

Chloe Jelley

Ph.D. Student - Department of [Entomology](#), Cornell University - [Moreau Lab](#)

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Research Interests

Trait Diversity – Behavior – Phylogenetics – Outreach– Collections Based Research

Education

Ph.D. Entomology

Cornell University, Ithaca, NY

Expected Graduation: 2025

Advised by Dr. Corrie Moreau

B.A. Biology, Minor: History

May 2020

New Jersey Institute of Technology, Newark, NJ

Advised by Dr. Phillip Barden

Skills

Technical: Insect Collection, Specimen Preparation, & Identification – Collection Databasing – Collection Digitization – R – Phylogenetic Comparative Methods

Strategic: Scientific outreach – Leadership – Presentation – Scientific Writing – Teaching

Publications

Jelley, C. and Barden, P., 2021. Vision-Linked Traits Associated With Antenna Size and Foraging Ecology Across Ants. *Insect Systematics and Diversity*, 5(5), p.9.

Awards & Grants

2020 Cornell University Fellowship

2019 Entomological Society of America President's Prize 2nd Place in Undergraduate Talks
College of Science & Liberal Arts Outstanding Undergraduate Student Award
Atlantic Sun Conference Indoor Track & Field All-Academic Team

2018 NJIT Provost Undergraduate Summer Research Fellowship

Presentations

2020 SINNERS Annual Meeting

Cancelled due to COVID-19 Pandemic.

Jelley, C. & Barden, P. Ecological Pressures on Ant Eye Diversity. Talk.

Entomological Society of America Meeting

November, Annual Meeting, Virtual

Jelley, C. & Barden, P. Foraging ecology is linked to morphological variation of the eye across ant lineages. Talk.

2019 Entomological Society of America Meeting

November 18, Annual Meeting, St. Louis – MO

Jelley, C. & Barden, P. Ecological Variation in Ant Eyes. Talk. Second Place in student

competition.

2018 NJIT President's Forum and Faculty Research Showcase

March 28, Annual Symposium, Newark – New Jersey

Jelley, C. & Barden, P. Paleontology and comparative genomics as windows into evolution and sociality. Poster.

NJIT 11th International Undergraduate Summer Research Symposium

July 27, Annual Symposium, Newark – New Jersey

Jelley, C. & Barden, P. Revealing Trade-offs in Sensory Organs and Morphological Characteristics of Formicidae. Poster.

Entomological Society of America Meeting

November 13, Annual Meeting, Vancouver – British Columbia

Jelley, C. & Barden, P. Revealing trade-offs in sensory organs and morphological traits of ants (Hymenoptera: Formicidae). Digital Poster.

Course & Fieldwork

BIOL 634: Methods in Phylogenetic and Macroevolutionary Analysis Fall 2021

R focused phylogenetics course covering topics ranging from reconstructing phylogenies to phylogenetic comparative methods.

WRIT 7101: Writing in the Majors Seminar Fall 2021

Received instruction on how to teach a writing intensive course. Collaborated with other TAs across several departments about how to spark constructive discussions within a classroom setting.

ENTOM 2120: Insect Biology Fall 2020

Learned the basics of insect biology and completed a lab complementary to the course. Curated and identified a collection consisting of over 50 specimens and spanning 14 different families.

Ant & Canopy Bootcamp July 2019

One-month course located at the Madagascar Biodiversity Center in Antananarivo dedicated to developing skills related to ant biology including canopy collection methods and identification. Field work consisting of canopy sampling was conducted in Ankarafantsika National Park.

Teaching Experience

Model-based phylogenetics and hypothesis testing (ENTOM 4610) Spring 2022

Led students through the computer lab section of the course. Updated labs to be more fitting to the current state of the field of Phylogenetics.

Plagues and Peoples (ENTOM 2100) Fall 2021

Assisted in active learning activities in lecture, led three discussion sections centered around active learning exercises, graded assignments and exams, proctored quizzes and exams, delivered feedback on final projects, and created exam questions based on lecture materials and Bloom's Taxonomy. Played an integral role in planning active learning activities alongside the active learning coordinator for the course. Interacted with students from a wide range of majors in order to help them navigate the science behind pandemics. 15-20 hours per week.

GRASSHOPR Outreach Program Spring 2021-Present

Developed a 4 lesson course to teach elementary aged students the basics of insect biology and the cultural importance of the field of Entomology. Topics explored included insect anatomy, insect diets, insect portrayal in popular culture, cultural and practical relevance of insects, and basic principles of the scientific method. The course was delivered in a virtual setting but maintained a strong focus on hands-on activities to encourage engagement in the material.

Pear Learning Assistant

Spring 2020

Assisted students enrolled in Foundations of Ecology and Evolution at NJIT, by helping them understand challenging concepts and answering additional questions that they may have about the course material.

Outreach

Museum of the Earth Exhibit

Spring 2022

Worked alongside a team to develop insect displays for a short term exhibit emphasizing insect diversity and beauty.

Darwin Days Panel

Spring 2022

Participated in a Panel discussing my own research in insect evolution as a part of the Annual Darwin Days Event. Museum of the Earth, Ithaca- NY.

Snodwigs Undergraduate Entomology Club

Fall 2021

Presented on general ant biology in order to get Entomology undergraduates interested in Myrmecology. Cornell University, Ithaca- NY.

Ant Biology Talk

October 2021

Presented at Snodwigs (Undergraduate Entomology Club) about interesting ant biology and ways that scientists study ants. Cornell University, Ithaca- NY

GRASSHOPR Outreach Program

Spring 2021-Present

What bugs you? Course designed to teach basic principles of insect biology and the scientific method. South Hill Elementary School, Ithaca- NY

Insect Fear Film Festival

February 2020

Insect Petting Zoo. Interacting with community members to encourage engagement with live insects. University of Illinois at Urbana-Champaign- IL

Meet the Scientist

April 2019

Fossil ants. Tabled at the STEAM Fair with coloring page activities and an interactive fossil ant head. Bear Tavern Elementary School, Hamilton- NJ

Work Experience

Summer Youth Supervisor

May-July 2020

Developed activities both educational and recreational for youth ages 8-12 at Boys Town New England, a non-profit organization that services placed at-risk youth and their families.

Developed several enriching, STEM-related activities in order to foster curiosity in insect biology.

Undergraduate Researcher

Fall 2017-May 2020

As a volunteer Assisted in developing protocols and curating entomological collection through data basing and specimen preparation. Independent project on comparative morphology of sensory organs funded by NJIT Provost Undergraduate Summer Research Fellowship and for course credit (BIOL 491).

Teaching Assistant

July 2018

Worked with inner city high school students in the Capitol One Junior Banker program by leading them through their daily schedule of team building activities and program of lectures.

Other Activities

Service

Jugatae Outreach Co-chair

Fall 2021-Spring 2022

Co-led the outreach committee for the Department of Entomology's Graduate student organization at Cornell University.

Racial Justice Seminar Working Group

Fall 2021-Spring 2022

Updated admissions page for [Department of Entomology Website](#).

Jugatae

Fall 2020-Spring 2021

Department of Entomology's Graduate student organization at Cornell University: Was an active member of the Professional Development Committee, which included helping plan events such as practice talks for the annual ESA conference, Mental Health Breaks, Careers in Entomology Panel, and a website building workshop.

Professional Development

Databasing at Cornell University Insect Collection

Spring 2021-Present

Spent approximately 6 hours per week databasing the CUIC ant collection.

Collections Meetings

Spring 2021

Mentored by several professionals that are involved in the curation, up-keep, and day to day activities surrounding insect collections. This involved networking opportunities, learning about the legalities of accessioning and deaccessioning, discussing various methods of databasing, and learning how to package loans.

Barden Lab

Fall 2017-Spring 2018

Assisted in developing protocols and curating entomological collection through data basing and specimen preparation.

Mentorship

Diversity Preview Weekend Mentoring

Fall 2021

One-on-one mentoring with a student interested in applying to graduate school at Cornell University. Gave feedback on CV as well as personal statement. Diversity Preview Weekend (DPW) is a grassroots program at Cornell focused on providing students from underrepresented backgrounds with opportunities to speak with current students and faculty, receive feedback on application materials, and attend workshops geared toward applying to graduate programs.

Scientific Organizations

Entomological Society of America (Meeting attendance: 2019, 2020)

Entomological Collections Network (Meeting attendance: 2021)

Intl Union Study Social Insects, NAS

References

Dr. Corrie Moreau

PhD Advisor

Martha N. and John C. Moser Professor of Arthropod Biosystematics and Biodiversity

Director & Curator of the Cornell University Insect Collection

corrie.moreau@cornell.edu

Dr. Phil Barden

Undergraduate Research Advisor

Assistant Professor, New Jersey Institute of Technology

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