

Jessica E Brown

Department of Entomology
Huck Institutes of the Life Sciences
Pennsylvania State University
Office: 006A Chemical Ecology Laboratory
University Park, PA 16802
jmb7284@psu.edu

Education and Research

- 2019-Present The Pennsylvania State University, PhD Intercollege Graduate Degree Program in Ecology.
PI: Dr. Erika Machtinger
Expected graduation: May 2024
- 2015-2019 The Pennsylvania State University, B.S. Wildlife and Fisheries Science.
GPA 3.78

Relevant coursework:

- | | | |
|-------------------------------------|----------------------------|--------------------------|
| ○ Technical Writing | ○ Wildlife Measurements | ○ Ecology |
| ○ Formal Public Speaking | ○ Wildlife Management | ○ Mammalogy |
| ○ ESRI ArcMap | ○ Ichthyology | ○ Vertebrate dissections |
| ○ Forest Monitoring & Data Analysis | ○ Natural resources policy | ○ Dendrology |

Grants

- 2019 Grant-in-Aid of Research, American Society of Mammalogists
Tick choice and host behavior as critical drivers behind tick burdens on small mammals

Awards and Honors

- 2022 MUVE Student Travel Award, Entomological Society of America
- 2022 Second Place, Student Poster Competition, Stone Valley Forest Expo 2022
- 2021 Outstanding Student Presentation Award, Acarological Society of America Annual Meeting
- 2021 Honorable Mention, NSF Graduate Research Fellowship Program
- 2020 Second Place, Student 10-min Paper Competition, Entomological Society of America Annual Meeting
- 2019 Second Place, Student Poster Competition, Entomological Society of America Annual Meeting

- 2019 Graduate Student Travel Award, Pennsylvania State University College of Agricultural Sciences
- 2019 Fund for Excellence in Graduate Recruitment Scholarship, Pennsylvania State University College of Agricultural Sciences
- 2019 Boyd E Wolff Gotcha Fund in International Agriculture Scholarship Recipient, Pennsylvania State University
- 2019 Frank Felbaum Scholarship Recipient, Pennsylvania Chapter of The Wildlife Society
- 2019 Wildlife for Everyone Foundation Scholarship Recipient
- 2018-2019 Robert T. Billin Memorial Scholarship Recipient, Pennsylvania State University

Publications

- Brown, J. E.**, T. M. Miller, E. T. Machtinger. 2020. Tick tubes reduce blacklegged tick burdens on white-footed mice in Pennsylvania, USA. *Journal of Applied Entomology*. 144:6. 542-545.
- Machtinger, E. T., **J. E. Brown**, and E. R. Burgess, IV. 2021. Landscape distribution and abundance of animal-associated adult filth flies on commercial swine facilities in North Carolina, US. *Medical and Veterinary Entomology*. 35: 633-645.
- Fedele, K. J., K. C. Poh, **J. E. Brown**, A. Jones, L. A. Durden, H. S. Tiffin, A. Pagac, A.Y. Li, E. T. Machtinger. 2020. Host distribution and pathogen infection of fleas (Siphonaptera) recovered from small mammals in Pennsylvania. *Journal of Vector Ecology*. 45:1. 32-44.
- Machtinger, E. T., H. R. Springer, **J. E. Brown**, P. Olafson. 2021. Sudden mortality in captive white-tailed deer (*Odocoileus virginianus*) with atypical infestation of winter tick (*Dermacentor albipictus*). *Journal of Medical Entomology*. 58:4. 1962-1965.
- Green, K. D., H. S. Tiffin, **J. E. Brown**, E. R. Burgess IV, and E. T. Machtinger. 2022. Evaluation of tick control tube month of placement and modifications to increase visitation by small mammals. *Ecosphere*. 13:7. e4155.
- Machtinger, E. T., E. R. Burgess IV, and **J. E. Brown**. 2022. Association of biting flies with swine production facilities in the Southeastern United States. *Journal of Pest Science*. *Submitted*.
- Brown, J. E.**, K. C. Poh, H. S. Tiffin, J. R. Evans, A. Pagac, T. M. Miller, B. Herrin, C. Sutherland, and E. T. Machtinger. Differential tick burdens on sympatric rodent species in Pennsylvania, USA. *In preparation*.

Instruction

- 2022 **Guest lecturer.** Entomology 457: Principles of Integrated Pest Management, Penn State.
Developed and taught one lecture on integrated vector management.
- 2021 **Guest lecturer.** Wildlife and Fisheries Science 447: Wildlife Management, Penn State.
Developed and taught two lectures on understanding the basics of wildlife disease.
- 2021 **Guest lecturer/facilitator.** Entomology 216N: Plagues through the Ages, Penn State.
Lectured and led four discussions with undergraduates on the history of plagues and their impact on today's world.
- 2019 **Mentor.** Taught field methods and animal handling to 8 undergraduate students

Presentations

- Brown, J. E.,** K. C. Poh, and E. T. Machtinger. April 2022. Tick Safe: Surveillance on university-affiliated properties in central Pennsylvania. [Student Poster Competition]. Stone Valley Forest Expo. April 2022. State College, PA.
- Brown, J. E.,** J.R. Evans, K. C. Poh, A. Maleki, and E. T. Machtinger. April 2022. Investigating behavioral drivers of differential blacklegged tick (*Ixodes scapularis*) burdens on sympatric rodent species. [Student Oral Presentation Competition]. Entomological Society of America, Eastern Branch Annual Meeting. Philadelphia, PA.
- Brown, J. E.** November 2021. Investigating behavioral drivers of differential blacklegged tick (*Ixodes scapularis*) burdens on two sympatric rodent species. [Student Oral Presentation Competition]. Acarological Society of America Annual Meeting. Virtual.
- Brown, J. E.,** J. R. Evans, and K. C. Poh. April 2021. Parasite Pu-Pu Platter: A sampling of PA's Peculiar Pests. [Invited Talk]. "Science on Tap" Event, Penn State Science Policy Society. State College, PA.
- Brown, J. E.,** T.M. Miller, and E. T. Machtinger. November 2020. Tick tubes reduce blacklegged tick burdens on white-footed mice in Pennsylvania, USA. [Student 10-min Paper Competition]. Entomological Society of America Annual Meeting 2020. Virtual.
- Brown J. E.** October 2020. Differential tick burdens on small mammal host species in Central Pennsylvania. [Conference Presentation]. Pennsylvania Chapter, The Wildlife Society Annual Meeting 2020. Virtual.

Brown, J. E. November 2019. Differential tick burdens on small mammal host species in Central Pennsylvania. [Student Poster Competition]. Entomological Society of America Annual Meeting 2019. St. Louis, MO.

Other Publications

Poh, K.C., H. S. Tiffin, J. R. Evans, **J. E. Brown**, M. J. Skvarla, and E. T. Machtinger. 2021. "Tales From the Field: Training Undergraduate Researchers for Fieldwork." American Entomologist *Field and Bench* Column. 67:1. 26-30.

Brown, J. E., H. R. Springer, and E. T. Machtinger. 2021. "Winter Tick, *Dermacentor albipictus*, and its potential impact on white-tailed deer farms." Penn State Extension.
<https://tinyurl.com/39nv5vps>

Service and Outreach

2019-Present	Vector-Borne Disease Team Member Penn State Extension
2022	Outreach Educator , Tick-borne Disease Prevention. Ag Progress Days.
2022	Webinar Presenter , "Tick Series: Tick Prevention on Companion Animals" Penn State Extension
2021	Webinar Presenter , "Tick Behavior and Protection from Ticks." Pennsylvania Farm Show 2021.
2021	Panelist , "Dismiss the Myths: Common myths about ticks, mosquitoes, and other vectors." Pennsylvania Farm Show 2021.
2021	Symposium Co-organizer , "Take a Walk on the Wild Side: Exploring the Intersection of Wildlife and Entomology." Entomological Society of America, Eastern Branch. 2021 Virtual Meeting.
2020	Webinar Presenter , "Tick Series: Ecology and How to Approach Control" and "Tick Series: Tick Protection Around the Home" Penn State Extension
2020	Webinar Facilitator , "Tick Series: Protecting yourself from Tick Bites" and "Tick Series: Protecting your Horses from Tick Bites" Penn State Extension
2020	Outreach Educator , Tick-borne Disease Prevention. Pennsylvania Farm Show
2019	Workshop Assistant , Vector-borne Disease "Train the Trainer" Workshop.

Penn State Extension

2019 **Outreach Educator**, Great Insect Fair. Penn State Department of Entomology

Leadership

2022 **Vice President**, Penn State Ecology Graduate Student Organization

2021 **Secretary**, Penn State Ecology Graduate Student Organization

2018-2019 **Treasurer, Web Team Coordinator**, Pennsylvania State University Student Chapter of The Wildlife Society

2017- 2018 **Student Transition Leader**, Pennsylvania State University Student Orientation and Transition Programs

2016- 2017 **President, Vice President**, Pennsylvania State University Harrisburg Equestrian Team

Employment History

2018-2019 **Laboratory Research Technician**
Veterinary Entomology Laboratory—University Park, PA
Responsibilities include: Maintaining insect colonies, conducting tick repellency bioassays, providing field and lab assistance to other students, assisting with data organization and analysis of data, mentoring incoming undergraduate research assistants.

Professional Society Membership

2018 - Present The Wildlife Society
2019 – Present The Entomological Society of America
2021 – Present Acarological Society of America