Biology Newsletter

California State University Channel Islands

Spring 2026

Image above: Barn Owl, Carrizo Plain National Monument, San Luis Obispo Co., CA, USA. Photo by Bill Bouton (CC BY-SA 2.0 license).

Contents

Chair's welcome

Hello everyone,

Welcome to the Spring 2026 edition of our Biology Department Newsletter. As the incoming Chair, I am incredibly proud to spotlight the distinct achievements of our students, faculty, and alumni. We are thrilled to celebrate major milestones, including the grand opening of our new CSUCI Apiary at the UC Hansen Agricultural Research and Extension Center and the official approval of our upcoming B.S. in Sustainable Agriculture degree. From award-winning student research at the national SACNAS conference to transformative summer research experiences, our students continue to push boundaries and excel. I invite you to explore these pages to see how our community is expanding educational opportunities and shaping the future of scientific innovation.

Enjoy the newsletter!

Dr. Ruben Alarcón

Chair, Biology Department

California State University Channel Islands

We want to hear from you! Invitation to alumni

We invite CSUCI Biology alumni to share your news—current endeavors, work, projects, and/or studies. We would love to hear about your journey since completing your degree. Please contact Biology and/or Laura Lugo, Academic Program Analyst, to share your news for the next newsletter!

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Student Accomplishments

Biology Program Honors 2026 recipients

We congratulate Malena Cantoni and Cassandra Fernandez, who received Biology Program Honors. Both students were selected from a larger pool of nominees who met several selection criteria, including achieving a minimum grade point average of 3.5 for all courses satisfying the requirements for the major and completing a Service-Learning course (e.g., BIOL 492, BIOL 494, or BIOL 497). The statements included below were read at the honors convocation.

Pictured above, CSUCI Biology students Malena Cantoni and Cassandra Fernandez (center left and center right, respectively) at the program honors ceremony. Biology Professors Dr. Geoff Dilly and Dr. Ruben Alarcón are standing on the left, and Dean of Arts and Sciences Dr. Phil Hampton, standing on the right, announced the award.

Malena Cantoni

Malena Cantoni is an excellent student and has been a valued member of the learning community in our university. For nearly two years, she worked as a biology and chemistry tutor at the Learning Resource Center, where she provided support to students and facilitated group discussions. She also was an integral member of two research teams during her time here with Dr. Rudi von May studying evolutionary morphology of amphibians and reptiles, as well as Dr. Geoff Dilly studying stress responses in intertidal mussel populations. She learned new skills including the analysis of micro-computed tomography scanning images to study the morphology of Andean frogs, the bioinformatics of primer design and analysis of RNAseq data, and molecular lab techniques. In Summer 2025, she was a research participant in SURF on a mussel restoration project. She has participated in several research conferences both locally (including the California/Nevada Amphibian Populations Task Force Meeting and the Student Research Conference, both on campus) and internationally at the Peruvian Congress of Herpetology, held in Lima, Peru. Excelling in academics, at the bench, and in the field – she is a credit to the department and to CSUCI. We wish her the best!

Cassandra Fernandez

Cassandra Fernandez joined CSUCI as a transfer student from Moorpark College in Spring 2025. Even in her short time at CI, she has had a huge impact in classes, in research, and in the biology community. Cassandra has received numerous awards since 2025 including the Westlake Garden Club Scholarship, Eddinger Family Scholarship, Cause and Tracy Hanna Memorial Scholarship, and an ESA Travel Award. She is actively involved in two research teams: at Moorpark College rearing and researching endangered Palos Verdes Blue Butterflies, and at CI studying the ecology of intertidal systems in the lab of Dr. Geoff Dilly. In that lab, she led the ecological research in a SURF 2025 project studying the impacts of mussel bed restoration and has taken the lead on modeling the impacts of long-term changes on rocky intertidal sites around the Channel Islands. She has presented her findings at conferences locally (at SCCUR hosted at CSUCI and at the California Native Plant Society in Riverside) as well as nationally at the Ecological Society of America in Baltimore. Simultaneously, she has continued to excel in her coursework, maintaining a perfect 4.0 GPA at CSUCI. She is the model of a student-scholar, and the biology department wishes her the best!

Student Accomplishments

Summer Research Experience in Colorado: Tabitha Kelley, B.S. Biology — Class of 2026

Attending the Rocky Mountain Biological Laboratory (RMBL) in Colorado last summer was one of the most memorable and transformative experiences of my life. Working alongside scientists who treated us as true colleagues gave me my first real sense of what it means to *do* science in the field. I was part of the education program, a tight-knit group of about 40 students who quickly became my community. Every day brought a new adventure—hiking, conducting research, biking through the mountains, or even sunbathing under UV levels that reached 13. No matter what we were doing, I always had someone beside me cheering me on.

Pictured above, CSUCI Biology student Tabitha Kelley preparing to sort aquatic insects in the field.

My favorite day at RMBL was July 4th. Everyone takes the day off and heads down to town to celebrate together, and the sense of community is unforgettable. The friendships I made and the experience of living and working in the Rocky Mountains are things I'll carry with me forever.

For any student who loves ecology or outdoor science, the National Science Foundation's Research Experiences for Undergraduates (NSF-REU) program at RMBL is an opportunity you should absolutely pursue.

RMBL Application Website: https://www.rmbl.org/apply-now/

Pictured above, fox outside one of the cabins at RMBL. Pictured left, Emerald Lake, a short hike away from the RMBL campus.

Biology Alumni Spotlight

Selina Osuna, B.S. Biology — Class of 2024

I'm excited to announce that I will be attending Rocky Mountain University of Health Professions in Provo, Utah for their Doctorate of Optometry program beginning May 2026. With their unique and innovative "optometric medicine" approach, RMU strives to train their optometry students not only in glasses and contacts, but with a heavy emphasis in disease management and systemic integration. The 11-semester curriculum provides a strong foundation in anatomy, physiology, microbiology, immunology, biochemistry, and pharmacology which aligns closely with medical school, all while allowing for student success. As a student, I will be receiving clinical exposure as early as my first year, which as a visual learner, makes me feel more confident for my clinical rotations starting in the third year and especially for the three-part board exams.

During my time at CSUCI from 2020-2024, I completed my degree in Biology because I knew I wanted to pursue a career in health care and ended up deeply enjoying courses like microbiology and anatomy & physiology. Learning about the intricate mechanisms of the body and seeing how microscopic elements play such a big role in them led me to optometry, which marries these two interests. An optometry program will be rigorous and demanding, but I feel as if CSUCI has provided me with the tools necessary to pursue this level of higher education.

I am thrilled to be starting this four-year journey towards my professional career and look forward to specializing in pediatrics and helping underserved communities receive the eye care they deserve.

Pictured above, CSUCI Biology alumna Selina Osuna, graduation photo.

Congrats Selina!

News from recent graduates

Irene Ochoa (Class of 2026) recently started working at AmerStem Inc., a biotech company focused on sustainable biomass cultivation of the Quillaja tree for vaccine research. AmerStem is based in Camarillo, California. Congrats Irene!

Cristopher Giles (Class of 2026) was accepted to the Master of Science in Stem Cell Biology and Regenerative Medicine program at the University of Southern California (USC). Congrats Cristopher!

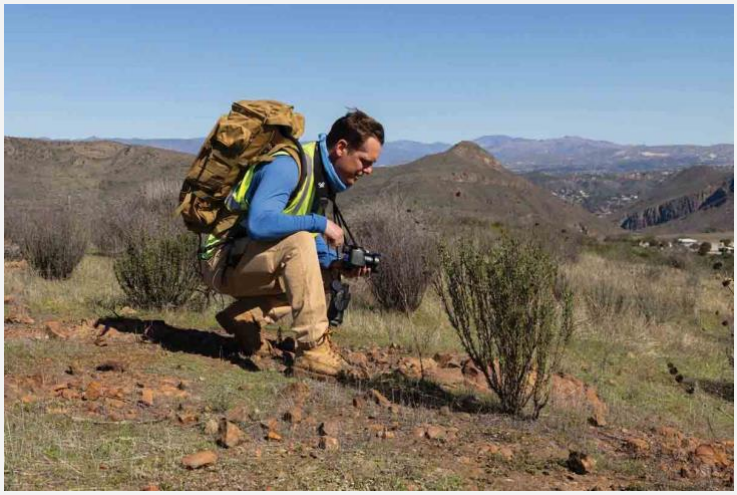
Bryan Magana (Class of 2026) was accepted to the Master of Science in Epidemiology program at Johns Hopkins University. Congrats Bryan!

Biology Alumni Spotlight

Kevin Bock, B.S. Biology — Class of 2019

Kevin Bock, now one of Southern California's leading bumble bee experts, discovered his passion for bees almost by accident. While studying at CSU Channel Islands and indulging in his Dungeons & Dragons hobby, he became interested in making mead—an interest that led him to enroll in a beekeeping course. Despite an initial fear of bees, repeated time in the bee yard transformed his nervousness into fascination, eventually sparking a deep love for the insects. Returning to college in his mid-twenties after feeling unfulfilled in an office job, Bock found that biology aligned with his lifelong love of the outdoors.

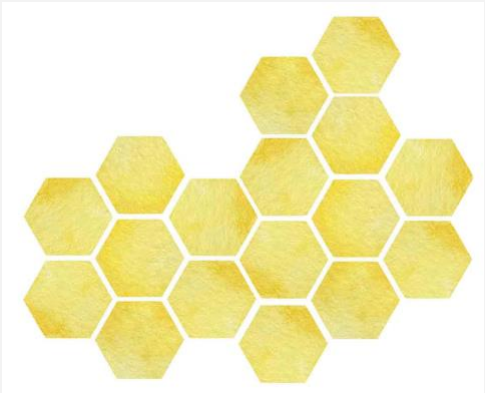
Pictured above, CSUCI Biology alumnus Kevin Bock in the field.



Pictured above, CSUCI Biology alumnus Kevin Bock in the field.

Mentored closely by Professor Ruben Alarcón, Bock gained the skills and confidence that helped launch his career as a wildlife biologist for Sentinel Science, where he works to protect endangered native bees and support broader conservation efforts. Grateful for the guidance he received, he now returns each year to help teach CSUCI's beekeeping class, mentoring students who hope to follow similar paths. His journey—from hesitant student to expert and mentor—demonstrates how curiosity, support, and hands-on experience can shape a meaningful career in conservation.

Visit go.csuci.edu/ch-bock to view a video of Kevin and the bees and read article in Channel Islands magazine.



We want to hear from you! Invitation to alumni

We invite CSUCI Biology alumni to share your news—current endeavors, work, projects, and/or studies. We would love to hear about your journey since completing your degree. Please contact Biology and/or Laura Lugo, Academic Program Analyst, to share your news for the next newsletter!

Biology Alumni Spotlight

Nikolas VanKeersbilck, B.S. Biology — Class of 2020

Biology alum Nikolas VanKeersbilck, (Class of 2020) graduated in with a double major, B.S. Biology and B.S. chemistry. Nik was one of four CSUCI students mentored by Biology Professor Dr. Amy Denton, who was a faculty participant in an NSF-funded project led by the University of Rhode Island Graduate School of Oceanography called the Northwest Passage Project. The project was designed to attract students from smaller, minority-serving institutions and get them involved in both arctic climate change research and science outreach during an 18-day, 2000 nautical mile expedition on an ice-breaking research vessel in the Canadian Arctic Archipelago. On the ship, Nik was involved as a student researcher on a team led by University of Rhode Island scientist Dr. Brice Loose, where he took conductivity, depth, and temperature readings to study how water column chemistry affects arctic greenhouse gas flux. Nik presented his group's preliminary findings in February 2020 at the American Geophysical Union's Oceans Sciences conference in San Diego. While in the arctic, the expedition researchers made international news by finding microplastics in an ice core.

A PBS documentary was made about this expedition and can be watched for free here: *Frozen Obsession* (PBS)

After graduation from CSUCI, Nik completed a Master of Science in Bioinformatics at the University of Iceland (he really liked the arctic!) and is now working at Amgen.

Pictured above, CSUCI Biology alumnus Nik VanKeersbilck at work in the Canadian arctic while on the research trip.

Pictured left, the Swedish icebreaker *Oden*, used in the NSF-funded Northwest Passage Project (Photo: Larry Larsson, U.S. Navy Photo, Public domain, via Wikimedia Commons).

New CSUCI Apiary opens

New CSUCI Apiary at the University of California Hansen Agricultural Research & Extension Center

Pictured above, Monica Estrada and Jane Arthur, creators of the apiary mural, with CSUCI Interim President, Dr. Sue Andrzejewski.

The CSUCI Biology Department celebrated the grand opening of the CSUCI Apiary on September 5, 2025, at the UC Hansen Agricultural Research and Extension Center, joined by campus administrators, community partners, and sponsors who helped bring the project to life. The expanded site enhances opportunities for education, research, and honey production, offering greater capacity for student projects and bee-related studies. Guests enjoyed honey tasting, met student researchers and beekeepers, and admired a new mural created by CSUCI Art majors, Monica Estrada and Jane Arthur.

Designed to eventually house 60–80 honey bee colonies, the apiary will support CSUCI students, a SEEAG high school STEM program, and participants in the UC Davis's California Master Beekeeping Program. The event also recognized generous support from the California Association of Pest Control Advisors (CAPCA) Ventura County, the Los Angeles County Beekeepers Association, and Nutrigen Ag Solutions. This spring, students in BIOL 475 and members of the Bee Club will continue expanding the garden at the apiary with herbs and native plants, marking an exciting step forward for the campus community—and for the bees.

Pictured above, CSUCI Bee Club President Tabitha Kelley and VP Gabriella Vincze showcasing CSUCI honey.

Research Highlights

Listening for Frogs: Monitoring California Red-Legged Frogs in the Santa Monica Mountains

This spring, Dr. Allison Alvarado and CSUCI biology students launched a collaborative project with the National Park Service (Santa Monica Mountains National Recreation Area) to monitor amphibian populations using passive acoustic technology. Students deployed AudioMoth and HydroMoth recording units across stream habitats to detect frog vocalizations, with a focus on the federally threatened California red-legged frog (CRLF). Because frogs call most actively during the breeding season, these recordings provide valuable insight into species presence, activity patterns, and habitat use.

Back on campus, students are using bioacoustic tools to analyze recordings and investigate both species-specific detections and broader community composition. This work complements the Santa Barbara Zoo's CRLF headstart program at CSUCI, where eggs are reared and tadpoles released to bolster local populations. Together, these efforts approach the same conservation challenge from different angles—linking field-based monitoring with on-campus conservation to better understand and support amphibian populations in the Santa Monica Mountains.

Pictured above, the federally threatened California red-legged frog.

Pictured above, deploying HydroMoth recording unit in a stream in the Santa Monica Mountains National Recreation Area.

Research Highlights

Research highlight: Tapia Lab (https://tapialab.cikeys.com/)

Sheila Ferer, Research Scientist in the Tapia lab, visited Dr. Steven Boeynaems (https://www.boeynaemslab.org/) lab at Baylor College of Medicine during Fall 2025. At BCM she carried out a proteome wide screen looking at the yeast GFP library, a collection of close 4,500 yeast strains individually tagged with GFP. This work is funded by the Water and Life Interface Institute (https://walii.science/) that the Tapia Lab is part of. This screen is currently under analysis and will lead to both a publication as well as future projects already underway.

Sheila Ferer, Research Scientist in the Tapia lab, attended the 2025 Yeast Genetics & Genomics Course at Cold Spring Harbor Laboratory (CSHL) which ran from July 22 to August 12, 2025, providing intensive, hands-on training in classical and modern yeast techniques.

Sheila Ferer, Research Scientist in the Tapia lab, will be presenting a talk at the Yeast Genetics Meeting, held at the Asilomar Conference Grounds in Pacific Grove, CA, on June 13–17, 2026. Sheila's talk is titled "Global proteome rewiring after desiccation and rehydration."

Research highlight: Becerra Lab

Biology faculty Dr. Caryl Ann Becerra and students in her lab have been investigating the antibacterial potential of extracts made from California native plants, some of which grow in the recently renamed and rededicated Luqumšaš Courtyard (also formally known as Napa Courtyard). Luqumšaš means "We Grow Together" in Barbareño/ Ventureño Chumash language. Over the past year, students spent several days working to improve the garden, which has medicinal plants used for their research. The garden also has native milkweed, which are host plants for Monarch butterflies and their caterpillars. After completing their work in the garden, the students organized a community building event that included a potluck that allowed them to enjoy and appreciate the space they worked on.

Congrats for the good work!

Pictured above, students congregating by the plants (top), after completing their work in the garden (bottom left), and at potluck (bottom right).

Research Highlights

New Species from South America — Meet the new Poison Frog, Lungless Salamander, and Andean Lizard

Biology faculty **Dr. Rudi von May** and colleagues recently described and named three new species from South America—a poison frog, a lungless salamander, and an Andean lizard. The new species were identified using a combination of morphological and molecular data (DNA sequences), in addition to their color pattern and geographic distribution. Molecular phylogenetic analyses further confirmed their distinctiveness from other known species.

New lungless salamander,
Bolitoglossa chrysothyma.
Photo by Frank Glaw.

New poison frog,
Ranitomeya ichapama.
Illustration by Karin von May.

New Andean lizard,
Liolaemus misti.
Photo by Roy Santa-Cruz.

The new poison frog (*Ranitomeya ichapama*) is known from five sites in Amazonian lowland forests in Peru and Brazil, whereas the new salamander (*Bolitoglossa chrysothyma*) is known from three sites in the Amazonian lowland and montane forests of Peru. In contrast, the new lizard (*Liolaemus misti*) lives in a harsh alpine ecosystem composed of grasslands and shrub-dominated habitat near the summit of volcanos in southern Peru. It is considered the world's highest elevation lizard. The discovery of these new species improves our understanding of tropical biodiversity, much of which remains unknown or undescribed. Knowing how many species live in each place is also a key step for nature conservation. Each species was described in a separate scientific paper (all listed at the end of this newsletter).

New B.S. in Sustainable Agriculture

New interdisciplinary program to welcome its first cohort in Fall 2027

CSU Channel Islands is pleased to announce the development of a new Bachelor of Science in Sustainable Agriculture. The program was recently approved and is expected to welcome its first cohort in Fall 2027. Designed as an interdisciplinary degree, it brings together natural sciences, social sciences, and hands-on learning to give students a strong foundation in plant and soil science, pest management, labor rights, agricultural policy, and food system social movements. This combination of scientific training and social analysis prepares graduates to address the ecological and equity challenges shaping modern agriculture.

The new B.S. in Sustainable Agriculture program aligns closely with CSUCI's mission to foster learning across disciplines and cultivate global and multicultural perspectives. Students will participate in fieldwork, laboratory courses, and community partnerships, gaining practical experience with Ventura County's fresh produce and horticulture industries.

Once launched, the B.S. in Sustainable Agriculture will fill an important educational gap within the CSU system by offering a program rooted in both ecological science and social justice. Graduates will be prepared for careers in farm advising, agribusiness, agricultural policy, food justice advocacy, research, and sustainable production. The curriculum equips students to develop management strategies that incorporate diverse perspectives while supporting long-term ecological sustainability, ensuring they are ready to lead in a rapidly evolving agricultural landscape.

To access the catalog description, please go to Sustainable Agriculture, B.S.

Teaching Highlights

Conservation Connect Speaker Series engages students

As part of the Santa Barbara Zoo–CSUCI Conservation Center Pilot Program, Dr. Allison Alvarado coordinated a three-part speaker series this spring featuring members of the Zoo's Conservation Science team. Held in April and May, the series highlighted topics in wildlife conservation, including condor recovery, field-based research and career pathways. The series created opportunities for students to engage directly with practicing conservation biologists in an informal, highly interactive setting, with questions and discussion woven throughout. The talks were especially relevant for students interested in ecology, animal behavior, and wildlife careers. The dates, guest speaker names, and the titles of their talks are listed below.

On April 20, 2026, Estelle Sandhaus, Ph.D., Vice President of Conservation and Science at the Santa Barbara Zoo, gave a talk titled "What Wildlife Conservation Really Looks Like."

On April 27, 2026, Dave Meyer, California Condor Biologist from the Santa Barbara Zoo, gave a talk titled "Tracking condors: my experience with one of the rarest birds."

On May 4, 2026, Molly Murphy, California Condor Biologist from the Santa Barbara Zoo, gave a talk titled "Wildlife Conservation in the Field: Saving California's Species."

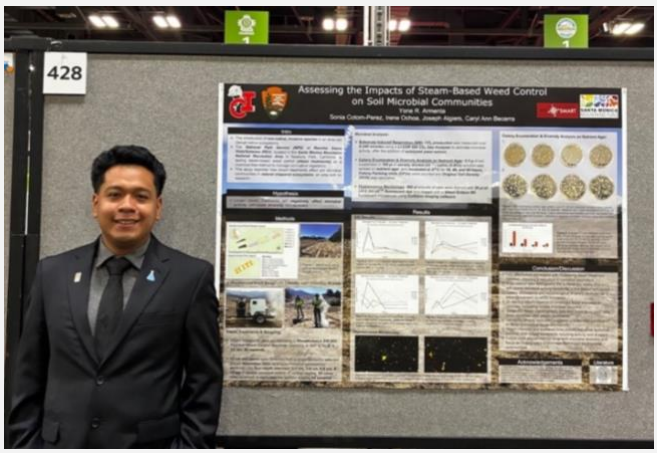
Conference Presentations

CSUCI students participate in 2025 National Diversity in STEM conference

Sixteen CSUCI students presented their research at the 2025 National Diversity in STEM conference (NDiSTEM) hosted by the Society for the Advancement of Chicanos/Hispanics & Native Americans in Science (SACNAS) in Columbus, Ohio, in October 2025.

CSUCI Biology major **Yone Armenta** received an award for his poster presentation titled "*Assessing the Impacts of Steam-Based Weed Control in Soil Microbial Communities*". His poster featured the research he conducts in the lab of Assistant Professor Dr. Caryl Ann Becerra. Yone is the third student in Dr. Becerra's lab who has won an award at this national undergraduate conference. Congratulations Yone!

Pictured above, CSUCI students and faculty who attended the SACNAS 2025 NDivSTEM conference.



Pictured above, CSUCI Biology student Yone Armenta presenting his poster at NDivSTEM.

Pictured above, Yone Armenta and Dr. Caryl Ann Becerra, when they received the news about the award.

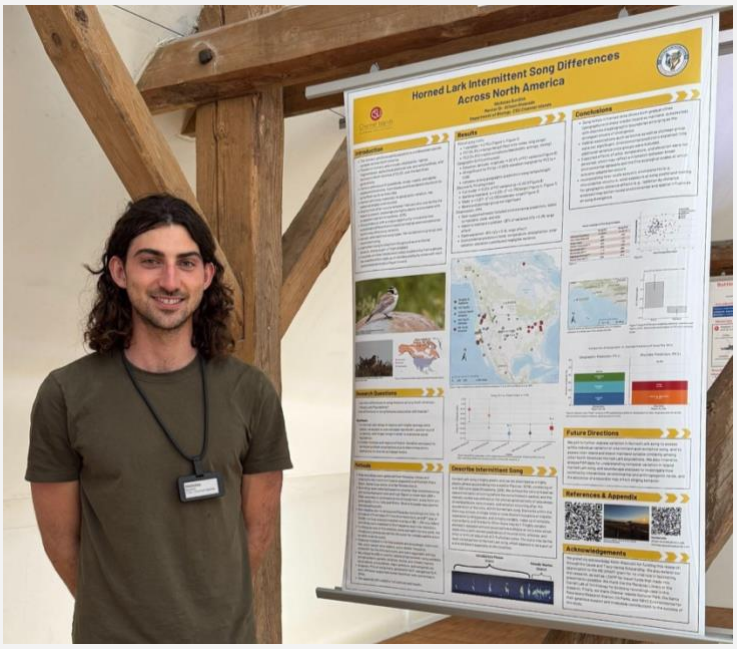
Pictured above, CSUCI Biology alumna Brianna Ramos (center, right) talking to CSUCI students.

During the conference, the students met three CSUCI Biology alumni who are currently enrolled in graduate programs: Brianna Ramos, who previously did research in Dr. Gareth Harris's lab and is currently in the PhD program in neuroscience at the University of Michigan, Ann Arbor; Bianca Salazar, who previously did research in Dr. Allison Alvarado's lab and is currently in the PhD program in Quantitative and Systems Biology at the University of California, Merced; and Rachel Richardson, who previously did research in Dr. Becerra's lab and is currently doing microbiome research at Michigan State University.

Conference Presentations

Taking Undergraduate Bird Research to an International Stage

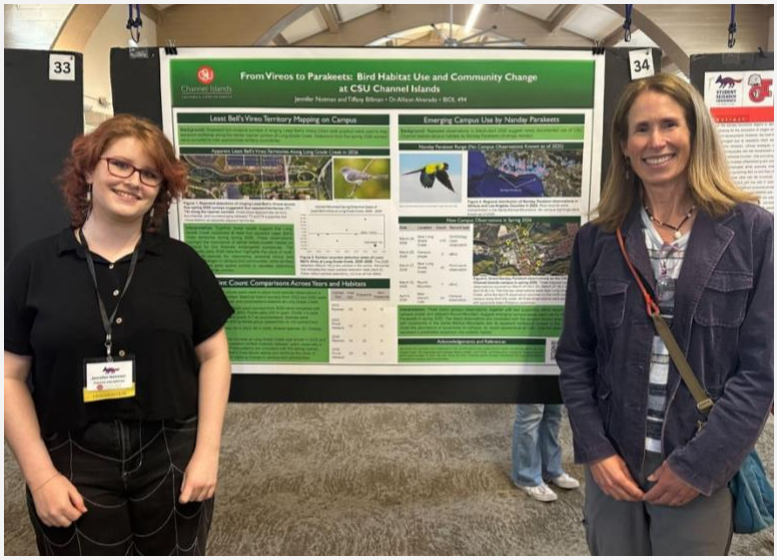
Nicholas Burdick, a Biology and Psychology double major, presented a poster at the XXIX International Bioacoustics Congress in Denmark in September 2025. Working with faculty advisor Dr. Allison Alvarado, this research examines song variation in Horned Larks, incorporating new acoustic recordings from populations on the California Channel Islands. Their work highlights how bioacoustics can be used to study geographic variation in bird communication and contributes to a growing understanding of how island populations may differ from mainland counterparts. Congrats Nicholas!



Pictured left, Biology & Psychology student Nicholas Burdick at his poster. Above, a Horned Lark.

Mapping Bird Habitat and New Species Records at CSUCI

Jennifer Notman, a Biology major and president of the CI Bird Club, received the award for Best Biology Poster at the 18th Annual CSUCI Student Research Conference for her project on bird habitat use and community change at CSU Channel Islands. Working with faculty advisor Dr. Allison Alvarado, this research includes territory mapping of the endangered Least Bell's Vireo in Long Grade Creek, as well as documenting the first records of Nanday's Parakeets on campus this spring. This work contributes to ongoing efforts to better understand avian diversity and habitat use in both natural and campus environments. Congrats Jennifer!



Pictured above, Jennifer Notman (left) with Dr. Alvarado at poster.

Conference Presentations

Students participate in 2025 Southern California Conference for Undergraduate Research

Several Biology students, along with students and faculty in other departments at CSUCI, presented their projects at the Southern California Conference for Undergraduate Research (SCCUR), held at CSUCI on November 22, 2025. The conference had over 2,038 attendees including students, faculty and others representing 123 institutions of higher education and 43 high school/enrollment programs. With a total of 899 presentations, including 631 posters and 268 oral talks across five sessions, the event was a success! Additionally, there was a robust GradFair with 18 graduate program representatives. The following students presented work done in the labs of Biology faculty Caryl Ann Becerra, Ph.D., and Nitika Parmar, Ph.D., as well as Chemistry faculty William Munroe, Ph.D., and ESRM faculty Joseph Algiers, M.S. Congratulations to all!

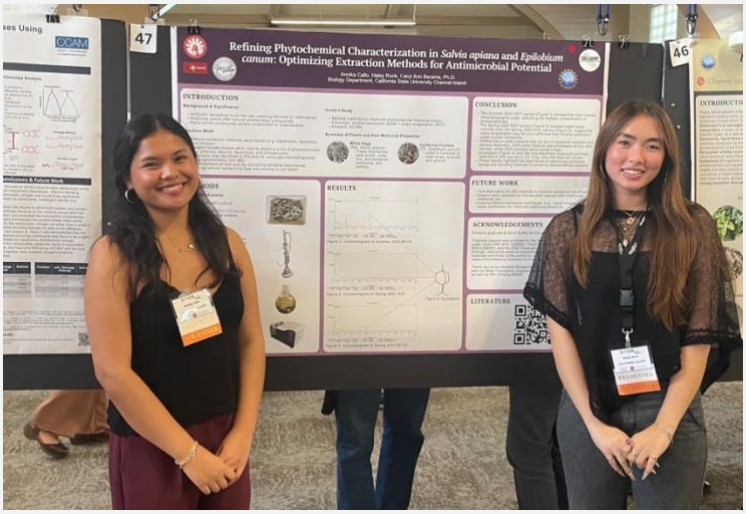
Annika Callo, **Haley Ronk**, and Caryl Ann Becerra. "Refining Phytochemical Characterization in *Salvia apiana* and *Epilobium canum*: Optimizing Extraction Methods for Antimicrobial Potential," SCCUR, November 2025. [*Poster*]

Omkar Patil, **Shivani Sule**, **Genesis Cecena**, **Jennifer Moreno**, and Caryl Ann Becerra. "Investigating the Antibacterial Potential of Teas made from California Native Plants," SCCUR, November 2025. [*Poster*]

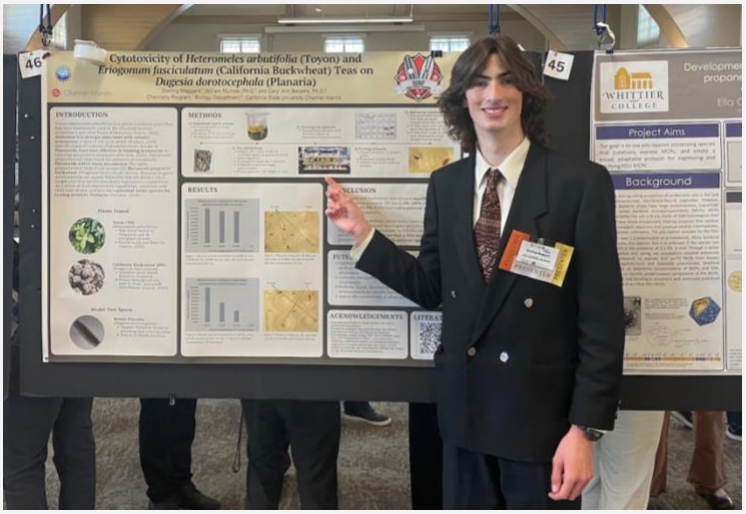
Sterling Maggard, William Munroe, and Caryl Ann Becerra. "Cytotoxicity of *Heteromeles arbutifolia* (Toyon) and *Eriogonum fasciculatum* (California Buckwheat) Teas on *Dugesia dorotocephala* (Planaria)," SCCUR, November 2025. [*Poster*]

David Ross, **Samantha von Blomberg**, **Cristopher Giles**, **Sarah Kennedy**, and Nitika Parmar. "Mapping the Oral Microbiome of Human Subjects in response to Natural and Synthetic Sweeteners." SCCUR, November 2025. [*Poster*]

Yone Armenta, **Sonia Cotom-Perez**, **Irene Ochoa**, Joseph Algiers, and Caryl Ann Becerra**. "**Assessing the Impact of Steam Treatment on Soil Microbial Communities," SCCUR, November 2025. [*Oral presentation*]



Pictured above, Biology students Annika Callo and Haley Ronk at their poster.



Pictured above, Biochemistry student Sterling Maggard at poster.

Conference Presentations

Biology students participate in West Coast Biological Sciences Undergraduate Research Conference

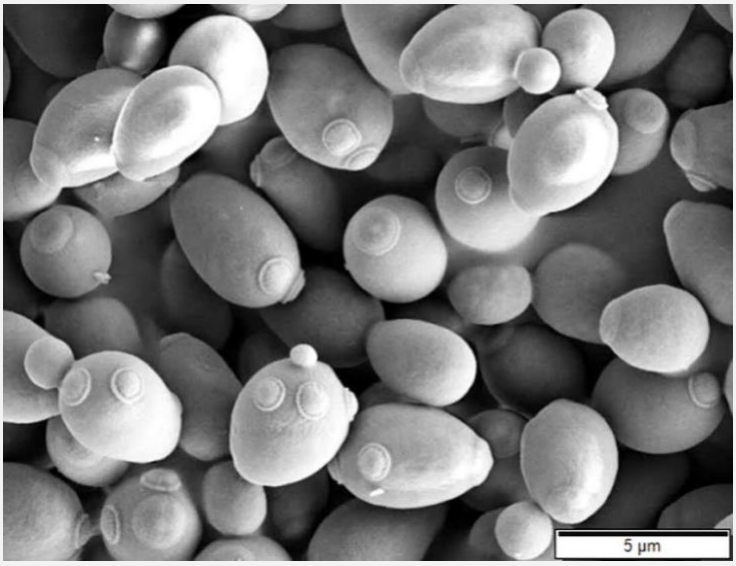
Several Biology students participated in the 49th Annual West Coast Biological Sciences Undergraduate Research Conference (WCBSURC), held at Sonoma State University on April 11, 2026. The following students presented work done in the lab of Associate Professor Hugo Tapia, Ph.D. Congratulations to all!

Riley Thorne. "Mechanisms of Membrane Protection and Desiccation Tolerance in Yeast." WCBSURC, April 2026. [*Poster*]

Karen Galvan, and **Ryan Moses**. "Dried and Tried: Yeast Spores, Trehalose, and the Battle Against Desiccation." WCBSURC, April 2026. [*Poster*]

Biology student participates in Amgen CSURF program

Biology student **Christell Martinez** presented work done in the lab of Associate Professor Hugo Tapia, Ph.D. Christell's presentation, "Characterizing Growth and Induction Dynamics in Yeast Surface Display," received an Honorable Mention in Poster Presentation in the field of Molecular Biology. Congratulations Christell!



Pictured above, Brewer's yeast (*Saccharomyces cerevisiae*). Scanning electron microscope image by Mogana Das Murtey and Patchamuthu Ramasamy (CC BY 3.0 license).

M.S. Biotechnology students participate in 2025 Amgen University Day

Several CSUCI M.S. Biotechnology students presented their research at Amgen University Day, in June 2025. Congratulations to all!

Jainee Patel. "Engineering-Based Mechanobiological Modeling of Commotio Cordis: A Translational Pathway to Sudden Cardiac Death Prevention." Amgen University Day, June 2025. [*Poster*]

Farhan Billoo. "In Vitro Characterization of Bioengineered Polyethylene Glycol Hydrogels for Cartilage Regeneration Using ATDC5 Cells and Human iPSCs: Toward Stem Cell-Based In Vitro Disease Modeling Platforms." Amgen University Day, June 2025. [*Poster*]

Chaitali Vadgama. "Small Cells, Big Impact - High-Throughput Imaging for safer Drug Development." Amgen University Day, June 2025. [*Poster*]

Sai Prasanna. "Fasting Mimicking Diet for Alport Syndrome: A Novel Therapeutic Approach." Amgen University Day, June 2025. [*Poster*]

Prudhvi Sai. "Modeling Neurodevelopmental Disruption in PACS1 Syndrome Using iPSC-Derived Neurons." Amgen University Day, June 2025. [*Poster*]

Invited Seminars & Guest Lectures

Biology faculty **Dr. Hugo Tapia** gave an invited seminar presentation at CSU San Marcos on October 3, 2025: "Drying without dying; using yeast as a model organism to study desiccation tolerance." Department of Biological Sciences, Seminar Series, CSU San Marcos.

Biology faculty **Dr. Hugo Tapia** gave an invited seminar presentation at Sonoma State University on October 20, 2025: "Drying without dying; using yeast as a model organism to study desiccation tolerance." Department of Biology Seminar Series, Sonoma State University.

Biology faculty **Dr. Zin Htway** presented research with collaborators in the annual conferences of the American Society of Clinical Oncology, the Endocrine Society, and the American College of Surgeons.

Contributor: "Using Generative Artificial Intelligence to Reduce Health Literacy Disparities in Surgical Oncology." Pandya, S., Burrough, C., Bresler, T.E., Htway, Z., Fujita, M. Disparities in Surgical Oncologic Care Section of the Society of Surgical Oncology (SSO) 47th Annual Meeting. Phoenix, Arizona, March 5–7, 2026.

Contributor: "Cross-Modality Imaging Variability in Pancreatic Cyst Size Measurement and Its Implications for Surgical Decision-Making." Bresler, T.E., Mauch, A., Htway, Z., Desai, K. Plenary Session of the 106th Annual Scientific Meeting, Southern California Chapter of The American College of Surgeons (SCCACS). Santa Barbara, California, January 9–11, 2026.

Contributor: "Assessing the Performance of ChatGPT-4.0 in Handling Complex Clinical Queries Based on NCCN Guidelines for Neuroendocrine and Adrenal Tumors." Pandya, S., Makaryan, T., Bresler, T.E., Meyer, R., Htway, Z., Fujita, M. The Endocrine Society (ENDO) 107th Annual Meeting. San Francisco, California, July 12–15, 2025.

Contributor: "Mastectomy Use Despite Breast-Conserving Eligibility: National Trends in Stage I Breast Cancer (2004–2021)." Calero, T., Bresler, T.E., Htway, Z., Chi, D.D. American Society of Breast Surgeons 27th Annual Meeting. Seattle, Washington. April 29–May 3, 2026.

Biology faculty **Dr. Rudi von May** gave an invited seminar presentation at Cal Poly Humboldt on April 3, 2026: "Elevational patterns of body size and shape in terrestrial-breeding frogs." Department of Biological Sciences, Seminar Series, Cal Poly Humboldt.

Biology Professor **Amy Denton, Ph.D.**, gave a talk at the Ventura Audubon Society, in Ventura, California, on January 13, 2026. In her talk, titled "From Shoebills to Secretarybirds: Birding as a Driver of Conservation and Sustainable Tourism in Botswana and Uganda," she emphasized the importance of birding as a key component of sustainable tourism in sub-Saharan Africa, offering both ecological and economic benefits. She shared her recent experiences birding across diverse ecosystems in Botswana and Uganda, highlighting the incredible diversity of species she encountered. Beyond their aesthetic appeal, birds play critical roles in ecosystem functioning, including pollination, seed dispersal, pest regulation, and complex interactions with many other iconic African species. She discussed how birding-specific tourism fosters conservation by creating economic incentives for local communities and promoting habitat protection and how Botswana and Uganda are using different strategies to leverage their rich avian biodiversity.

Pictured above, a Shoebill, one of the many bird species Dr. Denton observed during her trip in Africa.

Community Outreach

CSUCI Day of Service at Modoc Garden

CSUCI's 9/11 National Day of Service was held at Modoc Garden on September 12, 2025. The event was organized by the Center for Community Engagement (CCE), with support from the Biology Program, CI Housing, CI Basic Needs, and several community partner organizations including Native Monarchs, CalThrive Community Agriculture, the Santa Barbara Zoo, Community Roots Garden, Rodale Institute, and Food Forward. A total of 66 volunteers including CSUCI students, faculty, and staff, as well as community partners, helped pull weeds and spread mulch—essential tasks for maintaining the Modoc Garden—while learning about the local environment, sustainable agriculture, and wildlife research and conservation.

One of the highlights included a special Monarch tagging session with specialists from the Santa Barbara Zoo. Tagging individual butterflies (see photo) allows researchers to study the abundance, behavior, and movement of Monarch butterflies in the area. Other activities included (i) a guided tour of the garden; (ii) Monarch and Milkweed conservation with Native Monarchs; (iii) composting, hoop house gardening, and invasive species; (iv) Weeding and planting vegetables with CalThrive; (v) how the vegetable harvest supports the Dolphin Pantry with CI Basic Needs; (vi) coloring pollinator garden signs to be displayed in Housing gardens.

Pictured above, participants at Modoc Garden.

Pictured above, CalThrive team.

Pictured above, students doing garden maintenance.

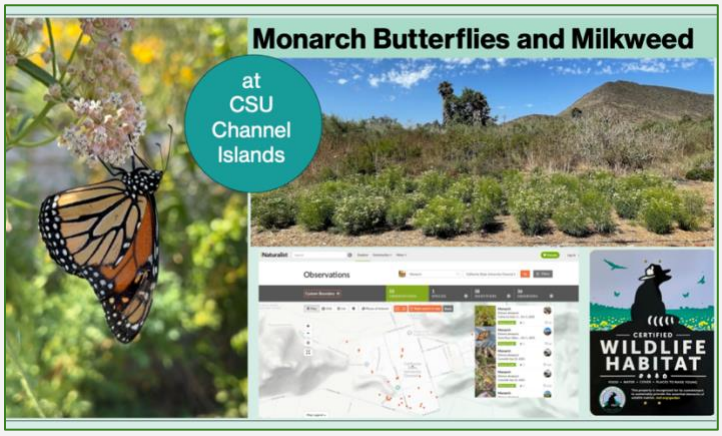
Pictured above, Monarch butterfly with tag.

Community Outreach

Entomology Students Participate in Monarch Butterfly Day

Biology majors **Diana Alfaro**, **Yessica Giles**, **Nicholas Burdick**, and **Ethan Ernst** participated in the "Monarch Butterfly Day/Día de la Mariposa Monarca" on Saturday, October 11, 2025, at Mission Park in Ventura. This community outreach event celebrated the cultural and ecological importance of the Monarch Butterfly and was organized by the Ventura Land Trust. The event included the participation of 15 organizations offering hands-on educational and art activities for all ages. The students volunteered at the CSUCI Biology booth, where they provided information about Monarch Butterflies and Milkweed as well as other insects and their habitats on campus. CSUCI Biology alumna **Marissa Nava** (Class of 2024) also volunteered at the booth. Attendees were particularly interested in learning about species shown in the insect display boxes that students use in their Entomology class, taught by Dr. Ruben Alarcón. They also discussed the importance of insects as pollinators of wild and cultivated plants. The event included five guest presentations, one of them given by Biology faculty Dr. Rudi von May, who spoke about CSUCI's Biology Program and student research in the Modoc garden and the surrounding habitats.

Pictured above, event flyer (top) and Biology students speaking with guests.



Pictured above, posted displayed in Biology booth.

Pictured above, guests observing insects in display boxes.

Community Outreach

Wildlife Conservation in Action: A New Generation of Barn Owls at CSUCI

The CSUCI Biology Department continues to expand its work in wildlife conservation through a Barn Owl nesting project at the Modoc Garden. Associate Professor Dr. Allison Alvarado and community partner Chris Amendt (Native Monarchs) have led the development of a nesting site, where an owl box installed with student support is now actively used by a breeding pair. Following seasonal maintenance, a camera was installed this winter to enhance observation and outreach.

A pair of Barn Owls established quickly this breeding season. A community-wide naming campaign, conducted in partnership with the Santa Barbara Zoo, expanded the project's reach by engaging students, families, and the broader public. After the initial submissions, a committee of five members reviewed and narrowed down the names before a final community vote was done in coordination with the zoo. The selected names—Poppy (female) and Sage (male)—reflect this collaborative effort to connect scientific work with community participation.

Pictured above, pair of adult Barn Owls inside owl box at Modoc Garden.

The owls successfully raised three owlets, all of which fledged in early-mid May. This project highlights how the Biology Department integrates ecological research, habitat enhancement, and public engagement, while providing meaningful opportunities to observe wildlife behavior and conservation in action.

The Santa Barbara Zoo recently opened the Conservation Office at Modoc Hall, where Zoo staff will connect with CSUCI students, faculty, and staff. Conservation priorities for the Zoo include the Monarch Butterfly, Red-legged Frog, Western Pond Turtle, Western Snowy Plover, among other species. CSUCI is an ideal partner in this work, providing space and support for the Zoo's field conservation program as well as experiential and service-learning activities with emphasis in wildlife conservation.

Pictured above, three owlets inside owl box at Modoc Garden.

Community Outreach

Renewed Biology Display Cabinets

The display cabinets on the first floor of Aliso Hall were recently updated by **Kimberly Gardner**, Biology Instructional Support Technician II. One of the cabinets highlights two elective courses, Apiculture and Bee Biology (BIOL 475) and Entomology (BIOL 452), both of which are taught by Biology Professor Dr. Ruben Alarcón. Apiculture and Bee Biology provides an introduction to the diversity and evolution of bees, bee development, nutrition, physiology, reproduction, as well as modern beekeeping. The related laboratory course (BIOL 476) complements the lecture and provides students hands-on experience in handling bees and beehive management. Entomology is the scientific study of insects, and the course focuses morphology, physiology, ecology, behavior, taxonomy, and evolutionary history of the major insect orders. The other cabinet highlights the biology of Barn owls and Monarch butterflies and includes illustrated descriptions of their respective life stages, their morphology, behavior, and ecological roles. Additionally, the cabinet has two digital photo frames displaying images and videos of the Barn owls, Monarch butterflies, and student projects in the Modoc Garden. We invite everyone to check out the cabinets in Aliso Hall!

Pictured above, Biology display cabinets put together by Kimberly Gardner, Biology Instructional Support Technician II.

Thank you, Kimberly, for the good work!

Publications

Biology faculty **Dr. Geoffrey Dilly** published a peer-reviewed article in the journal *Science Advances*.

- Robinson, R. C., Chongrungreang, T., Ponlachantra, K., Boonyarit, B., **Dilly, G. F.**, Li, Y. I., Girguis, P. R., Copley, R. R., Claridge-Chang, A. (2025). The structure of an actin nucleus stabilized by villin. *Science Advances* 11(49): eadw6915. doi.org/10.1126/sciadv.adw6915

Biology faculty **Dr. Zin Htway** published peer-reviewed articles in the journals *The American Surgeon* and *Journal of Surgical Oncology*.

- Bresler, T. E., Lada, S., Pandya, S., Mauch, A., **Htway, Z.**, & Desai, K. (2026). Cross-modality differences in pancreatic cyst size measurements may affect surgical decision-making. *The American Surgeon* 00031348261443347. doi.org/10.1177/00031348261443347
- Pandya, S., Bresler, T.E., Wilson, T., **Htway, Z.**, Fujita, M. (2025). Decoding the NCCN guidelines with AI: a comparative evaluation of ChatGPT-4.0 and Llama 2 in the management of thyroid carcinoma. *The American Surgeon* 91(1), 94-98. doi.org/10.1177/00031348241269430
- Bresler, T. E., Wilson, T., Makaryan, T., Pandya, S., Palmer, K., Meyer, R., **Htway, Z.**, & Fujita, M. (2025). AI at the Forefront: Navigating Oncologic Care for Six Gastrointestinal Cancers According to the NCCN Guidelines Utilizing Gemini-1.0 Ultra and ChatGPT-4. *Journal of Surgical Oncology* 132(2), 317-322. doi.org/10.1002/jso.70005

Biology faculty **Dr. Rudi von May** published peer-reviewed articles in the journals *Zootaxa*, *Studies on Neotropical Fauna and Environment*, *ISME Communications*, and *Salamandra*.

- Brown, J. L., Geralds, B., Moraes, L. J. C. L., Granados-Martínez, S., **von May, R.**, Muell, M. R., Guillory, W. X., Twomey, E. (2026). Revisiting the systematics of the *Ranitomeya uakarii* complex (Anura: Dendrobatidae) with the description of a new species from the Fitzcarrald Arch of Peru and Brazil. *Zootaxa* 5793(1): 42–60. doi.org/10.11646/zootaxa.5793.1.2
- Glaw, F., Köhler, J., Castillo-Urbina, E., Siu-Ting, K., Santa-Cruz, R., Aguilar-Puntriano, C., **von May, R.**, & Vences, M. (2026). Translating phylogeny into taxonomy: a new plethodontid salamander species, genus *Bolitoglossa*, from Amazonian Peru. *Studies on Neotropical Fauna and Environment*: 1–19. doi.org/10.1080/01650521.2026.2665359
- Holmes, I. A., Martínez-Fonseca, J. G., **von May, R.**, Sealey, B. A., Cerda, P. A., Grundler, M. R., Westeen, E. P., Nondorf, D., Larson, J. G., Myers, C. R., Hendry, T. A. (2025). Increased host diversity limits bacterial generalism but may promote microbe-microbe interactions. *ISME Communications* 5(1): ycaf146. doi.org/10.1093/ismeco/ycaf146
- Santa-Cruz, R., Canazas-Terán, A., Bejarano, R., López, E., Morales, A., **von May, R.**, Catenazzi, A., Aguilar-Puntriano, C. (2025). A new species of the *Liolaemus walkeri* clade (Squamata: Liolaemidae) in the volcanic chain of Arequipa, Peru. *Salamandra* 61(2): 115–131. https://www.salamandra-journal.com/index.php/contents/2025-vol-61/2174