

James Terrance Brown

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University of Florida, Entomology and Nematology
Steinmetz Hall, 1881 Natural Area Dr.
Gainesville, Florida 32608

Education

Doctor of Philosophy | Entomology January 2020 - Present
University of Florida
Advisor: Dr. Oscar E. Liburd

Master of Science | Entomology June 2016 - May 2019
University of Florida
Thesis title: The association between lipid stores and diapause genotype among European corn borers, *Ostrinia nubilalis* (Lepidoptera: Crambidae)
Advisor: Daniel A. Hahn

Bachelor of Science | Biological Sciences August 2008 - December 2010
University of Maryland College Park
Major: Cell biology and Molecular Genetics

Experience

USDA Pathways Student Intern June 2016 - December 2019
USDA Agricultural Research Service, Chemistry Research Unit
Gainesville, FL.

While earning a Master of Science degree in Entomology and Nematology as a Pathways Student Intern I assisted in the development of lab skills, safety, and experiment protocol training of four undergraduate volunteers. In collaboration with the Entomology and Nematology department's Outreach program, I participated and support for community outreach events. During the last year of my graduate program, I was invited to present my graduate research at the 2018 American Chemical Society AGRO division's Agricultural Based Natural Products as Biorational Pesticides symposia.

After graduating, my position as a research intern focused on using gas chromatography to characterize volatile organic compounds produced by blueberry and strawberry associated microbes to determine their role in altering the behavior responses of spotted-wing drosophila (*Drosophila suzukii* (Matsumura)). The long-term goal of this project is to identify the compounds

or blend of compound produced by the microbes repel or attract the flies and use that blend of chemicals to manipulate fly behavior away from the fruit. Providing growers with an addition tool to manage these fly pests.

Biological Science Technician

October 2011 - June 2016

USDA Agricultural Research Service, Insect Behavior and Biological Control Unit
Gainesville, FL.

My position in the Insect Behavior and Biological Control Unit focused on sorting and identifying Lepidoptera and maintaining an archive of lepidopteran insect pest migration patterns across the United States using a web-based repository (<http://www.pestwatch.psu.edu/>). In field experiments, I helped diagnose pest insect presence by scouting for plant disease and plant damage. In the lab, I participated in the development of a biological assay to test the mortality rate and fecundity of adult *Trichogramma* sp. when provided nectar from Florida wildflower species.

Special Volunteer

June 2011 - August 2011

NIH National Institute of Allergy and Infectious Disease
Rockville, MD.

The aim of Dr. Leppla's lab was to exploit the pathogenic mechanisms of the Anthrax virus to target cancer cells while adhering to BSL-2 and BSL-3 safety guidelines. As a Special Volunteer and a member of Dr. Leppla's lab I made reagent solutions, passaged cell cultures, and maintained the DNA library by conducting cell transformations and proliferations.

Air Defense C41 Tactical Operations Sergeant

February 2002 - February 2008

US Army National Guard
West Palm Beach, FL.

The role of a Sergeant in the US Army is to lead and supervise lower enlisted personnel by example I supervised the daily activities of my squad of five soldiers within my platoon. I was selected as a Mission Readiness Representative and deployed to the training site to prepare soldiers for live missions and to conduct procedural drills. I created and revised mission readiness trainings and reported progress to validating officials. In line with my duties as Air Defense Operator, I inventoried and destroyed classified material, performed security functions, detected and identified aircraft, and distributed operation information to other military branches.

Peer-Reviewed Publications

Meagher, R., K. Watrous, S. Fleischer, R. Nagoshi, **J. Brown**, K. Bowers, N. Miller, S. Hight, J. Legaspi, and J. Westbrook. 2019. **Documenting potential Sunn Hemp (*Crotalaria juncea* L.) (Fabaceae) pollinators in Florida.** Environmental Entomology. doi:<https://doi.org/10.1093/ee/nvy190>

Meagher, R., R. Nagoshi, **J. Brown**, S. Fleischer, J. Westbrook, and C. Chase. 2017. **Flowering of the Cover Crop Sunn Hemp, *Crotalaria juncea* L.** HortScience. 52: 986-990. doi:<https://doi.org/10.21273/HORTSCI11981-17>

Rabinowitz, R., A. Rowley, **J. Brown**, R. Meagher, B. Rathinasabapathi. 2016. **Feeding deterrence and inhibitory effects of bee balm (*Monarda didyma*) leaves on fall armyworm.** Proceedings Florida State Horticultural Science. 128:162-165. doi:<https://journals.flvc.org/fshs/article/view/105959>

Invited Speaker

Brown, J. 2020. C.U.R.E. Course Career Panel Discussion. Zoom, Gainesville, FL.

Brown, J., D. Hahn, R. Meagher, J. Beck. 2018. **The relationship between diapause preparation and diapause length: A possible target for European corn borer management.** American Chemical Society Conference AGRO Division. Boston, MA.

Recognition

ENSO Student Travel Grant, \$500	June 2018
USDA Pathways Student Internship	June 2016

Professional Membership

Board of Directors, Pride Community Center of North Central Florida	2019 - Present
Member, American Chemical Society	2018 – Present
Member, Entomological Society of America	2016 - Present

Skills

- Analytical Chemistry (GC-MS, LC-ELSD, GC-FID instrument maintenance, operation, and data analysis)

- Lipid Quantification (optimization and validation of fatty acid extractions and analysis)
- Insect Bioassays (husbandry, longevity assays, and parasitism assays using lepidopterans, dipterans, and hymenopterans)