

# Jess Mullins

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## EDUCATION

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<b>University of California, San Diego</b>	2021–Present
<i>PhD in Ecology, Behavior, and Evolution; Advisor: Dr. David Holway</i>	
<i>Dissertation: Investigating how climate variability and land-use change interact to shape bee biodiversity through community and trait-level responses in a biodiversity hotspot.</i>	
<i>Certificate: Native American &amp; Indigenous Studies</i>	
<b>University of Colorado Boulder</b>	2019–2021
<i>MS in Museum and Field Studies; Advisor: Dr. M. Deane Bowers</i>	
<i>Thesis: Weathering the Storm: Wild Bee Community Response to an Extreme Flood – <a href="#">[link]</a></i>	
<b>University of Colorado Boulder</b>	2010–2015
<i>BAs in Ecology &amp; Evolutionary Biology and German Studies</i>	
<b>Universität Regensburg (Germany)</b>	2012–2013
<i>Study Abroad, Biology and German Studies</i>	

## PEER-REVIEWED PUBLICATIONS

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- Mullins, J.L.**, Thrift, C., Gardner, J., Ascher, J.S., Holway, D.A., Hung, K.J. Range size as an extinction risk factor for native bees. *In preparation*.
- Mullins, J.L.**, Hung, K.J., Gardner, J., Ascher, J.S., Holway, D.A. Variable winter precipitation interacts with land-use change to affect the diversity and composition of native bee assemblages. *Submitted*.
- De Pedro, D., Ceccarelli, F. S., Sagot, P., López-Reyes, E., **Mullins, J. L.**, et al. (2024). Revealing the Baja California Peninsula's Hidden Treasures: An annotated checklist of native bees. *Zootaxa*, 5522(1): 1–391.
- 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*. *J. Kans. Entomol. Soc.* 96 (2), 30–38.
- Mullins, J.L.**, Strange, J.P., Tripodi, A.D. (2020). Why are queens broodless? *Journal of Economic Entomology*, 113 (2), 575–581.

## FELLOWSHIPS & RESEARCH FUNDING (\$86,432)

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National Institute of Health Pathways in Biological Sciences Training Fellowship	2022–2024
\$53,172 (tuition & research funding)	
H.R. Young Graduate Scholarship (\$7,500)	2025
Xerces Society Travel Award (\$800)	2024
NAPPC Imperiled Bumble Bee Conservation Taskforce Research Grant (\$5,000)	2024
<i>Co-awarded with Diego de Pedro (PhD student at Centro de Investigación Científica y de Educación Superior de Ensenada)</i>	
Entomology Collections Management Workshop Travel Grant (\$1,000)	2023
UC Natural Reserve System: Mildred E. Mathias Graduate Student Research Grant (\$2,000)	2023
Ecological Society of America: Real Brown & JT Callahan Memorial Travel Awards (\$500)	2023
Sea & Sage Audubon Society Bloom Hays Research Grant (\$1,500)	2022
University of California San Diego Jeanne M. Messier Memorial Endowed Fund (\$3,500)	2021
Denver Audubon Society Lois Webster Fund (\$4,853)	2020
City of Longmont Research Award (\$4,942)	2020
University of Colorado Museum of Natural History Research Grant (\$1,131)	2020
University of Colorado Museum of Natural History Collie Fund (\$534)	2020

## RESEARCH EXPERIENCE

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- Graduate Student Researcher** 2021–Present  
*UC San Diego, Holway Lab (NIH T-32 Pathways Trainee)*  
Investigate how climate variability and habitat fragmentation interact to shape bee biodiversity, linking community composition with functional trait responses in a biodiversity hotspot. Lead the continuation of a long-term survey of wild bees.
- Museum and Field Studies MS Student** 2019–2021  
*University of Colorado Museum of Natural History*  
Added to a long-term dataset to uncover the impacts of a 100-year flood on an urban bee community in Colorado.
- Biological Aid** 2017–2018  
*USDA–ARS Pollinating Insects Research Unit, Bumble Bee Lab*  
Surveyed for an imperiled bumble bee; dissected 600+ queens and used visual and molecular methods to diagnose parasites and pathogens; contributed to developing a multiplex PCR protocol to detect four common parasites in a single assay.

## FIELD/TECHNICIAN EXPERIENCE

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- Entomology Lab Technician** May – Aug 2021  
*University of Colorado, Resasco Lab*  
Curated and identified specimens collected as part of a resurvey on Long's Peak.
- Museum Collections Assistant** 2019–2021  
*University of Colorado Museum of Natural History, Entomology Collection*  
Assisted Collections Manager in overseeing an arthropod collection with over 1 million specimens, including pest prevention, curation of new accessions, collection maintenance, wrote policies and procedures, and public outreach through exhibits and writing.
- Field Crew Leader** Jun–Sept 2018  
*University of California Riverside, Ponisio Lab*  
Led field crew to survey plant–pollinator interactions on eight Madrean Sky Islands.
- Bee Biology Technician** Jan–Jun 2018  
*Utah State University Insect Collection, Logan UT*  
Tested and wrote bee identification keys for 40+ native and introduced bee genera for the Exotic Bee ID Website – [\[link\]](#).
- Seasonal Plant Ecologist** May–Nov 2016  
*Boulder County Parks and Open Space, Longmont CO*  
Led field crew surveying vegetation to track disturbance regimes on plant communities.
- Bee Biology Field Technician** Mar – May 2016  
*University of California Davis, Williams Lab*  
Surveyed the Sonoran Desert to measure impacts of solar array installations on bee communities.
- Seasonal Field Botanist** Jun – Oct 2015  
*National Park Service, Southern Colorado Plateau Network, Flagstaff AZ*  
Conducted botanical surveys at 90+ long-term plots across five National Parks in the Southwest.
- Museum Assistant** Oct 2013 – May 2015  
*University of Colorado Museum of Natural History, Boulder CO*  
Collected and curated native bee specimens from Colorado.

## TEACHING

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- Teaching Assistantships at UC San Diego**
- BIEB 121: Ecology Laboratory Spring & Fall 2025
- BIEB 176: Biology & the Human Predicament Fall 2024
- BIEB 128: Insect Diversity Winter 2022
- BILD 3: Organismic & Evolutionary Biology Fall 2021, Winter 2025
- Guest Lectures**
- Monte Vista High School in Spring Valley, CA 2025  
*Prepared a lesson and hands-on activity to learn about pollination as an ecosystem service for an AP Environmental Science class.*
- UC Environmental Stewards California Naturalist Course 2024, 2025  
*Prepared and presented a lecture to teach adult students about the importance and diversity of invertebrates.*
- Mission Trails Regional Park - EcoAmbassadors 2023, 2024  
*Taught a module to 3 cohorts about bees and designed a hands-on activity where students made their own bumble bee field guide.*
- Classrooms 4 Climate Action 2019, 2020, 2021  
*Visited 2nd grade classrooms in Colorado (virtually and in person) to talk about the importance of wild bees and pollination services.*

## LEADERSHIP & CONSERVATION INITIATIVES

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<b>Founding President</b>	2025–Present
<i>California Native Bee Society</i>	
Established statewide non-profit with the mission of advancing conservation, public engagement, and research. Lead board governance, prepare bylaws, and assisted with 501(c)(3) filing. Manage membership, monthly meetings, and collaborations with regional bee societies. Initiated and moderate public programs including logo contest and online membership portal.	
<b>Lead Taxonomic &amp; Data Coordinator</b>	2023–Present
<i>Torrey Pines State Natural Reserve – Bee Monitoring Program</i>	
Train and support volunteers in long-term non-lethal bee monitoring at a state park. Oversee specimen identification, data pipeline, and analyses. Deliver annual reports to land managers and secure state permits.	

## OUTREACH ACTIVITIES

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### Tabling Events

Entomo-Fest at UC San Diego	2025
Torrey Pines State Natural Reserve Earth Day Celebration	2023
World Bee Day, San Diego Japanese Friendship Garden	2023
La Jolla Secret Garden Tour	2020
Bee Boulder Pollinator Festival	2019–2020

### Outreach Articles

Mongabay Kids: Ask a Melittologist – <a href="#">[link]</a>	2023
<i>Co-wrote a series of five short articles for an international children’s magazine explaining the life history and diversity of bees.</i>	
Torreyana Magazine: Torrey Pines State Park Docent Newsletter – <a href="#">[link]</a>	2024–Present
<i>Expert content editor for monthly “Bee of the Month” articles; lead author for 8+ articles.</i>	

### Other Activities

UCSD Pollinator Club	2024–Present
<i>Organized an event to teach students how to pin and label museum-quality bee specimens. Presented on career panel.</i>	
Cabrillo National Monument Biodiversity Internship Taxonomy Expert	2022–2024
<i>Taught a group of college students how to survey for bees with a net and camera. Identified all specimens and photo vouchers.</i>	
Restorative Education About Plants (REAP @ UCSD)	2022–2024
<i>Visited a junior high classroom to educate about growing food in the school’s community garden.</i>	
Virtual Bee Boulder Pollinator Festival	2020

## PRESENTATIONS

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Sea and Sage Audubon Society (Virtual) – <i>invited</i>	2025
Nature Collective President’s Circle Fundraising Event, Keynote Speaker – <i>invited</i>	2025
Dr. Katja Seltmann’s Lab Meeting - UC Santa Barbara – <i>invited</i>	2025
Entomological Society of America (Poster - <a href="#">PDF</a> ) – <i>Won 1st Place President’s Prize</i>	2024
Mission Trails Regional Park Trail Guide Meeting – <i>invited</i>	2024
Point Loma Garden Club Meeting – <i>invited*</i>	2024
San Diego Natural History Museum - Nat Talk Series – <i>invited*</i>	2024
Cabrillo National Monument Naturally Speaking Series (Virtual) – <i>invited*</i>	2024
Ecological Society of America, Portland (Poster - <a href="#">PDF</a> )	2023
Torrey Pines Docent Society Speaker Series – <i>invited*</i>	2023
San Diego Beekeeping Society – <i>invited*</i>	2023
Sierra Club Santa Margarita Group, San Geronio Chapter (Virtual) – <i>invited</i>	2023
California Native Plant Society, San Diego Chapter – <i>invited</i>	2023
Entomological Society of America (Poster - <a href="#">PDF</a> ) – <i>Won 1st Place President’s Prize</i>	2022
Entomological Society of America, (Virtual Talk) – <i>Won 1st Place President’s Prize</i>	2021
Denver Audubon Society (Virtual) – <i>invited</i>	2021
Colorado Pollinator Summit (Virtual)– <i>invited</i>	2020
Entomological Society of America (Poster – <a href="#">PDF</a> ) – <i>Won 1st Place President’s Prize</i>	2017

\*Invited presentations marked with an asterisk were co-presented with community scientist Patricia Simpson.

## WORKSHOPS ATTENDED

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

## SKILLS

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### Mentorship

Independent Study in Holway Lab (BISP 199): Kayleigh Cassidy\*, Yerin Go, Isabel Hui\*, Lex Junker, Bianca Jussen, Sky Kezmoh, Eugene Kim, Bridget Spencer\*, Tim Swain\*, Bautista Tobias. UCSD Environmental Systems Major – Senior Thesis Advisees: Lillian Landre\* — Floral preferences of bumble bees in San Diego using iNaturalist data.

Tristie Le\* — Literature review on native pollinators and human food systems. NSF-REU Undergraduate Researcher:

Kris Price\* — Temporal change in bee body size from >2,000 pinned specimens. McNair Scholar: Mads Kelly\* —

Body-size variation across habitats from 1,800 pinned specimens. \* *mentored for more than one quarter.*

### Computer Proficiency

Daily: R, iNaturalist

Often: Inkscape, LaTeX

Seldom: ArcGIS, Google Earth Engine

### Languages

English (native); German (advanced intermediate)

## PEER REVIEWER IN SCIENTIFIC JOURNALS (N = 9)

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Apidologie (1); Ecological Entomology (1); The Great Lakes Entomologist (1); Journal of Melittology (1); The Pan-Pacific Entomologist (1); Proceedings of the San Diego Society of Natural History (1); Science of the Total Environment (1); Scientific Reports (1); Western North American Naturalist (1)

## SOCIETIES & NETWORKS

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California Native Bee Society (founding president)	2025 – Present
Ecological Society of America	2023 – Present
Entomological Society of America – Systematics, Evolution, & Biodiversity, Pacific Branch	2017 – Present
National Native Bee Monitoring Network (Member) – <a href="#">[link]</a>	2022 – Present
The Next Generation Sonoran Desert Researchers (Member) – <a href="#">[link]</a>	2022 – Present
Sigma Xi – <i>invited</i>	2025 – Present
Society for Conservation Biology	2025 – Present

## SERVICE

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UCSD Integrated Pest Management Committee Student Representative	2025 – Present
Annual Pathways in Biological Sciences Symposium Planning Committee	2024
UCSD PhD Student Admissions Committee	2024
Biology Undergraduate Masters Mentorship Program – <a href="#">[link]</a>	2023 – 2024
UCSD Biological Sciences PhD Student Peer Mentor Program	2023