

## Education

**Michigan State University** (East Lansing, MI): PhD Candidate; Plant Biology/EEB; GPA: 4.0/4.0 July 2020 – present

- Advisor: Dr. Jeffrey Conner, Committee: Drs. Emily Josephs, Lars Brudvig, and David Lowry
- Dissertation research: investigating the roles of phenotypic plasticity and genetic change in the successful invasion of weeds into agricultural fields
- Other Conner Lab research: investigating pollinator-mediated selection on anther traits in wild radish

**Wesleyan University** (Middletown, CT): BA/MA; Biology; GPA: 4.0/4.0 Sep. 2015 – May 2020

- Advisor: Dr. Sonia Sultan; Thesis: “Transgenerational effects of competition: Context-dependent effects of distinct parental competition treatments in *P. persicaria*” – describes common garden experiments investigating how the parental competitive environment influences seed and offspring growth traits
- Other Sultan Lab research: Correlations between light microsite variation and dispersal distance in the field and greenhouse to parameterize a transgenerational plasticity model, transgenerational effects of parental light environment on offspring fitness

**School for International Training Study Abroad: Tanzania Wildlife Conservation and Political Ecology** Spring 2018

- Studied conflicts between wildlife and various human land uses; practiced field-based ecological research methods

**East Lyme High School** (East Lyme, CT): GPA: 4.1/4.0, SAT: 2300/2400, *Salutatorian* Aug. 2011 – June 2015

## Peer-Reviewed Publications

1. Palande, S., et al. (Foundations in Computational and Plant Sciences Course). (2025). Expression-based machine learning models for predicting plant tissue identity. *Applications in Plant Sciences*, 13(1), e11621. doi: 10.1002/aps3.11621
2. Smith, O.M., Davis, K.L., **Waterman, R.**, et al. (2024). (EEB Collaborative Research Group). Journals must expand access to peer review data. *Trends in Ecology & Evolution*, 39(4), 311-314. doi: 10.1016/j.tree.2024.02.003
3. Smith, O.M., Davis, K.L., Pizza, R.B.\*, **Waterman, R.\***, et al. (EEB Collaborative Research Group) (2023). Peer review bias perpetuates barriers for historically excluded groups. *Nature Ecology & Evolution*, 7(4), 512-523. doi: 10.1038/s41559-023-01999-w.
4. **Waterman, R.**, Sahli, H., Koelling, V. A., Karoly, K., & Conner, J. K. (2023). Strong evidence for positive and negative correlational selection revealed by recreating ancestral variation. *Evolution*, 77(1), 264-275.
5. **Waterman, R.**, & Sultan, S. E. (2021). Transgenerational effects of parent plant competition on offspring development in contrasting conditions. *Ecology*, 102(12), e03531. doi: 10.1002/ecy.3531
6. Baker, B. H., Sultan, S. E., Lopez-Ichikawa, M., & **Waterman, R.** (2019). Transgenerational effects of parental light environment on progeny competitive performance and lifetime fitness. *Philosophical Transactions of the Royal Society B*, 374(1768), 20180182. doi:10.1098/rstb.2018.0182
7. **Waterman, R.**, Lewis, J., & Waterman, K. C. (2017). Accelerated stability modeling for peptides: A case study with bacitracin. *AAPS PharmSciTech*, 18(5), 1692-1698. doi:10.1208/s12249-016-0635-7

### In Review:

1. **Waterman, R.**, Song, S., Bhandari, N., Conner, J.K. Testing adaptive hypotheses for an evolutionarily conserved trait through slow-motion videos of pollinators.

undergraduate mentees \*equal contribution

## Selected Poster & Oral Presentations

- **R. Waterman.** Evolution conference, Athens, GA, June 2025: “Horsing around with horseweed: evolution and plasticity in an agricultural weed”. Talk.
- **R. Waterman,** B. Catlett, I. Bhatt, G. Edmonds, J.K. Conner. MSU Ecology, Evolution, and Behavior Symposium, May 2025: “Effects of growth hormone and stratification conditions on Canadian horseweed (*Conyza canadensis*) life cycle”. Poster. Awarded *Best Poster*.
- **R. Waterman.** Society for the Study of Evolution GREG Seminar, March, 2024: “Investigations of adaptation to agriculture in horseweed”. Virtual talk.
- **R. Waterman.** KBS Colloquium, Hickory Corners, MI, December 2023: “Preliminary Results and Challenges from a Reciprocal Transplant Experiment of Agricultural Weeds”. Talk.

- **R. Waterman**, S. Song, N. Bhandari, and JK Conner. Evolution conference, Albuquerque, NM, June 2023 and MSU Ecology, Evolution, & Behavior Symposium, East Lansing, MI, May 2023: "Testing adaptive hypotheses for tetradynamy through slow-motion videos of pollinators". Talk.
- **R. Waterman**, H. Sahli, V. Koelling, K. Karoly, and JK Conner. Evolution conference, Cleveland, OH, June 2022: "Strong evidence for positive and negative correlational selection revealed by recreating ancestral variation". Poster.
- **R. Waterman**, H. Sahli, V. Koelling, K. Karoly, and JK Conner. MSU Ecology, Evolution, and Behavior Symposium, May 2021: "Measuring selection on anther position using male and female fitness and expanded phenotypic variation". Virtual poster. Awarded *Runner-up Best Poster*.
- **R. Waterman**. Wesleyan University College of the Environment Senior Capstone Poster Session, Middletown, CT, May 2019: "Transgenerational Effects of Competition on Offspring Phenotypes in *Polygonum*". Poster & talk.

## Honors & Awards

- |   |                             |
|---|-----------------------------|
| • Summer Mentoring & R Workshop Fellowship, KBS/MSU (\$10,855 total)  | May 2021 - 2025             |
| • Summer Graduate Student Fellowship, KBS/MSU (\$6,339 total)         | May 2021, 2022, 2025        |
| • Paul Taylor Endowment Award, MSU (\$4,685 total)                    | April 2022 – Spring 2025    |
| • USDA NIFA Pre-doctoral Fellowship (\$175,405 total)                 | June 2023 – June 2026       |
| • Society for the Study of Evolution Lewontin Early Award (\$2500)    | May 2022                    |
| • EEB Professional Horizons Grant, MSU (\$585)                        | March 2022                  |
| • Science Education & Outreach Fellowship, KBS/MSU (\$42,000)         | Spring 2022 – Summer 2023   |
| • College of Natural Science Early Start Fellowship, MSU (\$6,000)    | May, 2020                   |
| • University Distinguished Fellowship, MSU (estimated \$94,000 total) | Feb., 2020                  |
| • Phi Beta Kappa, CT Chapter  | April, 2019                 |
| • Dean's List, Wesleyan   | Fall 2015 – Spring 2019     |
| • Wesleyan Summer Research Fellowships (\$12,000 total)               | Summer 2017, 2018, and 2019 |
| • Environmental Professionals of CT Scholarship (\$1,000)             | July, 2019                  |
| • Student Organization of the Year, Wesleyan (organization: Veg Out)  | May, 2017                   |

## Mentoring

- |  |                         |
|--|-------------------------|
| Michael Kwalton (KBS Undergrad Research Assistant)   | Summer 2025             |
| • Conducted methods testing for extracting plant DNA   |                         |
| Lindsey Urban & Morgan Durham (NSF REUs)   | Summer 2024             |
| • Measured leaf and physiological traits in field reciprocal transplant of agricultural weeds.   |                         |
| Ishwari Bhatt & Georgia Edmonds (Kalamazoo Area Math & Science Center Research Team)   | Fall 2023 – Spring 2024 |
| • Conducted horseweed growth type experiment in greenhouse   |                         |
| Brooke Catlett (NSF REU) & Dominick Stoops (KBS Undergrad Research Assistant)  | Summer 2023             |
| • Helped conduct reciprocal transplant field experiment, tested effect of gibberellic acid on horseweed growth type, and conducted pilot seed viability experiment |                         |
| Cole Cahill & Nathan Gleason (Kalamazoo Area Math & Science Center Research Team)  | Fall 2022 – Spring 2023 |
| • Collected and analyzed seed production and morphology data in greenhouse-grown lambsquarters   |                         |
| Shoshannah Blaszczak & Sally Song (NSF REUs)   | Summer 2022             |
| • Helped conduct common garden experiment with agricultural and non-agricultural populations of 3 weedy species  |                         |
| • Conducted a second year of slow-motion videos of pollinator visits to provide more definitive test of hypotheses   |                         |
| Nicholas Bhandari (KBS Undergrad Research Assistant & MSU biology honors thesis)   | May 2021 – Dec. 2021    |
| • Tested adaptive hypotheses about anther position in wild radish using slow-motion videos of pollinator visits  |                         |

Co-mentored undergraduate researchers in Sultan Lab – Charlotte Babbitt (Sept. 2019 – Sept. 2020), Jolie Villegas (Sept. 2019 - May 2020), Annie Thompson (Sept. 2019 - May 2020), and Amy Schaap (June 2018 – Dec. 2018)

## Work & Volunteer Experience

- |   |                      |
|---|----------------------|
| <b>Michigan State University</b> , East Lansing, MI, <i>Teaching Assistant</i>                    | Sept 2021 – Dec 2021 |
| • TA for 2 sections of Ecology Lab, Professor Louise Mead, took the lead in 1 section             |                      |
| <b>Wesleyan University</b> , Middletown, CT, <i>Plant Ecology Research Assistant</i>              | Jun 2020 – Oct 2020  |
| • Trained undergrad in field measurements; analyzed field moisture, light, and dispersal datasets |                      |

<b>Wesleyan University</b> , Middletown, CT, <i>Teaching Assistant</i>	Jan 2020 – May 2020
<ul style="list-style-type: none"> <li>• Provided support for course: Evolution in Human-Altered Environments, Professor Sonia Sultan</li> </ul>	
<b>Everyone Outside</b> , Durham, CT, <i>Nature Mentor/Coordinator</i>	April 2019 – Oct. 2019
<ul style="list-style-type: none"> <li>• Planned and led an after-school garden club for elementary school students; helped run nature-based field trips</li> </ul>	
<b>Middletown Sustainability Team</b> , Middletown, CT, <i>Volunteer</i>	May 2019 – Aug. 2019
<ul style="list-style-type: none"> <li>• Created updated inventory and GIS map of municipal brownfields in support of Sustainable CT Gold Certification</li> </ul>	
<b>Wesleyan Food Rescue</b> , Middletown, CT, <i>Volunteer</i>	Jan. 2019 – May 2019
<ul style="list-style-type: none"> <li>• Redistributed extra food from Wesleyan dining halls to emergency homeless shelter</li> </ul>	
<b>CT Forest and Parks Association</b> , Middlefield, CT, <i>Service-Learning Partner</i>	Fall 2017 & Spring 2019
<ul style="list-style-type: none"> <li>• Used GIS tools to prioritize parcels along Blue-Blazed Trails based on various social and ecological factors</li> </ul>	
<b>Environmental Justice Student Forum</b> , <i>Instructor</i>	Jan. 2017 – May 2017
<ul style="list-style-type: none"> <li>• Helped design curriculum, facilitate class discussion, and grade essays in a full-credit student-run course</li> </ul>	
<b>FreeThink Technologies Inc.</b> , Branford, CT, <i>Summer Research Intern</i>	Summer 2015
<ul style="list-style-type: none"> <li>• Experimentally demonstrated the applicability of accelerated stability methods for a peptide drug product</li> </ul>	

## Advocacy Activities

<b>K-12 Science Outreach</b>	Spring 2022 - present
<ul style="list-style-type: none"> <li>• Engage K-12 students with current science topics and science careers through classroom visits, career fairs, lesson plans, webinars, and field trips</li> </ul>	
<b>EEB Collaborative Research Group</b> , <i>Member</i>	Aug. 2021 – Apr. 2023
<ul style="list-style-type: none"> <li>• Conduct scholarly research on bias against underrepresented groups in academia</li> </ul>	
<b>MSU Grads for Climate Justice</b> , <i>Member</i>	Jan. 2021- Jan. 2022
<ul style="list-style-type: none"> <li>• Advocate for carbon neutrality at MSU, serve as representative on Utility Master Plan Working Group</li> </ul>	
<b>Veg Out</b> , <i>Task Force Leader</i>	Jan. 2016 – May 2019
<ul style="list-style-type: none"> <li>• Promoted environmentally conscious and cruelty-free eating through campus events and campaigns (1-2 hours/week)</li> </ul>	
<b>Natural Sciences and Mathematics Coalition</b> , <i>Student Coordinator</i>	Nov. 2017 – May 2019
<ul style="list-style-type: none"> <li>• Promoted equity and inclusion in STEM through data collection, student-faculty discussions, and task committees</li> </ul>	
<b>Wesleyan Fossil Fuel Divest</b> , <i>Member</i>	Oct. 2015 – May 2019
<ul style="list-style-type: none"> <li>• Advocated for Wesleyan to divest its endowment from fossil fuel interests through peaceful protests and campaigns</li> </ul>	
<b>Wesleyan Women in Science</b> , <i>Member</i>	Dec. 2015 – May 2019
<ul style="list-style-type: none"> <li>• Attended events and discussions among fellow women in the STEM fields at Wesleyan</li> </ul>	

## Academic Service

- **Peer review:** *New Phytologist* (Sept. 2020), *American Journal of Botany* (Dec. 2020), *Proceedings of the Royal Society B* (July 2021)
- **Committees:** KBS Culture and Inclusion Committee (Sept. 2022 – Fall 2025, co-chair starting Jan. 2023), PLB Graduate Student Organization (Oct. 2022 – Aug. 2024, KBS liaison), KBS Honors & Awards Committee (Jan. 2021 – May 2022), MSU Department of Plant Biology faculty search committee (May 2021-Feb 2022), Wesleyan College of the Environment Committee (Sept. 2017 – May 2019), Wesleyan Diversity and Sustainability Working Group (Dec. 2017 – Oct. 2018)
- **Professional organizations:** Society for the Study of Evolution (Dec. 2020 – present), American Association for the Advancement of Science (Sept. 2021 – present), Association for Women in Science (Sept. 2022 – present)

## DEI & Mentorship Training

- KBS Career Pathways seminars on workplace climate, mentoring, and fieldwork safety (6 hr) Summer 2023
- KBS mentoring and inclusive interviewing/hiring trainings (3 hr) Summer 2021 & 2022
- KBS Cultural Intelligence Workshop (1.5 hr) Feb 23, 2022
- MSU Dialogues on Race: 9-week intergroup dialogue experience (1.5 hr/week) Spring 2021