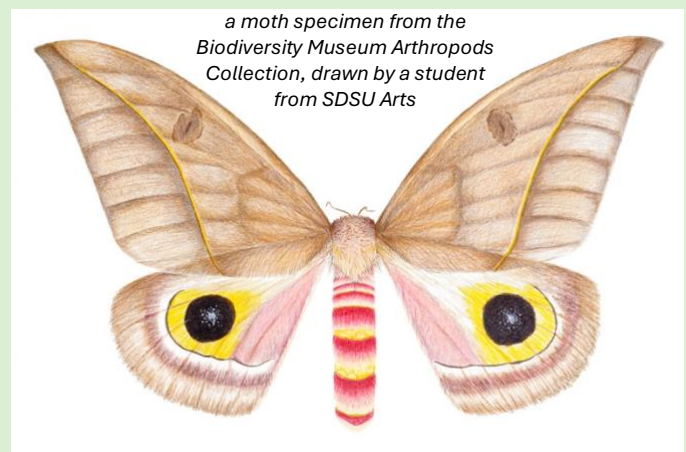


SDSU Biodiversity Museum Newsletter – Fall 2026



Thanks for taking the time to read our first Newsletter! The re-envisioning of our Biodiversity Museum arose out of a casual conversation at lunch in late 2022, spear-headed by Emeritus Faculty Curator Dr. Michael Simpson. COVID had mostly killed any prior museum-wide momentum that we had, and it's not an exaggeration to suggest that the fate of our Museum hung in the balance. One of our goals was to make the Museum space more contiguous, connected, with the potential to share ideas and energy. So, with considerable blood, sweat, and tears, we moved the Herbarium, Terrestrial Arthropods, and Reptiles and Amphibians Collections, and renovated a Shared Biodiversity Genomics lab. Hundreds of hours of hard work, by many. But now it's possible to walk into the Genomics lab, which is a central hub directly connected to the plants, birds, mammals, and arthropods. The lizards are just around the corner. We made signage for all of these places, so now the 100s of students that walk by daily actually know that, yes, SDSU has a Biodiversity Museum! And many students peek in, interested.

Over the past few years we have developed a new [Webpage](https://biodiversitymuseum.sdsu.edu/) (<https://biodiversitymuseum.sdsu.edu/>), finalized our Museum logo in consultation with SDSU StratComm, and have written and secured several grants for collections improvement from the [California Institute of Biodiversity](#). Following a long and cherished tradition at SDSU, we continue to use our specimens in many organismal classes, allowing students the opportunity to see and experience real plants and animals, unfortunately less common in today's academic world. We have even shared specimens with several Art classes, with student art inspired by the beauty of biodiversity. Thanks to the hard work of our Curators, and our graduate and undergraduate students, our Community Outreach efforts have grown considerably. Examples include participation in the annual [City Nature Challenge](#) (thank you Lisa Marun!), using the Museum as a centerpiece for our [Darwin Day celebration](#), and participation in the city-wide [San Diego Festival of Science and Engineering](#).



Below are additional brief highlights from each of our Curators, for each of our core Collections:

Notes from the Herbarium, Dr. Mike Simpson - The SDSU Herbarium (acronym "SDSU") houses more than 28,000 plant specimens. Field collection data for all specimens have been digitized and are available online through the [Consortium of California Herbaria](#); more than 99.5% of our specimens have been imaged, and about 87% georeferenced, the latter allowing for precise mapping of plant localities. These specimens are used for both teaching and research. We give numerous tours of the herbarium during the year, highlighting the importance of biological



Natalie Trujillo, SDSU undergraduate, giving her poster presentation at the Botany 2026 meetings in Tucson

collections. Currently, two students are working on research projects involving extraction of DNA from specimens housed in the SDSU Herbarium collection. A recent goal is developing "extended specimens" by linking physical voucher specimens, which document the plants collected, with associated digital and biological data. This will include images of our extensive slide collection, from which plant materials were removed and photographed at high magnification and resolution. We will also link specimens used in DNA sequencing projects to their associated genetic data in GenBank (the NIH genetic sequence database). Additional linkages will include information about the collectors and identifiers associated with specimens in the collection, as well as images or collections of insects documented to visit plants in the wild and other evidence of potential pollination or herbivory associated with the

collected specimens. We plan to engage several SDSU undergraduates from both computer science and biology in the development and expansion of the extended specimen project.

Notes from Mammalogy, Dr. Eric Ekdale - The Mammal collection has been increasing its digital presence over the past year. Through a major undertaking, Collections Manager Mike Van Patten has ensured that all information written on each individual specimen tag, especially those data pertaining to collection localities, have been added to the specimen database. He has also revised outdated taxonomy in the database to align with current practices. Jackson Wolfe, a Masters student working in the Museum, has been georeferencing all of the locality data, beginning with specimens collected in California. Additionally, Jackson has uploaded the California specimens to the publicly available



Over the years thousands of microscope slides have been prepared, and are now being incorporated into our Extended Specimen project

and searchable [Consortium of Vertebrate Collections](#) database. This is only a small fraction of the nearly 3,000 specimens in the collection, so much work still remains to be done. In the interest of preserving data, our Museum volunteer Kyla White has digitized all donation forms and necropsy reports to serve as digital back-ups for the original hard copy documents. We are in the process of cross-referencing these documents with individual records in the specimen database.



Some of our many 1000s of mammal specimens actively used in teaching & research at SDSU

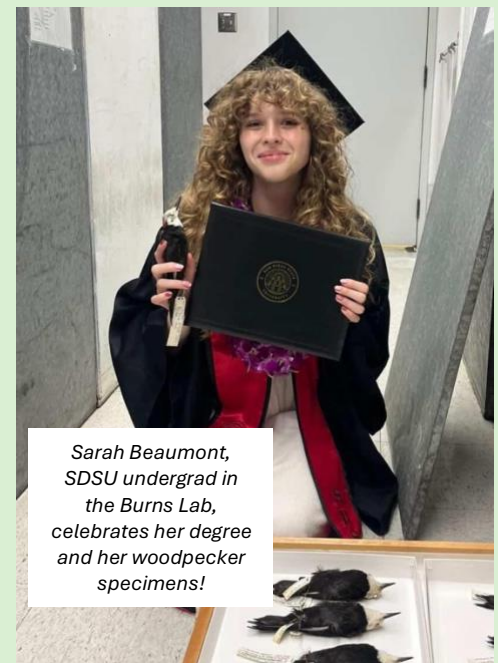


Jadon Gonzales, MS student in the Hedin Lab, exits a cave in Sequoia NP after collecting a new species of cave spider

Notes from Arthropods, Dr. Marshal Hedin - We've been quite busy in the Insects & Arachnids collection, with (as of Fall 2026) four Master's students conducting specimen-based research, contributing actively to new collections, and working with prior collections. We also have several devoted student volunteers, all SDSU alums, all having worked in the collection now for multiple semesters. These students are actively sorting, organizing, identifying, imaging, and databasing

many specimens. Great hands-on experience for these students! Some of these databased specimens are available at the [Ecdysis portal](#). Dr. Hedin also was recently awarded an NSF grant to research Californian soft spiders - this grant relies upon extensive original fieldwork, and the many 100s of morphology- and DNA-preserved specimens that reside (with expert care) in our collections. Our DNA collection alone includes over 15,000 genomics-preserved arachnid specimens, making this one of the largest and most important of its kind in the United States.

Notes from Ornithology, Dr. Kevin Burns - The bird collection continues to be a hub of activity for both teaching and research. With the help of undergraduate Sarah Beaumont, data from our egg, nest, wing, and mount collections have now been entered into a digital catalog. Together with the skin and skeleton collection, which were previously digitized, the bird collection now comprises over 3,700 numbered specimens. Sarah has been a dedicated museum student for three years, and her work in the museum culminated in her undergraduate thesis focusing on the phylogenomics of the White-headed Woodpecker. Two graduate students are also using museum specimens in their research. PhD student Michael Tofflemire and MS student Allie Tappe are sequencing genomes from tissues collected by museum students over 20 years ago to support their research on the Wrentit and the California Thrasher, two bird species of the California Floristic Province. Allie is also using skin specimens to see how plumage coloration correlates to the genome, research that is possible only because museums preserve both tissues and traditional skin specimens. Our collection of genetic resources continues to grow by several hundred samples each year, largely through collaboration with the [San Diego Natural History Museum](#). In recent years, we have provided subsamples of this material to researchers from Mexico to Massachusetts, allowing our bird collection to contribute to research across the country and around the world.



Sarah Beaumont, SDSU undergrad in the Burns Lab, celebrates her degree and her woodpecker specimens!



PhD student Tucker Heptinstall, PhD student in the Brock Lab, with one of many snakes collected in Greece

Notes from Herpetology, Dr. Kinsey M. Brock- Our herpetology collection continues to grow through field research that connects genes, behavior, and environmental change. During the 2026 field season, researchers traveled to ancient cities in Greece and Italy to investigate how human-driven landscape change affects snake genetic diversity and lizard cognition. In Greece, PhD student Tucker Heptinstall collected more than 220 snakes from five species, representing the largest snake genetic dataset from the region. Whole specimens of these species are now in our Biodiversity Museum collection, and Tucker will use tissues from these specimens to generate reference genomes for the scientific community, and maybe even describe a new Greek endemic species of viper.

Our whole specimen Italian Wall Lizard collection has also grown substantially as PhD student Amber Singh has collected more than 400 of these lizards from Los Angeles where they were introduced to a backyard in 1994 and have been spreading across the city ever since. This summer, Amber collected introduced wall lizards from LA and their ancestors from Taormina, the Italian village where the lizards were plucked from, to compare their cognition and ability to deal with stress. Specimens from LA and Italy are accompanied by tissues and high-resolution scans so that future researchers can connect genes to phenotypic characteristics that do not preserve well in ethanol, such as color. Amber also expanded how our collection can be used beyond research as she developed eight new teaching kits featuring skeletons and wet specimens to support hands-on learning about topics such as convergent evolution and camouflage. Our efforts in the Reptile & Amphibian collection demonstrate how specimens can serve as lasting resources for research, teaching, and public. This collection is also searchable on the [Consortium of Vertebrate Collections](#) database.



A potential new species of viper from Greece

“A devotion to specimens, so that they can tell their important stories”. Or I should say, so that WE can tell THEIR stories. I’ve emphasized the They, as it’s not really so much about us people. That’s a curious thing about museums and museum curation, as it’s really not about us. It requires a devotion to “other”, a commitment to something for the greater good. A long game, waiting for inevitable payoffs. That’s what we’re trying to do here at the SDSU Biodiversity Museum. We’re embracing and caring for the legacy of the 1000s of specimens that have been sacrificed and preserved to live here, in our Museum. But in a very similar way, we are honoring the legacy of the faculty curators and student researchers before us. In this way, it is about us, at least partially.



Our Museum Curators and Associates, after an Outreach event in Nov 2025. L to R, Dr Mike Simpson, Dr Gena Sbeglia, Dr Marshal Hedin, Dr Eric Ekdale, Dr Kinsey Brock (front), Dr Lluvia Flores-Renteria, and Dr Kevin Burns

Please consider supporting the Museum [at this link](https://biodiversitymuseum.sdsu.edu/give/), or here:
<https://biodiversitymuseum.sdsu.edu/give/>.

Your contribution will help support undergraduate and graduate students, solidify our infrastructure, and purchase new equipment. Please contact Dr. Hedin if you have a particular support interest. Also, please consider sharing the [Newsletter link](https://biodiversitymuseum.sdsu.edu/newsletter-signup/) (<https://biodiversitymuseum.sdsu.edu/newsletter-signup/>) with others to help spread the word about our efforts!

Until next time, with humble thanks.

Dr. Marshal Hedin
Director, SDSU Biodiversity Museum

