

# Jessica Mullins

www.jessmullins.com



## Education

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### University of California, San Diego

Ph.D. in Ecology, Behavior, and Evolution, *Advisor: Dr. David Holway*

Expected 2026

### University of Colorado, Boulder

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

2021

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

2015

## Publications

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**Mullins, J.L.**, Paraskevopoulos, A.W., Pittman, C., Burrows, S.J., Carper, A.L., Resasco, J. 2023. New records of gynandromorphism in *Heriades* and *Dianthidium* and images of the first reported *Dianthidium* gynandromorph (Hymenoptera: Megachilidae). *J. Kans. Entomol.* *Accepted.*

**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.*

**Mullins, J.L.**, Carper, A.L., Scott, V.L., Bowers, M. D. Wild bee community response to an extreme flood. *In preparation.*

## Presentations

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### Invited Talks

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.*

2020 Wild bee community response to an extreme flood. *Colorado Pollinator Summit.*

### 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 Lois Webster Fund Committee Meeting.*

### Posters

2023 Range-restricted bee species are more vulnerable to extirpation in fragmented habitats. *Annual Ecological Society of America Meeting, Portland, Oregon*

2022 Range-restricted bee species are more vulnerable to extirpation in fragmented habitats. *Annual Entomological Society of America Meeting, Vancouver, BC \**

2017 Why don't queens get broody? Parasites, mating status, and ovary development in *Bombus huntii*. *Annual Entomological Society of America Meeting, Denver, CO \**

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

## Funding

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2022 Sea & Sage Audubon Society: Bloom Hays Research Grant \$1,500

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

## Research Experience

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### **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. Curate specimens collected over six field seasons spanning 12 years.

### **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.

### **Museum Collections Assistant** **2019 - 2021**

*University of Colorado Museum of Natural History Entomology Collection* Boulder, CO

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

### **Bee Biology Technician** **Jan - Jun 2018**

*Utah State University Insect Collection*

Logan, UT

Tested and wrote non-dichotomous keys for 40+ native and introduced bee genera and edited factsheets about native bee genera for the Exotic Bee ID website.

### **Biological Aid** **2017-2018**

*USDA-ARS Pollinating Insects Research Unit, Bombus Lab*

Logan, UT

Dissected 600+ bumble bee queens who failed to initiate a nest in lab-reared conditions to and diagnose parasites using microscopic and molecular methods.

## Teaching Experience

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*University of California San Diego Instructional Assistantships*

Head TA, Organismic and Evolutionary Biology (BILD 3)

**Fall 2021**

Head TA, Insect Diversity (BIEB 128)

**Winter 2022**

## Education and Outreach

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### **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.

### **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 and analyze data.

### **Classrooms for Climate Action** **2020 & 2021**

Designed pollinator-focused activity for Colorado 2<sup>nd</sup> grade classrooms.

### **Bee Boulder Pollinator Festival** **2019 & 2020**

Prepared outreach video about the evolution of bees

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## Specialized Training

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- 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

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- 2022 – Present** Ecological Society of America
- 2017 – Present** Entomological Society of America
- 2019 – Present** Entomology Collections Network
- 2021 – Present** International Society of Hymenopterists

## Service

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Reviewer for Scientific Reports, Conservation Biology, The Great Lakes Entomologist