Curriculum Vitae

Rebecca Keim

Education:

May 2019	Biology (Mathematics minor) BS	University of Houston The Honors College
2024 *(anticipated)*	Entomology PhD	University of California, Riverside

Research Experience:

Graduate Student Researcher July 2019 - Present

Department of Entomology, University of California Riverside, Riverside, California

Faculty Advisor: Richard Redak

The ultimate goal of my current research is to determine the ecological impact of *Pogonomyrmex rugosus* in endangered coastal sage scrub in the context of invasive plants. This involves determining how *P. rugosus* fitness is impacted by these plants, as well as how *P. rugosus* helps disperse them. This work will be synthesized into an ecological restoration plan.

Undergraduate Research Assistant Aug. 2016 - Nov. 2016

Department of Biology and Biochemistry, University of Houston, Houston, Texas

PhD Student: Tess Domas

I assisted Tess Doumas, a PhD student in the lab of Dr. Diane Wiernasz, with fieldwork. Her study addressed whether male buckeye butterflies maintain site fidelity and if prefered sites contribute to mating success. I used focal animal sampling to quantify the time budget and spatial use of the males.

Undergraduate Research Assistant Dec. 2016 - May 2019

Department of Biology and Biochemistry, University of Houston, Houston, Texas

PI: W. A. Frankino

I contributed to the development and execution of a large scale experiment that seeks to identify the genes underlying the expression and evolution of variation in morphological scaling relationships within *Drosophila melanogaster* lines. This projects goal is to determine the cryptic, individual morphological scaling relationships and the genetic loci responsible.

Undergraduate Researcher May 2017 - May 2019

Department of Biology and Biochemistry, University of Houston, Houston, Texas

Faculty Advisor: W. A. Frankino

The ultimate goal of this project was to examine the morphological scaling relationships of two different species of mosquitoes: *Aedes triseriatus* and *Aedes albopictus*. First I manipulated the nutrition of mosquito larvae cohorts to produce

a range of adult body sizes, from which we will compare body and wing sizes.

Galapagos Research Experience Summer 2016, Summer 2018

University of San Francisco in Quito, San Cristobal, Galapagos, Ecuador

Summer 2018

As a peer mentor, I was a teaching assistant for the preparatory Galapagos Evolving course that accompanied the study abroad trip. I also coordinated social events that occurred outside of the course. While in the Galapagos, I provided guidance to the students in both navigating a foreign country and the research. I coordinated their work with the course instructors, while participating in the work itself:

- Contributed to a database of sea turtles using facial recognition software, from which we identified and documented recurring sea turtle individuals and their locations
- Assisted with collection of water from various sites on San Cristobal and then tested the quality
- Completed beach surveys to determine the baseline data of microplastic prevalence
- Trawled for and analyzed microplastics found in local bays

Summer 2016

As a student in the research-based study abroad group I assisted with several projects:

- Contributed to a database of sea turtles using facial recognition software
- Using the database we then determined the frequently visited foraging sites of individual sea turtles
- Quantified the effect of water temperature on sea urchin densities in shallow bays, and determined the algae composition of their habitats

Poster Presentation

Keim, R., Frankino, W. A., (2017, October). *Identifying the Terminal Growth Phase in Mosquitoes*. UH Undergraduate Research Day, Houston, TX.

Honors and Awards:

NSM Leadership Abroad Scholarship, 2018
Lerner, Jane & Ronald Endowment Scholarship, 2018 (UH Honors College Study Abroad)
Summer Undergraduate Research Fellowship, 2017
International Education Fee Scholarship, 2016
Alfred and Bernice Hibbler Scholarship, 2016 (UH Honors College Study Abroad)
University of Houston Academic Excellence Scholarship, 2015
Morton Lodge No. 72 AF & AM Academic Excellence Scholarship, 2015
Mirabeau B. Lamar Award of Excellence, 2015