**Emily M. Russavage**

Department of Entomology | Texas A&M University

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**EDUCATION**

**Ph.D. in Entomology**, Texas A&M University, College Station, TX

Dissertation: Indirect Plant Defense Against an Insect Herbivore of Sorghum

Advisor: Dr. Micky D. Eubanks

Cumulative GPA: 4.0

Expected graduation date: May 2024

**B.S. in Biology**, Wilkes University, Wilkes-Barre, PA

Capstone project: Effects of Drought Stress on an Arctic Sedge, *Eriophorum vaginatum*

Advisors: Dr. Jeffrey Stratford and Dr. Ned Fetcher

Cumulative GPA: 3.7

Degree conferred: December 2019

**RESEARCH EXPERIENCE**

**Graduate Research Assistant**  May 2020-Present

*Department of Entomology, Texas A&M University*

Supervisor: Dr. Micky D. Eubanks

**Research Technician** January 2020-April 2020

*Department of Biology, Wilkes University*

Supervisor: Dr. Michael Steele

**Research Intern** June 2019-August 2019

*Environmental Protection Division, Brookhaven National Laboratory*

Supervisor: Dr. Kathy Schwager

**Research Technician** May 2018-August 2018

*Department of Biology and Institute for the Environment, Wilkes University*

Supervisors: Drs. Jeffrey Stratford and Ned Fetcher

**Research Technician** May 2017-August 2017

*Department of Biology and Institute for the Environment, Wilkes University*

Supervisors: Drs. Jeffrey Stratford and Ned Fetcher

**RESEARCH GRANTS (*Conceived and drafted research in the following grants*)**

**USDA Southern SARE Grant ($16,116)**  2023

*“Plants attracting killers: Using resistance traits that attract insect predators to suppress sorghum aphids”*

**Texas A&M Dissertation Fellowship ($20,000)**  2023

**\*Declined** due to prior commitments

*“Plants can cry for help: How plant volatiles can help us suppress insect pests”*

**Texas Ecological Laboratory Research Grant ($4,311)** 2020-2022

*“Quantification of herbivore-induced plant volatiles from Johnsongrass and their effect on predator behavior”*

**NSF Graduate Research Fellowship ($138,000)** 2020-2023

*“Indirect plant defense against herbivores: Disentangling the causes and consequences of variation in herbivore-induced volatile among Solidago altissima genotypes”*

**TEACHING EXPERIENCE**

Teaching Assistant

Fall 2023 General Entomology, Texas A&M University

Fall 2023 Insect Physiology, Texas A&M University

Fall 2019 Principles of Modern Biology I, Wilkes University

Spring 2018 Cellular and Molecular Biology, Wilkes University

Fall 2018 Population and Evolutionary Biology, Wilkes University

Spring 2018 Principles of Modern Biology II, Wilkes University

Fall 2017 Principles of Modern Biology I, Wilkes University

Invited Guest Lecturer

Fall 2023 General Entomology, Texas A&M University

Fall 2023 Insect Physiology, Texas A&M University

Fall 2023 Senior Research (Undergraduate Course), Wilkes University

Spring 2023 Field Crops (Undergraduate Course), Texas A&M University

Fall 2022 Senior Research (Undergraduate Course), Wilkes University

**STUDENT RESEARCH MENTORSHIP**

Kassandra Gonzalez 2023

Research and Education Experience for Undergraduate (REEU) Student

USDA NIFA-funded program for students from Hispanic Serving Institutions

Poster Presentation, Texas A&M University Undergraduate Research Symposium

Mark Santana 2023

Research and Education Experience for Undergraduate (REEU) Student

USDA NIFA-funded program for students from Hispanic Serving Institutions

Poster Presentation, Texas A&M University Undergraduate Research Symposium

Madisyn Mahubani, Nash Campbell, and Yahel Acosta 2023

Research interns assisting on E. Russavage field research

Thea Alonzo 2023

Research intern working on independent research project about multiple herbivory

1st place Oral Presentation, Texas A&M University Undergraduate Research Symposium

Jennifer Swinney and Andrew Stoffels 2022

Research interns assisting on E. Russavage field research

Iris Tsing 2021

Research intern assisting on E. Russavage field and laboratory research

Miles Arceneaux 2020

Undergraduate taking research credit hours

**PEER-REVIEWED PUBLICATIONS (Available upon request)**

3. **E. Russavage,** D.L. Kerns, A. Szczepaniec, W.L. Rooney, A.M. Helms, and M.D. Eubanks. *In prep.* Genetic variation in sorghum herbivore-induced plant volatiles leads to differential attraction of natural enemies and pest suppression in the field. *To be submitted to Oecologia.*

2. **E. Russavage**, J.A. Hewlett, A. Szczepaniec, W.L. Rooney, A.M. Helms, and M.D. Eubanks. *In prep.* Variation in herbivore-induced plant volatiles among sorghum cultivars and differential attraction of an aphid parasitoid. *To be submitted to the Journal of Chemical Ecology*.

1. **E. Russavage**, J. Thiele, M. Dovciak, J. Lumbsden, T. Green, and K. Schwager. (2021). Characterizing canopy openness in open forests: Spherical densiometer and canopy photography are equivalent but less sensitive than direct measurements of solar radiation. *Journal of Forestry.* doi:10.1093/jofore/fvaa052

**PRESENTATIONS**

Invited Oral Presentation

2023, April Entomological Society of America Joint North Central and Southwestern Branch Meeting, Oklahoma City, OK. Presented “*Sorghum plant volatiles: Using odor cues to attract natural enemies and manage sugarcane aphids*” for section symposium.

Oral Presentations

2023, August Texas A&M Department of Entomology Graduate Student Forum, College Station, TX. Presented “*Plants attracting killers: Using indirect plant defenses to suppress an invasive aphid pest*”

2022, November Entomological Society of America Annual Conference, Vancouver, BC, Canada. Presented “*Using herbivore-induced plant volatiles to improve sorghum aphid management*”

2022, August Texas A&M Department of Entomology Graduate Student Forum, College Station, TX. Presented “*Using herbivore-induced plant volatiles to improve sorghum aphid management*”

2022, July Texas A&M University Entomology Graduate Student Organization’s UpGoer5 Competition, College Station, TX. Presented “*How we fight bad little sucking guys with green living thing smells*”

2022, April Entomological Society of America Southwestern Branch Meeting, Fort Worth, TX. Presented “*The correlation between direct and indirect defenses in sorghum: The potential for enhanced protection against an invasive aphid pest*”

2021, November Entomological Society of America Annual Conference, Denver, CO. Presented “*Direct and indirect plant defenses: Defense against sugarcane aphids in sorghum?*”

2021, August Texas A&M Department of Entomology Graduate Student Forum, College Station, TX. Presented “*Direct and indirect plant defenses: Defense against sugarcane aphids in sorghum?*”

2019, September Northeastern Ecology Conference, Lake Ariel, PA. Presented “*Comparison of three canopy cover estimation techniques in Long Island Central Pine Barrens*”

Poster Presentations

2023, February Gordon Conference for Plant-Herbivore Interactions, Ventura, CA. Presented “*Using herbivore-induced plant volatiles to improve sorghum aphid management*”

2023, February Plant Protection Conference, College Station, TX. Presented “*Using herbivore-induced plant volatiles to improve sorghum aphid management*”

2021, December Plant Protection Conference, College Station, TX. Presented “*The correlation between direct and indirect defenses in sorghum: Protection against an invasive aphid pest?”*

2021, January Texas A&M University Visiting Students Weekend, College Station, TX. Presented “*Direct and indirect plant defenses: Defense against sugarcane aphids in sorghum?*”

2020, November Entomological Society of America Annual Conference, Virtual Meeting. Presented “*Indirect defense in sorghum: Attraction of natural enemies to aphid-infested plants*”

2019, August Brookhaven National Laboratory Research Intern Symposium, Upton, NY.

Presented “*Comparison of three canopy cover estimation techniques in Long Island Central Pine Barrens*”

2019, March Tri-Beta Honors Society, Northeast District Meeting, Bloomsburg, PA. Presented “*Predation rates on model caterpillars are higher in suburbs than in the city or country*”

2018, July Association of Field Ornithologists and Wilson Ornithological Society Meeting, Chattanooga, TN. Presented “*Predation rates on model caterpillars are higher in suburbs than in the city or country*”

**HONORS AND AWARDS**

2023 3rd place oral presentation in 10-Minute Student Paper Competition, Texas A&M Department of Entomology Graduate Student Forum

2023 Outstanding Undergraduate Mentor Award, Texas A&M University’s Aggie Women in Entomology and Undergraduate Student Organization Mentorship Symposium

2023 Outstanding Ph.D. Student of the Year Award, Texas A&M University Department of Entomology

2022 Exceptional Dedication Award, Texas A&M University Entomology Graduate Student Organization

2022 1st place oral presentation in 10-Minute Student Paper Competition, Entomological Society of America Annual Conference

2022 2nd place oral presentation in 10-Minute Student Paper Competition, Texas A&M Department of Entomology Graduate Student Forum

2022 1st place oral presentation in Texas A&M University Entomology Graduate Student Organization’s UpGoer5 Competition

2022 3rd place oral presentation in 10-Minute Student Paper Competition, Entomological Society of American Southwestern Branch Meeting

2021 2nd place oral presentation in 10-Minute Student Paper Competition, Entomological Society of America Annual Conference

2021 Texas A&M University Department of Entomology Travel Grant **($600)**

2020 Rosenthal Award for Outstanding Student in Organismal Biology, Wilkes University

2018 Alfred Franklin D’Anca Scholarship, Wilkes University **($1,200)**

2018 Wilkes University Mentoring Grant **($1,000)**

2016 Wilkes University Presidential Scholarship **($17,000)**

**PROFESSIONAL SERVICE AND ASSOCIATIONS**

2023Symposium co-organizer, Entomological Society of America Annual Conference in National Harbor, MD (*Bodyguards for Plants: Integrating Indirect Defense into Plant Breeding and Pest Management*)

2023 Aggie Research Program for mentorship and leadership of undergraduates interested in research

2022 Entomological Society of America Southwestern Branch Student Affairs Committee Member

2022 Entomological Society of America Southwestern Branch Judge for Insect Photo Salon Competition

2022 Texas A&M University Department of Entomology search committee for new faculty

2020-Present Entomological Society of America Member

2017-2019 Wilkes University’s WEBS (Women Empowered by Science) mentor for middle and high school girls interested in STEM