolus vulgaris*?” (talk)

2017 Gustavus Adolphus College Fall Research Symposium, Saint Peter, MN. “Analysis of the effects of risk factors and the islet isolation procedure of total pancreatectomy with islet autotransplantation” (poster)

Research Experience

2019 – 2020 Chicago Botanic Garden and University of Minnesota Conservation Lab Manager, The *Echinacea* Project

2018 University of Minnesota Summer research intern, The *Echinacea* Project

2017 – 2018 Gustavus Adolphus College Independent research project, Dr. Pamela Kittelson lab

2017 University of Minnesota Summer research internship, Schulze Diabetes Institute

Grants and awards

Grants

2022	UGA Plant Biology Palfrey Student Research Grant	\$1250.00
2022	UGA Plant Biology Jaworski Student Travel Award	\$722.80
2021	UGA Plant Biology Research, Teaching, and Outreach award	\$600.00
2017	Gustavus Adolphus College Sigma XI undergraduate research award	\$500.00

Awards

2019 Gustavus Adolphus College, Albert G. Swanson Scholar

2019 Gustavus Department of Biology, J.A. Edquist Award

2019 Gustavus Adolphus College, Guild of St. Ansgar

2018 Gustavus Adolphus College, Biology Departmental Assistant

2018 Sigma Xi-O.W. Holcomb Research Fellow

2018 Gustavus Adolphus College, Gerhard T. Alexis Scholar

Teaching

* writing intensive course

Lead Instructor

S25 PBIO 3270 Flowers, University of Georgia

Co-Instructor

S24 PBIO 3270 Flowers, University of Georgia

Instructor of Record

S22, S23 BIOL 1108L Principles of Biology II Laboratory, University of Georgia*

Teaching assistant

F24 BIOL 49X0R, Writing TA for Faculty-Mentored Undergraduate Research, University of Georgia*

F22 PBIO 3650L Plant Ecology Lab, University of Georgia

F18	BIO-201 Cell and Molecular Biology Lab, Gustavus Adolphus College
S18	BIO-202 Evolution, Ecology, and Behavior Lab, Gustavus Adolphus College
F17, F16	BIO-101 Principles of Biology Lab, Gustavus Adolphus College
F17	CHE-251 Organic Chemistry II Lab, Gustavus Adolphus College
S17	BIO-102 Organismal Biology Lab, Gustavus Adolphus College

Teaching development and training

F24	UGA Writing Intensive Program TA Training, August 6-8, 2024
F24	Begun development of a writing Student Learning Outcome for UGA Biology majors
F24	Developed a syllabus for Biology 3000: Applied Statistics for Biologists, a writing intensive course
F24	Developed student surveys for writing TA's feedback in BIOL 49X0R

Mentoring

Zoë Mitchell F2023 – F2024	Projects: F23: “The effects of population density on survival and reproduction of <i>Helianthus porteri</i> ” F24: “The effects of patchiness on quality and quantity pollen limitation in <i>Helianthus porteri</i> ”
Vincent Le F2022 – S2024	Project: “Drought effects on <i>Helianthus porteri</i> , an endemic granite outcrop plant”
Sydney Speir S2022 – S2023	Project: “Impact of drought stress on reproductive and vegetative traits of <i>Helianthus porteri</i> ” Received UGA's Center for Undergraduate Research Summer Research Fellowship (\$3000)
Mentee posters	Mitchell, Z , RD Thoen, and ML DeMarche. 2023. The effects of population density on survival and reproduction of <i>Helianthus porteri</i> . UGA Plant Center Fall Symposium. Le, V, S Speir , RD Thoen, and ML DeMarche. 2023. Surviving drought: phenological and water use tradeoffs in <i>Helianthus porteri</i> . UGA CURO Student Research Symposium.

Service and outreach

	Reviewed for <i>Global Ecology and Conservation</i>
	Co-reviewed for <i>American Journal of Botany</i> and <i>Journal of Ecology</i>
2021 – present	Reviewer, <i>The Classic Journal</i> , University of Georgia
2023 – 2025	Editor, Athens Science Observer
2018 – 2019	Orientation Leader, Gustavus Adolphus College
2017 – 2019	Member, TriBeta Biology Honors Society, Gustavus Adolphus College

Outreach

- 7) “Helping plants thrive: assisted gene flow may combat habitat loss.” Blog post, *Athens Science Observer*. <https://athensscienceobserver.com/2024/11/25/helping-plants-thrive-assisted-gene-flow-may-combat-habitat-loss/>
- 6) “Supporting writing in the sciences: Fall 2024 virtual writing workshop series, hosted by Riley Thoen; 1) Writing the Introduction, 2) Methods and Results, and 3) Discussion and Abstract.” Video series, *UGA Writing Intensive Program*. <https://wip.uga.edu/supporting-writing-in-the-sciences/>
- 5) “How writing instruction pushed my writing over a massive writer’s block.” Blog post, *UGA Writing Intensive Program*. <https://wip.uga.edu/how-writing-instruction-pushed-my-writing-over-a-massive-writers-block/>
- 4) “Demystifying sports analytics: how data has changes the game.” Blog post, *Athens Science Observer*. <https://athensscienceobserver.com/2024/08/02/demystifying-sports-analytics-how-data-has-changed-the-game/>
- 3) “The evolution of Pokémon evolution: 25+ years of evolutionary misconceptions.” Blog post, *Athens Science Observer*. <https://athensscienceobserver.com/2023/05/26/the-evolution-of-pokemon-evolution-25-years-of-evolutionary-misconceptions/>
- 2) “Don’t take them for granite: the whimsical world of granite outcrops.” Blog post, *Athens Science Observer*. <https://athensscienceobserver.com/2022/04/06/dont-take-them-for-granite-outcrops/>
- 1) “Meet Riley D. Thoen.” Blog post, *The Classic Journal*. <https://theclassicjournal.uga.edu/index.php/meet-riley-d-thoen/>