

Jessica Mullins

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Education

University of California, San Diego

Expected Jun 2026

Ph.D. in Ecology, Behavior, and Evolution, *Advisor: Dr. David Holway*
Certificate in Native American and Indigenous Studies

University of Colorado, Boulder

M.S. in Museum and Field Studies, *Advisor: Dr. M. Deane Bowers* 2021

Thesis: Weathering the Storm: Wild Bee Community Response to an Extreme Flood

B.A. in Ecology and Evolutionary Biology & German Studies 2015

Publications

Refereed

Mullins, J.L., *et al.* 2023. New records of gynandromorphism in *Heriades* and *Dianthidium* and images of the first reported *Dianthidium* gynandromorph (Hymenoptera: Megachilidae). *J. Kans. Entomol.* 96 (2) 30-38.

Mullins, J.L., Strange, J.P., Tripodi, A.D. 2020. Why Are Queens Broodless? Failed nest initiation not linked to parasites, mating Status, or ovary development. *Econ. Entomol.*

Outreach

Bee of the Month. *Torreyana Docent Newsletter*. Monthly. [\[Link\]](#)

Ask a Melittologist. *Mongabay Kids*. 5 series piece about bees. [\[Link\]](#)

Research Experience

Graduate Student Researcher

2021- Present

University of California San Diego, Holway Lab

NIH T-32 Pathways in Biological Sciences Student Trainee

Investigate how land-use change and climate change interact to drive native bee biodiversity patterns in habitat fragments in Mediterranean-type ecosystems. Mentor undergraduate and MS students.

Museum Collections Assistant

2019 - 2021

University of Colorado Museum of Natural History Entomology Collection

Assistant to the collections manager of over 1 million arthropod specimens through curation, pest management, and writing policies and procedures. Educated the public on native bees by designing outreach specimen drawers for school, family, and adult audiences and writing monthly entomology-themed blog posts.

Biological Aid

2017-2018

USDA-ARS Pollinating Insects Research Unit, Bumble Bee Lab in Logan, UT

Survey of Western USA for imperiled Western Bumble Bee. Dissected 600+ bumble bee queens who failed to initiate a nest in lab-reared conditions to diagnose parasites and pathogens.

Field & Lab Experience

Field Crew Leader

Jun - Sept 2018

Ponisio Lab, University of California Riverside

Led field crew to survey plant-pollinator interactions on eight Madrean Sky Islands.

Bee Biology Technician

Jan - June 2018

Utah State University Insect Collection in Logan, UT

Tested and wrote bee identification keys for 40+ native and introduced bee genera.

Seasonal Plant Ecologist

May - Nov 2016

Boulder County Parks and Open Space in Longmont, CO

Led field crew surveying vegetation to track disturbance regimes on plant community.

Field Technician

Mar - May 2016

Williams Lab, University of California Davis

Surveyed the Sonoran Desert for bees to measure impacts of solar array installations on bees.

Seasonal Field Botanist

June - Oct 2015

National Park Service, Southern Colorado Plateau Network based in Flagstaff, AZ

Conducted botanical surveys at 90+ long-term plots at five National Parks in the southwest.

Museum Assistant

Oct 2013 - May 2015

University of Colorado Museum of Natural History in Boulder, CO

Collected and curated native bee specimens collected in Colorado.

Teaching

University of California San Diego Instructional Assistantships
Head TA, Organismic and Evolutionary Biology (BILD 3)
Head TA, Insect Diversity (BIEB 128)

Fall 2021
Winter 2022

Volunteer and Outreach Experience

- Restorative Education About Plants (REAP)** 2022 - Present
Visit a Granger Junior High School to help maintain a community garden to address food insecurity, promote interest in nature, and talk about future college options with students.
- Volunteer Entomologist** Aug 2023 - Present
San Diego Natural History Museum Entomology Collection
Pin and identify bee specimens collected as part of the California Insect Barcode Initiative (CIBI) and a project looking at the biodiversity of dunes on the Baja Peninsula.
- Torrey Pines State Park Bee Monitoring Project** 2022 - Present
Secure permit and collaborate with docents to monitor native bees on hiking trails with photo surveys to build a park-wide native bee checklist and gather baseline data.
- La Jolla Historical Society Secret Garden Tour** May 2020
Hosted a tabling event to teach attendees about native bees.
- Cabrillo National Monument Biodiversity Volunteer Taxonomic Expert** 2021 - Present
Co-organized pollinator collection and curation courses to teach community college students how to conduct active pollinator surveys paired with photo surveyors. Mentor a student to curate and identify specimens.
- Classrooms for Climate Action** 2020 & 2021
Designed pollinator-focused activity for Colorado 2nd grade classrooms.
- Bee Boulder Pollinator Festival** 2019 & 2020
Prepared outreach [video](#) about the evolution of bees

Presentations

Invited Talks

- 2024 Invertebrates. *California Naturalists Course Guest Lecture.*
- 2024 San Diego native bees. *Cabrillo National Monument Naturally Speaking series.* [\[Link\]](#)
co-presented with Patricia Simpson
- 2023 San Diego native bees and the plants they love. *San Diego Beekeeping Society.*
co-presented with Patricia Simpson
- 2023 Extinction risk of native bees in fragmented habitat islands in southern California Scrub habitat. *California Native Plant Society, San Diego Chapter.*
- 2023 Native bees need our help! *Sierra Club Santa Margarita Group.* [\[Link\]](#)
- 2020 Wild bee community response to an extreme flood. *Colorado Pollinator Summit.* [\[Link\]](#)

Contributed Talks

- 2021 Wild bee community response to an extreme flood. *Annual Entomological Society of America Meeting, virtual **
- 2021 Impacts and recovery status of wild bee communities following a catastrophic flood. *Denver Audubon Society*

Posters

- 2023 *Annual Ecological Society of America Meeting, Portland Oregon* [\[Link\]](#)
- 2022 *Annual Entomological Society of America Meeting, Vancouver, BC **
- 2017 *Annual Entomological Society of America Meeting, Denver, CO ** [\[Link\]](#)

* Presentations with (*) won First Place President's Prize at the conference.

Funding

2023	Mildred E. Mathias Graduate Student Research Grant	\$2,000
2023	Ecological Society of America: Real Brown & JT Callahan Memorial Travel Awards	\$500
2022	Sea & Sage Audubon Society: Bloom Hays Research Grant	\$1,500
2021	Jeanne M. Messier Memorial Endowed Fund	\$3,500
2020	Denver Audubon Society's Lois Webster Fund	\$4,853
2020	City of Longmont, Colorado Research Award	\$4,942
2020	University of CO Museum of Natural History Research Grant	\$1,131
2020	University of CO Museum of Natural History Collie Fund	\$534

Specialized Training

2023	Entomology Collections Management Workshop. Cleveland Natural History Museum, Ohio.
2023	Wasp ID Course. Virtual.
2022	Introduction to Biodiversity Specimen Digitization. iDigBio, Virtual.
2019	The Bee Course. Southwestern Research Station. Portal, Arizona.

Professional Affiliations

2022 – Present	Ecological Society of America
2022 – Present	California Native Plant Society, San Diego Chapter
2017 – Present	Entomological Society of America. Systematics, Evolution, & Biodiversity Section.
2019 – Present	Entomology Collections Network
2021 – Present	International Society of Hymenopterists

Service

Reviewer for Scientific Reports (1), Conservation Biology (1), The Great Lakes Entomologist (1), Proceedings of the San Diego Society of Natural History (1)