

# Riley Reed

## PhD Candidate

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## Education

- Washington State University  
Ph.D. in Entomology  
GPA: 3.970  
Expected Fall 2026
- Washington State University  
B.S. in Agricultural Biotechnology  
GPA: 3.550  
Cum laude  
2021

## Teaching

- Discover Insects: Laboratory for Non-Science Majors  
Teaching assistant, 23 students  
I taught one lab section each week, graded all assignments, and designed some of the lecture materials.  
Fall 2023
- Ecological and Integrated Pest Management  
Teaching assistant, 61 students  
I delivered a lecture on the limitations of pesticide technology, graded homework assignments and half of the final reports.  
Rated above average or better by 67% of responding students (18)  
Spring 2022
- Discover Insects: Laboratory for Non-Science Majors  
Teaching assistant, 25 students  
I taught one lab section each week, graded all assignments, designed some of the lecture materials and test questions.  
Rated above average or better by 100% of responding students (13)  
Fall 2021

## Publications

- **Reed, R.,** & Hopkins, B. (2025). A scientific note on observations of bumble flower beetles (*Euphoria inda*) in honey bee (*Apis mellifera*) hives. *The Journal of the Kansas Entomological Society*.
- Price, B., **Reed, R.,** Reams, T., & Hopkins, B. (2025). Induced brood breaks by refrigerated bee storage in spring: An effective strategy for Varroa destructor (Mesostigmata: Varroidae) control in honey bee colonies. *Journal of Insect Science*
- Zhang, G., Kuesel, R. W., Olsson, R., **Reed, R.,** Liu, X., & Hopkins, B. (2024). Pesticide exposure patterns in honey bees during migratory pollination. *Journal of Hazardous Materials*, 480, 135910. <https://doi.org/10.1016/j.jhazmat.2024.135910>

- Price, B., **Reed, R.**, Hopkins, B., & Zhu, G. (2024). *A Guide to the Small Hive Beetle: An Emerging Pest in Washington State*. Washington State University Extension. <https://pubs.extension.wsu.edu/a-guide-to-the-small-hive-beetle-an-emerging-pest-in-washington-state>
- Zhu, G., Bush, T. N., Burgstahler, K. S., Green, N., Cook, H., Rampone, E., Helmreich, S., **Reed, R. M.**, Milnes, J. M., & Crowder, D. W. (2023). Estimating the potential distribution of yellow spotted stink bug (*Erthesina fullo*) using ecological niche models. *Entomological Science*, 26(4), e12566. <https://doi.org/10.1111/ens.12566>

## Grants & Fellowships

**Total Funding: \$433,037**

- WSU Entomology Department Travel Grant 2025  
Awarded \$1,500
- USDA NIFA Biotechnology Risk Assessment Grant 2025  
Awarded \$351,313
- Western SARE Graduate Student Research and Education Grant 2025  
Awarded \$27,011
- WSU Entomology Department Research Grant 2025  
Awarded \$1,483
- Columbia Basin Seed Association Research Grant 2025  
Awarded \$4,000
- FFAR Fellowship 2022-2025  
Each year \$5,000 from the FFAR Foundation are matched by funds from Bejo Seed. <https://ffarfellows.org/>
- WSU Entomology Graduate Student Association minigrant 2023  
Awarded \$125 to purchase supplies for Entomological Society of America Pacific Branch student activities.
- GPSA RSO Affiliate Funding 2023  
\$500 awarded to the WSU Entomology Graduate Student Association to fund community outreach activities.

## Awards and Honors

**Total Funding: \$21,000**

- Crimson Opportunity Scholar (\$3,000) 2024
- FFAR Fellows Lighting Talks, 2<sup>nd</sup> place 2024
- Washington State Beekeepers Association Scholarship (\$5,000) 2023
- Entomology Games, WSU Team, PBESA 2<sup>nd</sup> place 2023  
Team: **Riley Reed**, Dowen Jocson, Stephen Onayemi, Joseph Montoya
- WSU Department of Entomology Outstanding PhD 2023  
Student of the Year (\$2,000)
- Foundation for the Preservation of Honey Bees Scholar (\$5,000) 2023
- Washington State Beekeepers Association Scholarship (\$5,000) 2022
- The Beekeepers of Indiana Scholarship (\$1,000) 2020

## **Presentations**

**Total: 43**

- Feeding and Pollination 2025  
Presented at the American Honey Producers Association annual conference
- Nutrition, Foraging, and Pollination in Carrot Seed 2025  
Presented at the American Honey Producers Association annual conference
- Improving Pollination Quality in Vegetable Seed 2025  
Presented at WSU Honey Bee Program Donor Appreciation day
- Tools and Equipment 2025  
Presented as part of a WSU virtual workshop "A Year Ahead: First Year of Beekeeping"
- Beekeeping 101: What to Expect When You're Inspecting 2025  
Presented as part of a WSU Student Honey Bee Veterinary Consortium meeting.
- Improving Pollination Quality in Vegetable Seed (poster) 2025  
Presented as part of the WSU Academic Showcase
- Beekeeping 101: What to Expect When You're Inspecting 2025  
Presented as part of the Sandhill Crane Festival
- The Good, The Bad, And The Buzzy: The Impacts Of Pesticides On Pollinators And How To Protect Them 2025  
Presented during the 2025 Spokane Ag Show
- The Good, The Bad, And The Buzzy: The Impacts Of Pesticides On Pollinators And How To Protect Them 2025  
Presented during the 2025 Columbia County Noxious Weed Board Annual Growers Meeting
- The Impacts of Supplemental Feeding on Honey Bee Foraging Habits in Carrot Seed 2025  
Presented during the American Bee Research Conference.
- Improving Pollination Quality in Vegetable Seed 2024  
Presented during a guest lecture for the WSU Honey Bee Biology course.
- The Good, The Bad, And The Buzzy: The Impacts Of Pesticides On Pollinators And How To Protect Them 2024  
Presented during the Washington State Crop Improvement Association Annual Conference.
- The Impacts of Supplemental Feeding on Honey Bee Foraging Habits in Carrot Seed 2024  
Presented during the Entomological Society of America annual conference.
- Improving Varroa Mite Control Through Spring Cold Storage 2024  
Presented at the poster session during the FFAR Fellows Danforth Plant Science Center visit.
- Improving Varroa Mite Control Through Spring Cold Storage 2024

- Presented at the poster session during the FFAR Fellows Bayer facility visit.
- The Small Hive Beetle, An Emerging Pest In Washington 2024  
Presented during a monthly Washington State Beekeepers Association “Ask a Washington Beekeeper” webinar.
  - Varroa and Viruses in Honey Bees 2024  
Presented as a DVM Masterclass for the Washington State Veterinary Medical Association.
  - The Small Hive Beetle, An Emerging Pest In Washington 2024  
Presented during the Washington State Beekeepers Association annual conference.
  - My Time as an Ignite Scholar 2024  
Presented as guest speaker during the annual WSU Ignite Undergraduate Research Program Orientation Dinner
  - Honey Bee Feeds and High Quality Seeds 2024  
Awarded 2<sup>nd</sup> place in the Foundation for Food and Agriculture Research Fellows Lighting Talk competition.
  - Three P’s in a Pod: Pests, Parasites, and Pathogens Of Washington Bee Hives 2024  
Presented during the Othello Sandhill Crane Festival
  - Beekeeping 101 2024  
Presented to the Connell FFA Sales Career Development Event team.
  - The Good, The Bad, And The Buzzy: The Impacts Of Pesticides On Pollinators And How To Protect Them 2024  
Presented during a WSU pesticide applicator’s license recertification course
  - The Good, The Bad, And The Buzzy: The Impacts Of Pesticides On Pollinators And How To Protect Them 2024  
Presented during a WSU pesticide applicator’s license recertification course
  - The Good, The Bad, And The Buzzy: The Impacts Of Pesticides On Pollinators And How To Protect Them 2024  
Presented during a Syngenta Seed School
  - The Good, The Bad, And The Buzzy: The Impacts Of Pesticides On Pollinators And How To Protect Them 2024  
Presented during a WSU pesticide applicator’s license recertification course
  - The Potential For Indoor Storage To Improve Control Of Varroa Mites In Honey Bee Colonies 2024  
Presented during the annual American Bee Research Conference.
  - The Good, The Bad, And The Buzzy: The Impacts Of Pesticides On Pollinators And How To Protect Them 2023  
Presented during the Far West Agribusiness Association’s annual meeting

- The Good, The Bad, And The Buzzy: The Impacts Of Pesticides On Pollinators And How To Protect Them 2023  
Presented during a WSU pesticide applicator's license recertification course
- Improving Varroa Mite Control Through Spring Cold Storage 2023  
Presented during the poster session at the Entomological Society of America annual conference
- The Small Hive Beetle, An Emerging Pest In Washington 2023  
Presented during the Washington State Beekeepers association annual conference.
- Improving Crop Isolation Through Supplemental Feeding 2023  
Presented during the Washington State Beekeepers association annual conference.
- Improving Pollination Quality in Vegetable Seed 2023  
Presented during the FFAR Fellows professional development retreat.
- Improving Varroa Mite Control Through Spring Cold Storage 2023  
Presented during the poster session of the Entomological Society of America Pacific Branch annual conference
- Improving Pollinating Quality in Seed Crops 2023  
Presented during the Marilyn & James Hyde seminar series in the Washington State University Department of Entomology
- Better Parasite Control Through Indoor Storage 2023  
Presented during the Washington State University Department of Entomology 3MT competition
- Improving Pollination Quality in Vegetable Seed 2023  
Presented during the Columbia Basin Vegetable Seed Association annual meeting
- Viability Of Ozone Fumigation as a Method of Sterilizing Combs In Commercial Beekeeping Operations (poster) 2023  
Presented during the American Bee Research Conference poster session.
- Viability Of Ozone Fumigation as a Method of Sterilizing Combs In Commercial Beekeeping Operations 2023  
Presented during the Foundation Luncheon at the American Beekeeping Federation Annual Conference.
- Improving Colony Health During Vegetable Seed Pollination 2022  
Idaho Honey Conference, presented via zoom.
- Diagnosing and Managing American Foulbrood (AFB) in Honey Bees (infographic)  
Presented virtually during the Entomological Society of America/Entomological Society of Canada joint annual conference
- Improving crop isolation through supplemental feeding and diverse forage 2022

- Graduate student research showcase at the Washington State Beekeepers Association annual conference
- Washington's Honey Bees & WSU Bee Program Overview 2022  
Presented during the International Carrot Conference facility tours in Othello, WA

## Outreach

**Total: 39**

- Sunnyside Elementary School Steam Night 2025  
Staffed a table with live and preserved arthropods during the STEAM night and spoke with children about the diversity of Arthropods
- Camp Wooten sixth grade camp 2025  
Educated 86 sixth graders about local arthropod diversity and how to collect them
- Palouse Clearwater Environmental Institute "Taste of PCEI" 2025  
Educated community members of all ages about arthropods while providing an opportunity to handle live specimens
- CAHNRS Fall Festival 2025  
Educated WSU students and employees about arthropods while providing an opportunity to handle live specimens
- WSU International Center Okinawa Summer Camp Program 2025  
High schoolers visiting from Japan were given the opportunity to handle a wide range of live arthropods while learning about arthropod diversity
- Edwin-Markham Elementary School 2025  
Spoke to ~50 kindergarten and second grade students about the diversity and importance of arthropods. Provided live specimens for watching and handling.
- Washington FFA State Convention Entomology Tour 2025  
Educated ~80 high school FFA members and advisors about career opportunities in entomology, the diversity of arthropods, and the importance of entomological museums.
- WSU Honey Bee + Pollinators Research Facility Tour 2025  
Led a tour of the facility as part of the Othello Sandhill Crane Festival
- Biology Graduate Student Association "Family Fun Day" 2024  
Educated community members about a variety of arthropods
- Kamiak Elementary School 2024  
Staffed a table with live and preserved arthropods during the STEAM night and spoke with children about the diversity of Arthropods
- CAHNRS Fall Festival 2024  
Educated WSU students and employees about arthropods while providing an opportunity to handle live specimens
- Edwin-Markham Elementary School 2024

- Spoke to ~40 second grade students about arthropod diversity and the importance of pollinators. Provided live specimens for watching and handling.
- Lind Elementary School 2024  
Taught children in preschool through fifth grade about the importance and diversity of insects while providing an opportunity to directly interact with live specimens.
  - Pullman First Grade Field Trip 2024  
Taught approximately 45 first grade students about the importance and diversity of pollinators and other insects while giving them the opportunity to handle or observe a variety of live and preserved specimens.
  - Pullman Community Gardens Spring Fair 2024  
Educated community members about insect diversity and live specimens for handling
  - Annual WSU Insect Expo 2024  
Managed a table with live arthropods and carnivorous plants For approximately 350 community members to hold while learning about arthropod diversity.
  - Adam Savage Earth Day Event 2024  
Managed a table with live arthropods for community members to hold while learning about arthropod importance and diversity.
  - WSU International Center Coffee Hour 2024  
Educated approximately 25 college students about the importance and diversity of arthropods while providing and opportunity to handle or observe a wide range of live specimens.
  - Colton Elementary Steam Night 2024  
Staffed a table with live and preserved arthropods during the STEAM night and spoke with children about the diversity of arthropods
  - Palouse Clearwater Environmental Institute “Taste of PCEI” 2023  
Educated community members of all ages about arthropods while providing an opportunity to handle live specimens
  - Jefferson Elementary School 2023  
Staffed a table with live and preserved arthropods during the STEAM night and spoke with children about the diversity of arthropods
  - Franklin Elementary School 2023  
Staffed a table with live and preserved arthropods during the STEAM night and spoke with children about the diversity of arthropods
  - Kamiak Elementary School 2023  
Staffed a table with live and preserved arthropods during the STEAM night and spoke with children about the diversity of Arthropods
  - CAHNRS Fall Festival 2023

- Educated WSU students and employees about arthropods while providing an opportunity to handle live specimens
- WSU International Center Coffee Hour 2023  
Twenty five students were given the opportunity to handle a wide range of live arthropods while learning about arthropod diversity
  - Clarkston school district 2023  
Fifty 6<sup>th</sup> graders from a local school were given the opportunity to handle a wide range of live arthropods while learning about arthropod diversity
  - WSU International Center Okinawa Summer Camp Program 2023  
Sixty high schoolers visiting from Japan were given the opportunity to handle a wide range of live arthropods while learning about arthropod diversity
  - Edwin-Markham Elementary School 2023  
Spoke to ~35 second grade students about arthropod diversity and the importance of pollinators. Provided live specimens for watching and handlings
  - Nimiipuu Youth Activities Group 2023  
Educated children of a wide age range about insect diversity in our region and how to catch them
  - Pullman Community Gardens Spring Fair 2023  
Educated community members about insect diversity and live specimens for handling
  - Annual WSU Insect Expo 2023  
Managed a table with live arthropods for community members to hold while learning about arthropod diversity.
  - Palouse Discovery Science Center “Ciders and Spiders” 2022  
Educated children about spiders and other arthropods
  - Biology Graduate Student Association “Spooky Family Fun Day” 2022  
Educated community members about a variety of arthropods
  - What’s Buzzing at Koppel? 2022  
Helped children catch and identify local arthropods
  - Annual WSU Insect Expo 2022  
Staffed a booth on pollinators
  - State Legislators Industry Tour 2021  
Helped prepare for and conduct a tour of WSU honey bee research facilities
  - Palouse empire fair 2021  
Staffed honey bee booth and educated community members About beekeeping practices and the importance of honey bees
  - Insect Feed 2021  
Helped staff an event to educate the public about the potential of insects as a food source
  - Cub Scout outreach event 2021



Educated a local cub scout troop about spiders

## Media

- *Feeding Bees Through Diversity*, FFAR Insights, 2024, <https://foundationfar.org/impact/insights/feeding-bees-through-diversity/>
- *The Bees Knees*, Home and Harvest Magazine, 2022
- *New WSU honey bee lab studies bee health, nutrition and parasites*, The Spokesman Review, 2022, <https://www.spokesman.com/stories/2022/oct/30/new-wsu-honey-bee-lab-studies-bee-health-nutrition/>

## Service

- Vice President 2024-present  
WSU Entomology Graduate Student Association
- Live arthropod collection caretaker 2023-present  
WSU Entomology Graduate Student Association
- Outreach officer 2023-2024  
WSU Entomology Graduate Student Association
- Search Committee graduate student representative 2023-2024  
WSU Honey Bee and Pollinator Health Research and Extension Assistant Professor
- Student competitions planning committee 2023  
Entomological Society of America, Pacific Branch

## Research Experience

- Improving vegetable seed pollination through improved honey bee nutrition 2021-present  
PI: Brandon Hopkins  
Graduate Research Assistant: **Riley Reed**  
Designed experiment, inspected colonies, decoded waggle dances collected and analyzed data.
- The impact of abscisic acid on honey bee health and foraging behavior. 2022-present  
PI: Brandon Hopkins  
Graduate Research Assistant: **Riley Reed**  
Revised experimental design, inspected colonies, collected samples, analyzed data.
- Fungal control of small hive beetles (*Athena tumida*) 2023-present  
PI: Brandon Hopkins  
Graduate Research Assistant: **Riley Reed**  
Designed experiment, started and managed beetle colony, applied treatments, analyzed data.

- The impact of oxalic acid on *Varroa destructor* setae: 2023  
a potential mode of action  
PI: Brandon Hopkins  
Graduate Research Assistant: **Riley Reed**  
Designed experiment, managed colonies, applied treatments,  
prepared mites for scanning electron imaging.
- Using cold storage to force brood breaks in honey bees 2018  
for varroa mite control  
PI: Brandon Hopkins  
Undergraduate researcher: **Riley Reed**  
Inspected colonies, collected samples, and analyzed data

## Related Work Experience

Washington State University  
Technical assistant

2018-2021

Worked with a team to manage 200 honey bee colonies, manage a breeding program, and assist with multiple research projects.

## Related Experience

- Attended the Washington State Invasive Species Council Invasive Ant Surveillance and Identification Virtual Workshop
- Professional development through the FFAR Fellowship, 150 hours
- Completed Crucial Influence training
- Completed Crucial Conversations training
- 2023 WSU Entomology Games team captain
- Completion of the virtual Wasp ID course
- Nine years beekeeping experience, 7 years in a research setting
- Experience with R coding

## Memberships

- American Association of Professional Apiculturists 2022-current
- American Beekeeping Federation 2022-current
- Washington State Beekeepers Association 2020-current
- Entomological Society of America 2016-current
- Central States Entomological Society 2024-current