

Bryce Barbee

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562-519-1782

RESEARCH INTERESTS

Behavioral Ecology · Social Behavior · Risk-Reward Trade Offs · Predator-Prey Dynamics · Mutualism · Marine Ecology · Community Ecology

EDUCATION

Ph.D. University of California, Santa Barbara; Santa Barbara, CA
Ecology, Evolution and Marine Biology
PI: Dr. Eleanor M. Caves
2022 - Current

B.S. University of California, Los Angeles; Los Angeles, CA
Ecology, Behavior, and Evolution
Departmental Highest Honors
GPA: 3.79
2018 - 2022

High School Long Beach Polytechnic High School; Long Beach, CA
GPA: 4.69
2014 - 2018

RESEARCH EXPERIENCE

Spring 2020-22 Nutritional Needs and Predation Risk Combine to Shape Foraging Decisions in Ants · University of California, Los Angeles

Using risk assessment assays in order to understand the group-level responses of Argentine ants (*Linepithema humile*) under different macronutrient deficiencies in the presence of risk
Mentor: Noa Pinter-Wollman PhD

Winter 2022 Nutrient Enrichment Alters Risk Assessment in Giant Clams · University of California, Los Angeles

Used risk assessment assays to understand how nutrient enrichment

affected Giant Clam (*Tridacna maxima*) foraging and antipredator behavioral tradeoffs

Mentors: Conner Philson and Dan Blumstein PhD

Winter 2022

Investigating the Spillover Effects of Recycled Nutrients from Damselfish Territories on a Fringing Coral Reef · University of California, Los Angeles

Assessed the potential of released nutrients by Damselfish (*Stegastes nigricans*) within their territories to biomass growth in areas surrounding their territories

Mentors: Shalanda Grier and Peggy Fong PhD

Summer 2021

Using Trait-Based Ecology to Detect Changes in Macroalgal Communities Following Disturbance Events · The Diversity Project

Utilizing Long Term Ecological Research (LTER) data combined with recent data collected in the field to apply a trait-based approach to studying macroalgal community changes following disturbance events in Moorea, French Polynesia

Mentors: Peggy Fong PhD, Caitlin Fong PhD, and Paul Barber PhD

Summer 2021

Changes in Foraging Behaviors in Responses to Humidity Differences in Seed Harvester Ants · Stanford University

Collected and analyzed data on colony foraging rates in response to humidity changes in order to understand eusocial collective decision making in *Pogonomyrmex barbatus* colonies

Mentor: Deborah Gordon PhD

Fall 2019-20

Insights on Intercolony Past and Future Individual Behaviors Depending on Group Size During Food Exchange Events · University of California, Los Angeles

Collected data on the interactions of Argentine ants (*L. Humile*) that received food from foragers while inside of the colony in order to understand the relationship behind trophallaxis group size with past and future behaviors of the recipient ants

Mentors: Julie Miller PhD and Noa Pinter-Wollman PhD

Summer 2019

The Effect on Keystone Individuals on the Behavior of Nestmates in Social Spiders · University of California, Los Angeles

Performed boldness assays on individual spiders (*Stegodyphus dumicola*) and analyzed the influence of significantly bolder individuals on the subsequent behaviors of their nestmates

Mentors: Gabriella Najm and Noa Pinter-Wollman PhD

Winter 2018

Exploring the Role of Prp16 in RNA Splicing Using Insertion Mutagenesis · University of California, Los Angeles

Utilized insertion mutagenesis to find the function of the Prp16 protein in RNA splicing

Mentor: Tracy Johnson PhD

PUBLICATIONS (*equal contribution)

Barbee, B.E.*, Lin, M.K.R.*, Min, I.A.*, Takenami, A.M.*, Philson, C.S., and D.T. Blumstein. 2022. Nutrient enrichment alters risk assessment in giant clams. *Journal of Zoology* XX:YY-ZZ. <https://doi.org/10.1111/jzo.13030>

Barbee B., and N. Pinter-Wollman. 2022. Nutritional needs and predation risk combine to shape foraging decisions in ants. *Current Zoology* XX:YY-ZZ <https://doi.org/10.1093/cz/zoac089>

Smith L., Barbee B., Layton J., Velasco B., Fong C., Barber P. H., and P. Fong. Trait-based ecology detects changes in macroalgal communities following disturbance events. (*in prep*)

FEATURED ARTICLES

Argentine ants will do anything for sugar, but they won't do this. Holly Ober. UCLA Newsroom Article.

PRESENTATIONS (*presentors)

Smith L., Barbee B.*, Layton J.*, Velasco B., Fong C., Barber P. H., and P. Fong. Trait-based ecology detects changes in macroalgal communities following disturbance events. Ocean Sciences Meeting, Virtual, March 2, 2022 - Oral

Barbee B.* Research Opportunities Within UCLA EEB. UCLA EEB New Student Orientation Ceremony, Los Angeles, CA, September 22, 2021 - Oral

Smith L., Barbee B.*, Layton J.*, Velasco B.*, Fong C., Barber P. H., and P. Fong. Trait-based ecology detects changes in macroalgal communities following disturbance events. The

Diversity Project UCLA Symposium, Los Angeles, CA, August 13, 2021 - Oral

Barbee B.*, and N. Pinter-Wollman. Nutritional needs and predation risk combine to shape foraging decisions in ants. Animal Behavior Society Conference, Virtual, August 4, 2021 - Oral

Barbee B.*, and N. Pinter-Wollman. Nutritional needs and predation risk combine to shape foraging decisions in ants. UCLA Undergraduate Research Week, Los Angeles, CA, May 24-28, 2021 - Oral

Barbee B.*, Najm G., and N. Pinter-Wollman. The effects of individual behavior on collective behavior in social spiders. UCLA SPUR Poster Session, Los Angeles, CA, August 15, 2019 - Poster

HONORS AND AWARDS

2023 - Current	Aquarium of the Pacific African American Scholar
2022 - Current	UCSB Chancellor's Fellowship
2021	Association for the Sciences of Limnology and Oceanography Multicultural Program/Ocean Sciences Meeting Travel Funding (ASLOMP/OSM)
2021	UC Davis Envision Program Funding Award
2021	The Diversity Project Summer REU
2020	Huyck Preserve's Odum Internship Acceptance
2018-2022	UCLA Dean's Life Science Scholar
2018-2022	Howard Hughes Medical Institute Pathways Program

MENTORSHIP

2023 - Current	Diversity in Diving · Mentoring diverse students throughout the process of becoming a scientific diver and joining a marine research lab
2023 - Current	GradGuide Leadership Board · Secretary of a graduate student led club with the goal of helping undergrads reach grad school
2019 - 2022	Howard Hughes Medical Institute (HHMI) Pathways Program Mentor · Mentoring of a younger undergraduate of my same major and research focus

WORK AND VOLUNTEER EXPERIENCE

2021	Greenhouse/Vivarium Maintenance Work Study Position · Maintain the UCLA Life Science Department's greenhouse and zebrafish vivarium
2021	UCLA Diversity in STEM Documentary · Took part in a documentary focused on diversity in STEM at UCLA

2020 - 2022 UCLA Bruin Herpetology Society · Treasurer for the club, organize club field trips/events

2018 Long Beach Marine Institute (LBMI) · Counselor for an Oceanic Explorer Camp for young children, facilitated marine science workshops

2018 Aquarium of the Pacific Education Volunteer · Completed 100+ hours as aquarium staff, led presentations at exhibits

2018 Youth Leadership Long Beach · Volunteered at numerous community service events, hosted a robotics fair promoting STEM in local middle schools

2018 - 2019 HEAS Foundation STEM Program · Facilitated an engineering class for youth in underrepresented communities

CERTIFICATIONS

AAUS SCUBA / Advanced Rescue Diver

MEMBERSHIPS

Animal Behavior Society (ABS)
Ecological Society of America (ESA)
Association for the Sciences of Limnology and Oceanography (ASLO)

SKILLS

Lab

PCR
Gel Electrophoresis
Insect Maintenance
Fish Maintenance
Botanical Maintenance

Field

Algal Identification
Scientific Diving (AAUS SCUBA)
Scientific Freediving
Insect Collections
Fish Behavioral Analysis

Computer

ImageJ
R Data Analysis

REFERENCES

Dr. Eleanor Caves
PhD Advisor
Caves Research Lab
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Dr. Tracy Johnson
UCLA Dean of Life Sciences
HHMI Pathways Program Leader
tljohnson@ucla.edu