



Santa Rosa Island Research Station

2024-25 Annual Report



Robyn Shea, Santa Rosa Island Research Station Director



I. DIRECTORS' SUMMARY

The Santa Rosa Island Research Station (SRIRS) is part of California State University (CSU) Channel Islands (CI). SRIRS creates unique, transformative, interdisciplinary educational and research experiences that also provide professional development and networking opportunities. Most station visitors come from traditionally underserved communities with limited or no experience in remote outdoor settings. As the only program connecting the university (CSUCI) with the Channel Islands, and as one of only 11 university-managed field stations in US National Parks, SRIRS experiences are a core feature of the CSUCI brand. This year marked a period of growth and transition for the Santa Rosa Island Research Station (SRIRS). Juliana Perez departed SRIRS to pursue other professional opportunities, and we were pleased to welcome Jenowa Larson as the new SRIRS Coordinator. Jenowa previously served as a student assistant with SRIRS and now joins the team as a full-time staff member. We also welcomed Emma Akmakdjian as the new Marine Debris Grant Coordinator and established a new position within the unit, appointing Stacey Ayer as the SRIRS Administrative Analyst. Previously, the Interim Director of SRIRS, Robyn Shea, now serves as the permanent Director of SRIRS, providing strong and steady leadership as the team continues to advance the station's mission.

The contribution of the SRIRS to student success, resource protection and stewardship, and improving equity in our National Parks is represented not only by the number of user days but also by the quantity and diversity of scientific projects, interdisciplinary activities, and the partnerships it continues to help develop and support. The following data summarizes the broad range of our users, partnerships, and the projects the SRIRS supported.

Santa Rosa Island Research Station: 2024-25 Summary	
Visitors	# User Days
Undergraduate Students	1,564
K-12 Students	403
Researchers	362
Service Learning/Volunteers	260
Total	2,589
Lost user days	1,025
Types of Visitors	# Groups
Research	36
Education	36
Community Outreach	19
Volunteer/Service Learning	10
Total	101
Research Support	# Projects
Minimal (e.g. assist with permitting/project logistics)	7
Moderate (e.g. provide housing/logistic support)	3
Significant (e.g. co-write research proposals/reports, perform fieldwork)	6
Total	16
Partnerships	# Partners
Colleges/Universities	13
K-12 or Informal Education Organizations	12
Government Agencies	3
Non-profits/Other	13
Total	41

II. MISSION

Our Mission

We provide students, faculty, researchers, and our local community with the resources and opportunities to engage in natural and cultural resource-based research and education via a partnership between the US National Park Service and CSU Channel Islands.

Touchstones to the Mission

- Build inquiry centered educational partnerships.
- Engage stakeholders in discovery and dissemination.
- Inspire and transform participants and society.
- Encourage broad sharing of interdisciplinary knowledge.
- Promote stewardship of resources.

III. ACHIEVEMENTS AND HIGHLIGHTS

A. Undergraduate Research

In 2024-25 we directly supported 5 CI undergraduate research projects which involved 12 of our students. Undergraduate students were immersed in the start-to-finish process of research at the SRIRS; learned how to apply for scholarships and submit federal scientific collection permits; conducting data analyses and composed written findings; and received experience presenting and defending their findings. These students participated in place-based research and cultivated successful relationships with their faculty and non-CI mentors while sharpening critical thinking skills, placing them ahead of their peers when applying for and attending graduate programs.

B. Cloud Forest Restoration

We continue to provide support to the Cloud Forest Restoration project by funding a part-time staff member who is duty-stationed on Santa Rosa Island and works solely on this project alongside other island partners. Additionally, with the help of our visiting undergraduates, k-12 partners and other community members, we contributed 604 people hours of volunteer and service-learning efforts. This was repeatedly voiced as one of the favorite parts of the trip for participants, and we look forward to contributing more during this next Academic Year.

C. Long-Term Inventory and Monitoring

Long-term monitoring of two lagoons (Abalone Rocks Lagoon, Old Ranch House Lagoon) on the east end of Santa Rosa Island in Channel Islands National Park continues. Building on work initiated in 2016, physical measurements at each lagoon are taken using HOBO loggers and a YSI Pro. Through the efforts of SRIRS staff and CSUCI students, we continue to meet critical monitoring needs for sensitive and unique habitats inside Channel Islands National Park by tracking these hypersaline lagoons, and their fluctuating dissolved oxygen, salinity, and pH levels. In 2024, we submitted a report summarizing data analysis for the preceding three years, since SRIRS staff took over maintaining the project.

D. Partnerships

We have been successful in maintaining our long-term partnerships with government agencies and organizations, as well as numerous school districts with plans for expansion in the 2025-26 Academic Year.

E. Marine debris removal on California’s Channel Islands: High-Impact and Large Marine Debris Removal throughout the National marine Sanctuary System

The SRIRS’s marine debris removal efforts have been taking place within the Channel Islands National Park (CHIS) and the Channel Islands National Marine Sanctuary (CINMS) since 2016. The outreach and interdisciplinary nature of this project make it truly unique and showcase the true value of marine debris work in reaching across different audiences and disciplines. Art students and alumni from CSUCI, undergraduates from Pepperdine University, and community artists continue to work with debris to create found object art pieces to highlight issues surrounding marine debris throughout the duration of this grant. To date, our efforts have improved critical island habitat by removing over 24,000 pounds of debris from Santa Cruz and Santa Rosa Islands. We have started partnering with the [California Lobster & Trap Fishermen’s Association](#), to support removing lost fishing gear in conjunction with our efforts, some of which can be repurposed rather than replaced – reduce, reuse, recycle. The current iteration of this project is funded by the Bipartisan Infrastructure Law through NOAA’s Marine Debris Program and CSUCI is a subrecipient of the National Marine Sanctuary Foundation’s Grant # NA23NOS9990089.

IV. PARTNERS

A. Academic (25)

- 1. K-12 (12):** Adolfo Camarillo High School (OUHSD), Buena High School (VUSD), Channel Islands High School (OUHSD), Del Sol High School (OUHSD), Ernest Righetti High School (Santa Maria Joint USD), Foothill Technology High School (VUSD), Hueneme High School (OUHSD), Isbell Middle School (SPUSD), Oxnard High School (OUHSD), Pacifica High School (OUHSD), Santa Paula High School (SPUSD), Ventura High School (VUSD).
- 2. Universities/Colleges (13):** Cal Poly SLO, Chico State – DFW Aquatic Bioassessment Lab, Colorado College, CSU Long Beach, CSU Los Angeles, CSU Northridge, CSU San Bernardino, Pepperdine University, Pierce College, UC Santa Barbara – Brenn School, UCLA, Ventura College, Westmont College.

B. Non-Academic (16)

- 1. Governmental (3):** Channel Islands National Marine Sanctuary, Channel Islands National Park – Inventory & Monitoring Program, United States Geological Survey.
- 2. Non-Profit (10):** Blue Robotics, Boy Scouts of America – Troop 4 Pasadena, California Institute for Environmental Studies, Coast Savers (Washington State), Crossing the Channel for Cause, Mohonk Preserve (NY), Natural History Museum of Los Angeles, Organization of Biological Field Stations, Santa Barbara Botanic Garden, Santa Ynez Band of Chumash Teen Program.
- 3. Other (3):** CSU STAR Program, Island Packers, Trimm’s Scaffolding.

V. EDUCATION

CI Programs Use of the SRIRS	CI Undergraduate Course Use of the SRIRS	K-12 Use of the SRIRS
<p>Anthropology, Art/Humanities, Astronomy, Biology, Biotechnology, Business & Economics, Communications, ESRM, Summer SURF, Mathematics, Medical Health & Safety, Performing Arts, Physics, Sociology, Theatre & Performing Arts, CIMAS, CI Facilities, EH&S, Advancement, OLLI, Psychology, Geology, Communications & Public Relations, Police, Emergency Response, First-Year Learning Communities, SASEI, CI Solutions, Waterfront & Outdoor Adventures</p>	<p>ANTHR 352 – Applied Anthropology, ANTH 365 – Natural History & Resource Management Of The California Channel Islands, ART 202 - Sculpture, ART 207 – Ceramics, ART 311 – Sculpture Media and Tech, ART 318 – Three-dimensional Art: Sculpture Media & Techniques, ART 329 – Three-dimensional Art: Ceramics Theory & Process, ART 421 – Advanced Artistic Problems: Three-dimensional Art, ASTR 390 – Screen Printing, BIOL 494 - Independent Research, COMM 443 – Environmental Communication, ECS 463 – Creating & Supporting Reciprocal Family & Community Networks, ESRM 100 – Intro Environmental Science/Resource Management, ESRM 351 – Field Methods: Monitoring & Assessment, ESRM 365 – Natural History & Resource Management Of The California Channel Islands, HLTH 101 – The US Health Care System, PA 210 – Understanding Dance & Music for Elementary Education, PHYS 390 – Frontiers Of Astronomy, SOC 321 – Research Methods in Sociology, THTR 100 – Theatre & Performance Studies in Our Communities, THTR 300 – Engaging Communities with Theatre and Performance Studies, UNIV 198 – Introduction to Interdisciplinary Research.</p>	<p>AP Biology, AP Env. Science, Biological Oceanography, Channel Islands Marine Biology & Ecology Program, Honors Env. Science, E.S. Science Academy, Marine Science Academy</p>

VI. RESEARCH

A. SRIRS Undergraduate Research

1. Student Capstone/Independent Research Projects

a. Environmental Science and Resource Management (1 Student)

- **Marine Debris Engagement:** 1 student created a new suite of maps utilizing GIS to help increase outreach and engagement related to SRIRS’s Marine Debris Grant. (*CI Faculty Mentor: Dr. Kiki Patsch; SRIRS Staff Mentor: Robyn Shea and Emma Akmakdjian*)

b. Biology (5 Students)

- **Intertidal Ecology (4 students):** Long-term intertidal monitoring to supplement and expand upon the existing Channel Islands National Park long-term monitoring program (*CI Faculty Mentor: Geoff Dilly; NPS Collaborators: Stephen Whittaker*).
- **Horned Lark Bioacoustics Monitoring (1 student):** A 2-year project focused on “Intermittent song differences of the Horned Lark (*Eremophila alpestris sp*) across North America”, with emphasis on variation amongst island subspecies vs the mainland. (*CI Faculty Mentor: Dr. Allison Alvarado; DOD-US Navy Mentor: Bill Hoyer; SRIRS Staff Mentor: Robyn Shea*)

c. Art (1 Student)

- Looking at the intersection of Art and Science, this student created scientifically accurate paintings of island species. (*CI Faculty Mentor: Christophe Bourley; SRIRS Staff Mentor: Robyn Shea*)

d. Environmental Communications (5 Students)

- Assessing impacts of shared experiences amongst siblings, from primarily 1st-generation students. CI Undergraduates invited a sibling from a local high school or community college to participate in a 4-day, 3-night trip to Santa Rosa Island. (*CI Faculty Mentor: Dr. Tracylee Clarke; SRIRS Staff Mentor: Robyn Shea*)

B. Faculty Research Projects

1. Biology

- **Dr. Geoff Dilly:** Investigating the impacts of climate change (i.e., sea level rise, ocean acidification, etc.) on the intertidal and sub-tidal habitats of Bechers Bay, Santa Rosa Island (*NPS Collaborator: Stephen Whittaker; SRIRS Support Staff: Robyn Shea*).
- **Dr. Allison Alvarado:** Avian acoustics – comparing Island Horned Larks across the archipelago, to mainland species to identify differences in song composition and seasonal variations. (*SRIRS Support Staff: Robyn Shea*)

2. Early Childhood Studies

- **Dr. Annie White:** Narrative Stories at the Santa Rosa Island Research Station: Creating and Supporting reciprocal family and community networks. (*CI Faculty Partners: Bonnie Lavin (Performing Arts - Dance) and Ray McNamara (Performing Arts - Music); SRIRS Support Staff: Robyn Shea and Jenowa Larson*)

C. Additional Research Supported by the SRIRS

- 1. Westmont College:** Examining the ecology & evolution of herpetofauna on Santa Rosa Island.
- 2. Santa Barbara Botanical Garden:** Seed banking and genetics of *Quercus tomentella*. Ecological Network – resurveying invertebrate communities of the Santa Rosa Island Cloud Forest. SRI Floristics –spatial phylogenetics.
- 3. CSU Northridge & Natural History Museum of Los Angeles:** Graduate work focusing on the genomics and climatic influences of Island Fence lizards (*Sceloporus occidentalis becki*) of the Channel Islands.
- 4. USGS:**
 - Re-establishing plant diversity and functioning plant community dynamics on Santa Rosa Island.
 - Establishing and monitoring tree demography plots for the Torrey Pines, Bishop Pines, Ironwood, and Island Oak on Santa Rosa Island.
 - Rare tree census and population structure.
 - Cloud Forest Restoration.
- 5. Coastal Marine Bio-labs/Reseda Charter High School & Foothill Technology High School:** Obtaining the unique DNA sequences of island arthropods and publishing results within an international DNA Barcode database.
- 6. NPS Inventory and Monitoring Program:**
 - Document and quantify changes in water quality and stream condition on Santa Rosa Island over time.
- 7. Channel Islands National Marine Sanctuary:**
 - Sandy beach and intertidal ecology citizen science programs.
- 8. Channel Islands National Park:**
 - Sandy beach ecology monitoring and morphological assessment.
 - Marine debris monitoring and removal.
 - Native vegetation monitoring.
 - Photo-point Monitoring for long-term changes

- Rare plant Ecology and Monitoring
- 9. Long-term Photo Point Monitoring:** Establishing new sites to engage students, track change over time, and support NPS management decisions. (*CSUSB Faculty – Dr. Yolonda Youngs; SRIRS Staff Support: Robyn Shea*).
 - 10. CSU Service, Teaching, and Research Program (STAR):** Providing no-cost accommodations for 4 STAR Fellows and guests, during the Summer, to conduct research and lesson planning for K-12 Science courses.

VII. FINANCES

A. Grants and Awards - \$165,972

1. NOAA Marine Debris (\$375,000) 2023-26 @ \$125,000/yr
2. Native American Initiatives (\$1,968)
3. Edison International (\$10,000)
4. National Park Service – Cloud Forest Technician funding, Year 3 of 3 (\$29,004)

B. Private Donations - \$ 156,190

C. On island accommodations donated by SRIRS - \$3,200

VIII. PEER COMPARISON

Research Station	Affiliation	User Days*	# of Users	Staff†
Santa Rosa Island Research Station	CSU Channel Islands	2,589	914	2.5
Santa Cruz Island Research Station	UC Santa Barbara	2,715	620	3
Sedgwick Reserve	UC Santa Barbara	5,201	2,320	7
Hastings Natural History Reserve	UC Berkeley	4,553	768	3
Point Reyes Field Station	UC Berkeley	1,376	437	2
Angelo Coast Range Reserve	UC Berkeley	2,418	322	3?
White Mountain Research Center	UCLA	9,800	879	6+
Quail Ridge Reserve	UC Davis	1,122	433	2
Yosemite Field Station	UC Merced	3,685	511	2
James San Jacinto Mountains Reserve	UC Riverside	1,275	333	2

*UCNRS Stats averaged over 5 fiscal years between 2019-20 and 2023-24. SRIRS Stats specific for 2024-25.

† Staff numbers are from reserves' current website details.

The Santa Rosa Island Research Station thanks the following organizations for their generous support:



CALIFORNIA INSTITUTE OF ENVIRONMENTAL STUDIES



National Marine Sanctuary Foundation



USGS
science for a changing world



The Nature Conservancy 

If you would like more information on the SRI Research Station, please visit our website (www.csuci.edu/sri) or contact the Station Director, Robyn Shea, at (805) 437-1653 or robyn.shea@csuci.edu.