**EDUCATION:**

**Washington State University, College of Agricultural, Human, and Natural Resource Sciences (CAHNRS)** Pullman, WA

Doctor of Philosophy in Entomology June 2016- May 2021

* GPA: 4.0
* Dissertation: “Evaluating the Non-consumptive Effects of Insect Predators on Aphids and Aphid-borne Viruses”

**Cornell University, College of Agriculture and Life Science**  Ithaca, NY

Bachelor of Science in Entomology, Cum Laude with Honors in Research May 2016

* GPA: Cumulative: 3.52, Major: 3.78
* GRE: Verbal Reasoning: 164, Quantitative Reasoning: 163

**RESEARCH ASSISTANTSHIPS:**

**Postdoctoral Research Scholar,** University of California – Davis (Dr. Ian Grettenberger) 2021- Present

* *A proactive approach to prepare for invasion of* Tuta absoluta *into California*

**Graduate Lab Assistant,** Washington State University (Dr. David Crowder) 2016-2021

* *Evaluating the non-consumptive effects of arthropod predators on vector behavior and disease ecology*

U**SDA Agriculture and Food Research Initiative (AFRI) EWD Predoctoral Fellowship** 2019-2021

* *Principal Investigator,* “Evaluating the non-consumptive effects of predators on aphid-borne virus spread”

**PEER-REVIEWED PUBLICATIONS:**

**B.W. Lee**, R.E. Clark, S. Basu, & D.W. Crowder, 2022, Predators affect a plant virus through density and trait-mediated indirect effects on vectors. *Food Webs*, 33, e00251.

**B.W. Lee,** S. Basu, S. Bera, C.L. Casteel, & D.W. Crowder, 2021, Responses to predation risk cues and alarm pheromones affect

plant virus transmission, *Oecologia,* 196(4), 1005-1015.

**B.W. Lee**, T. Ugine, & J. Losey, 2018, An Assessment of the Physiological Costs of Autogenous Defenses in Native and Introduced

Lady Beetles, *Environmental Entomology,* 47(4), 1030-1038.

S. Basu, **B.W. Lee**, R.E. Clark, S. Bera, C.L. Casteel, & D.W. Crowder, 2022, Legume plant defenses and nutrients mediate indirect interactions between soil rhizobia and chewing herbivores. *Basic and Applied Ecology*. 64. 57-67

O.M. Smith, D.M. Jocson, **B.W.** Lee, R.J. Orpet, ... & Northfield, T. D. 2022. Identifying Farming Strategies Associated With Achieving Global Agricultural Sustainability. *Frontiers in Sustainable Food Systems*, 259.

J. Kansman, S. Basu, C.L. Casteel, D. Crowder, **B.W. Lee**, C.T. Nihranz, D.L. Finke, 2022, Plant water stress reduces aphid performance: Exploring mechanisms driven by water stress intensity, *Frontiers in Ecology and Evolution*, Accepted

R. Clark, S. Basu, **B.W. Lee,** & D. Crowder, 2019, Tri-trophic interactions mediate the spread of a vector-borne plant pathogen,

*Ecology, 100 (11),* e02879.

S. Basu, R.E. Clark, Z. Fu, **B.W. Lee**, & D.W. Crowder 2021, Insect alarm pheromones in response to predators: ecological trade-offs

and molecular mechanisms, *Insect Biochemistry and Molecular Physiology,* 10.1016/j.ibmb.2020.103514.

C. Parker, L. Bernaola, **B. Lee,** … R. Skinner, 2019, Entomology in the 21st Century: Tackling Insect Invasions, Promoting

Advancements in Technology, and Using Effective Science Communication, *Journal of Insect Science,*

19(4), 1–11

K.R. Holt, L. Bernaola, … **B.W. Lee** … 2020, Synergisms in Science: Climate Change and Integrated Pest Management Through the

Lens of Communication—2019 Student Debates, *Journal of Insect Science,* 20 (5), 31, 1-11

**EXTENSION:**

University of California Cooperative Extension Vegetable Crops Newsletter serving Colusa, Sutter and Yuba Counties Aug/Sept 2022

* *The South American Tomato Leafminer Tuta absoluta: Threats of Invasion and Future Plans for Control*

Sacramento Valley Processing Tomato Production Meeting (Invited) February 2022

* *Proactive IPM strategies for the invasion of Tomato Leafminer* Tuta absoluta

**GRANT SUPPORT AND AWARDS:**

WSU CSANR Lawrence Hickman Endowed Graduate Fellowship in Sustainable Agriculture ($1000) 2021

Outstanding PhD Student of the Year, WSU Department of Entomology ($2000) 2019

Achievement Rewards for College Scientists Fellowship ($22,500) 2016-2019

Cornell University College of Agriculture and Life Sciences Hatch Grant ($1000) 2015-2016

Robert F. and Mary Lou Harwood Graduate Fellowship ($600) 2019

**PROFESSIONAL SERVICE AND LEADERSHIP:**

**Entomological Society of America (ESA)**

***ESA National Conference 2020***

* Organizer of “Pathogen-mediated Ecological Interactions: From Microbes to Complex Ecosystems” Section

symposium and co-moderator of panel discussion.

***Science Policy Fellowship Program*** 2019

* Finalist

***ESA Student Debate Competition*** 2017-2019

* Member of 2017 WSU Team debating “What is the single greatest threat to arthropod biodiversity”,

finished first place ($500), co-authored article published in *American Entomologist* (Spring 2019)

* Captain of 2018 WSU Team debating “What is the most harmful invasive insect species in the world?”,

finished first place ($500), co-authored manuscript summarizing debate in revision to *Journal of Insect Science*

* Captain of 2019 WSU Team debating “What is the most influential impact of climate change on Entomology?”,

winner of section ($100), co-authoring manuscript in *Annals of the Entomological Society of America*

***Pacific Branch 2018 Conference Planning Committee***Reno, NV

* Organized the Student and Early Career Professional Employment Fair

**WSU Graduate and Professional Student Science Policy Initiative (GPSSPI)** Pullman, WA

***President*** 2019-2020

***Secretary, Founding Member***2018-2019

* Connect graduate and professional student science advocates with policy makers and academics
* Host elected officials, academics, and government workers to discuss policy careers and research funding opportunities
* Received GPSA Affiliate Funding for 2019-2020 ($2500)

**WSU Entomology Graduate Student Association (EGSA)** Pullman, WA

***Vice President, Faculty Liaison***2017- 2018, Spring 2019-Present

* Organize and oversee EGSA committees and represent students in faculty meetings and events

**WSU Graduate and Professional Student Association (GPSA)** Pullman, WA

***Senator***2019-2020

* Serve on communications committee and represent WSU Entomology Graduate students in GPSA decision-making

**PRESENTATIONS:**

UC Davis 7th Annual Postdoctoral Research Symposium March 2022

* *A Proactive Approach to Prepare for Invasion of South American Tomato Leafminer*, Tuta absoluta

UC Davis Animal Behavior Graduate Group Seminar (Invited) January 2022

* *Insect Predators Drive Vector-borne Pathogen Dynamics through Feeding and Fear*

WSU Doctoral Examination Seminar

* *Evaluating the non-consumptive effects of insect predators on aphids and aphid-borne virus transmission* April 2021

WSU R Working Group (Invited) December 2019

* *Overview of Piecewise Structural Equation Modeling*

Entomological Society of America Meeting, 10-minute Paper Presentations

* *Predation Risk Cues Affect Pea Aphid Acquisition and Transmission of a Plant Virus* (First Place) November 2019
* *Evaluating the Non-consumptive effects of Predators on aphid-borne viruses*  November 2018

WSU CAHNRS 3-minute Thesis Competition March 2019

* Presented *“Insect Predators: A Solution or Threat to Plant Health in Agroecosystems”*,

placed first in Entomology department and second in the CAHNRS competitions ($500, <https://youtu.be/qtrn1-C1CGk>)

Washington State University Undergraduate Biology Club (Invited) February 2018

* *Identifying the Non-consumptive Effects of Predators on the Spread of Aphid-borne Viruses*

Washington State University Entomology Department December 2017

* *PhD Proposal Seminar*

**WORK EXPERIENCE:**

**Washington State University**

***CRLA Certified Tutor*** Spring 2017

* Tutored student-athletes in Microbiology and Entomology courses
* Developed learning activities, study programs, and review strategies for high-risk students

**Cornell University** Ithaca, NY

***Laboratory of Associate Professor Dr. John Losey***  2013-2016

* Research Assistant, maintained insect colonies for research projects, assisted researchers in conducting experiments, represented the NSF funded citizen-science “Lost Ladybug Project” at teaching and outreach events

***Laboratory of Dr. Linda Rayor*** 2013-2015

* Research Assistant and Animal Caretaker, maintained colonies of arthropods used for research and teaching, assisted with graduate student research projects

**TEACHING AND MENTORSHIP:**

**Washington State University** Pullman, WA

***Reproducible Research Techniques with R*** November 2020

* Assistant Instructor for 5-day graduate-level workshop covering data storage, manipulation, visualization,

and modeling techniques using a variety of R packages.

***Teaching Assistant***

* AFS 101: Introduction to Agricultural and Food Systems Fall 2016
* ENTOM 102: Insects, Infection, and Illness: Medical Entomology for Non-science Majors Spring 2018

**Northwest Science Association Annual Meeting**, *Assistant Instructor*  March 2019

* Cotaught “Intro to Manipulating and Visualizing Data in R” lesson to conference attendees at

Lewis and Clark State College in Lewiston, ID

***Regional Approaches to Climate Change (REACCH) Summer Undergraduate Internship Program*** Summer 2017

* Mentored Undergraduate Kristin Nesbitt, “Viruses and Aphids”

**OUTREACH EXPERIENCE:**

**Science Talk 2019 Annual Conference,** *Poster Presentation* April 2019

* Presented poster titled, “*Science Advocacy in Rural Washington”,* summarizing WSU GPSSPI events with

invited academics and elected state officials, and discussing strategies for communicating research to legislators

**Naturalist Outreach Program:** 2015-2016

* Wrote, produced, and co-starred in a 10-minute informational YouTube video, “Arthropod Predators: Nature’s Defenders”, aimed at educating children on the value of predator species and biological control (<https://youtu.be/CgMo-DWc8xU>)
* Developed and conducted educational presentations for 2nd through 6th grade students on biological

and ecological principles, focused on the use of biological control in agriculture

***Entomology Graduate Student Association (EGSA), Outreach Speaker*** Pullman, WA

* WSU Entomology Department Insect Expo April 2017-2019
* Boy Scouts of America, Insect Day Speaker Summer 2017
* Creatures of the Night (Palouse Clearwater Environmental Institute, Moscow, ID) October 2017

**ACTIVITIES AND SKILLS:**

**Skills:** Proficient in R Programming and Statistics, Experienced Public Speaker, Experienced Teaching Assistant and Tutor

**Recreational:** Fundraising, Cooking, Fermentation Science, Science Advocacy and Activism