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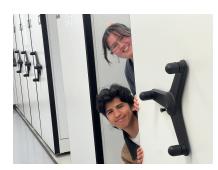
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# Cheadle Center for Biodiversity & Ecological Restoration

A Quarterly Album of Updates and Events from the Vernon and Mary Cheadle Center for Biodiversity and Ecological Restoration Collections & Biodiversity Program. January, 2025

### **Upcoming Events**



Visit the Cheadle Center for our Spring Open House! This casual event is open to everyone.

Date: February 28 from 4 - 6 pm Location: The Cheadle Center for Biodiversity and Ecological Restoration

UCSB, Harder South Building 578 (under Harder Stadium)

**Native Bee Habitat Restoration at Science by the Pint!** 

Come to Draughtsmen Aleworks in Goleta and learn about how to support our native bees!



Location: Draughtsmen Aleworks, Goleta. **All ages welcome.** 

SBTP is a collaboration between the UCSB EEMB Undergraduate Research Symposium committee and

Draughtsmen Aleworks Goleta. The goal is to fundraise for the spring EEMB Undergraduate Research Symposium event & provide UCSB students a space to present their science research to the public off-campus.

# Through the Looking Glass: A Microscopic Look at our Native Bees



Date: Tue, 02/11/2025 to Mon, 06/30/2025 Location: UCSB Library, Ocean Gallery

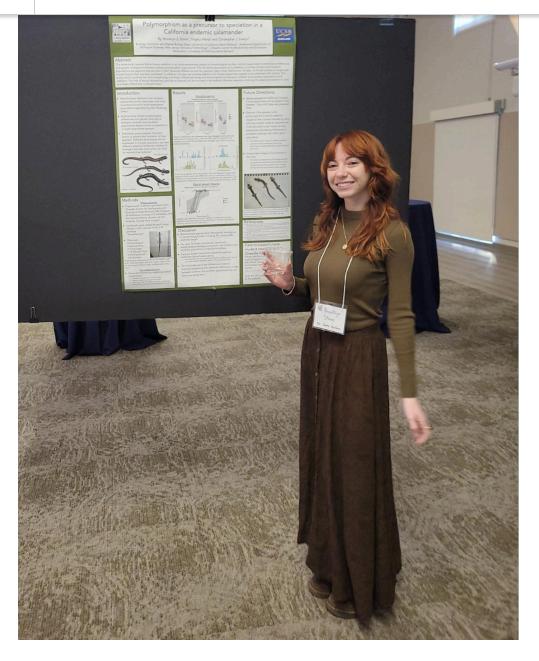
This exhibition showcases bee biodiversity through highresolution images of rare, local bees, many of which can be found on the UCSB campus. A dozen pinned native bee specimens and close-up images offer a unique

glimpse into this small yet mighty world. This exhibition is supported by the <u>UCSB</u>

Coastal Fund and the California Nature Art Museum.

#### comes to the South Coast!

On the 9th and 10th of January 2025, the Cheadle Center for Biodiversity and Ecological Restoration co-sponsored the California/Nevada Amphibian Task Force meeting at California State University Channel Islands. This annual meeting brings together amphibian researchers from across California and Nevada and serves as an important function in coordinating region-wide conservation efforts. This year's meeting featured researchers and student projects from the Earth Research Institute and the Cheadle Center. UC Santa Barbara alumni and ERI researchers Roland Knapp and Chris Evelyn along with undergraduates Max Laubstein and Brooklyn Stone presented at the meeting.



Meet Brooklyn Stone, a senior in UCSB's Ecology, Evolution, and Marine Biology program and a research intern at the Cheadle Center. Brooklyn is presenting her poster on the

southern populations to determine if these groups should be recognized as separate species.

#### California-Nevada Amphibian Populations Task Force

January 9-10, 2025

California State University Channel Islands Camarillo, CA

#### **AGENDA**

Chair: Dave Bradford, Las Vegas, NV

Vice Chair: Jef Jaeger, School of Life Sciences, University of Nevada, Las Vegas

Local Organizers: Rudi von May, Biology Program, California State University Channel Islands

Chris Dellith, Ventura Fish and Wildlife Office, U.S. Fish and Wildlife Service

Chris Evelyn, Cheadle Center for Biodiversity and Ecological Restoration,

University of California, Santa Barbera

Sean Anderson, Environmental Science and Resource Management Program,

California State University Channel Islands

Parent Organization: Amphibian and Reptile Conservancy

Sponsors: Biology Program, School of Arts and Sciences, California State University Channel

Islands

Cheadle Center for Biodiversity and Ecological Restoration, University of

California, Santa Barbera

Ventura Fish and Wildlife Office, U.S. Fish and Wildlife Service

On Saturday after the meeting, the Cheadle Center sponsored a hike on Santa Cruz Island to look for the **Channel Islands Slender Salamander**, which is endemic to our northern Channel Islands. Few things capture the imagination like an island endemic species. Despite the lack of winter rain, Chris Evelyn and the group of UCSB faculty and regional wildlife biologists uncovered three adult Channel Islands Slender Salamander during our hike toward the UC Research Station on Santa Cruz Island.



Rebecca Bradley, Wildlife Biologist for the Center for Environmental Management of Military Lands was the first to find salamanders. Here she shows off two juvenile Black-bellied Slender Salamander. Members of this species on Santa Cruz Island are morphologically distinct from the same species found in Santa Barbara.



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**RSS** 



Marisa Ishimatsu took this lovely photo of a salamander on the leaf of an island oak.

#### **Publication Highlights!**

We're excited to share two new studies that help us understand and protect our native bees. These papers explain how changing weather affects bee communities and offer advice on creating better habitats for them. Their findings are important for informing conservation strategies and ensuring the long-term health and resilience of our native bee communities.

#### Impact of Climate Change on Social Bees

Ostwald, da Silva, and Seltmann (2024) look at how climate change is affecting social bees and the way they live together. Published in the *Journal of Animal Ecology*, this study gives us important clues about how bee communities are adapting to warmer temperatures and unpredictable weather.

Read more

natural habitats for native bees. Their work, published in *Frontiers in Ecology and Evolution*, gathers recent research to help guide efforts in creating environments where bees can thrive.

Read more

## Sequencing Ancient (or at least very old) DNA



Katja Seltmann spent November at the San Diego Natural History Museum as a guest in the Entomology Department. She worked with Shahan Derkarabetian Ph.D., the new Curator of Entomology, to perform genomic DNA extractions of bee specimens from the 1950s! This work shows how old collections can help us answer modern questions. She is asking if one of the interesting bees we have on the UCSB campus is the subspecies (*Melissodes tepidus timberlakei*) or is it a separate species. As DNA sequencing gets less expensive and better, we can learn more about how species have changed over time.



*Melissodes tepidus timberlakei* from the UCSB Campus Lagoon Island. Photograph by Jeremiah Bender.

# **Collecting Trips with the UCSB Herbarium**

Greg Wahlert's persistent fieldwork has dramatically expanded the UCSB Herbarium's collection, with nearly 200,000 specimens, enriching our understanding of plant life through



the tepuis of Venezuela. An endemic flora thrives atop these quartz sandstone formations, and species adapted to this challenging environment are disjunctly distributed across Colombia and Venezuela.



It's another trip by Greg Wahlert, this time collecting lupines along the northern California coast. The identity of the plants at the mouth of the Gualala River in Sonoma County remains a mystery to many botanists. Perhaps they are of hybrid origin while maintaining a reproductive population.

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# **Leaf Litter...**

Just more photos from the Cheadle Center education and research activities







More fantastic photos by Marisa Ishimatsu from the Slender Salamander collecting trip on









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