

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 Fall 2023
Teaching assistant, 23 students
I taught one lab section each week, graded all assignments, and designed some of the lecture materials.
 - Ecological and Integrated Pest Management Spring 2022
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)
 - Discover Insects: Laboratory for Non-Science Majors Fall 2021
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)

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, 2nd place 2024
 - Washington State Beekeepers Association Scholarship (\$5,000) 2023
 - Entomology Games, WSU Team, PBESA 2nd place 2023
Team: **Riley Reed**, Dowen Jocson, Stephen Onayemi, Joseph Montoya
 - WSU Department of Entomology Outstanding PhD Student of the Year (\$2,000) 2023
 - 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 Presented at the American Honey Producers Association annual conference	2025
• Nutrition, Foraging, and Pollination in Carrot Seed Presented at the American Honey Producers Association annual conference	2025
• Improving Pollination Quality in Vegetable Seed Presented at WSU Honey Bee Program Donor Appreciation day	2025
• Tools and Equipment Presented as part of a WSU virtual workshop "A Year Ahead: First Year of Beekeeping"	2025
• Beekeeping 101: What to Expect When You're Inspecting Presented as part of a WSU Student Honey Bee Veterinary Consortium meeting.	2025
• Improving Pollination Quality in Vegetable Seed (poster) Presented as part of the WSU Academic Showcase	2025
• Beekeeping 101: What to Expect When You're Inspecting Presented as part of the Sandhill Crane Festival	2025
• The Good, The Bad, And The Buzzy: The Impacts Of Pesticides On Pollinators And How To Protect Them Presented during the 2025 Spokane Ag Show	2025
• The Good, The Bad, And The Buzzy: The Impacts Of Pesticides On Pollinators And How To Protect Them Presented during the 2025 Columbia County Noxious Weed Board Annual Growers Meeting	2025
• The Impacts of Supplemental Feeding on Honey Bee Foraging Habits in Carrot Seed Presented during the American Bee Research Conference.	2025
• Improving Pollination Quality in Vegetable Seed Presented during a guest lecture for the WSU Honey Bee Biology course.	2024
• The Good, The Bad, And The Buzzy: The Impacts Of Pesticides On Pollinators And How To Protect Them Presented during the Washington State Crop Improvement Association Annual Conference.	2024
• The Impacts of Supplemental Feeding on Honey Bee Foraging Habits in Carrot Seed Presented during the Entomological Society of America annual conference.	2024
• Improving Varroa Mite Control Through Spring Cold Storage Presented at the poster session during the FFAR Fellows Danforth Plant Science Center visit.	2024
• Improving Varroa Mite Control Through Spring Cold Storage	2024

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

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

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 6th 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
WSU Entomology Graduate Student Association 2024-present
- Live arthropod collection caretaker
WSU Entomology Graduate Student Association 2023-present
- Outreach officer
WSU Entomology Graduate Student Association 2023-2024
- Search Committee graduate student representative
WSU Honey Bee and Pollinator Health Research and Extension Assistant Professor 2023-2024
- Student competitions planning committee
Entomological Society of America, Pacific Branch 2023

Research Experience

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

- The impact of oxalic acid on *Varroa destructor* setae:
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. 2023
- Using cold storage to force brood breaks in honey bees
for varroa mite control
PI: Brandon Hopkins
Undergraduate researcher: **Riley Reed**
Inspected colonies, collected samples, and analyzed data 2018

Related Work Experience

Washington State University 2018-2021
 Technical assistant
 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