

# ALYSSA CONNAUGHTON

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## EDUCATION

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| <b>Ph.D. Geography</b><br>Department of Geography, Environment, and Society<br>Saint Anthony Falls Laboratory<br>University of Minnesota Twin Cities   | 2024 - present |
| <b>Graduate Degree Program in Ecology</b><br>Department of Ecosystem Science and Sustainability<br>Natural Resource Ecology Laboratory<br>Colorado State University  | 2022 - 2023    |
| <b>B.S. Environmental Science and Resource Management</b><br>Emphasis in Resource Management<br>California State University Channel Islands<br><i>Undergraduate Thesis: Virtual Visualization of Common Species in Channel Islands National Park</i> | 2016 - 2020    |

## SKILLS

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**ESRI Software:** ArcGIS Pro, ArcMap, Story Maps, Survey 123, ArcCollector, ESRI Field Maps  
**Data Analysis and Visualization:** R (including ggplot2, tidyverse), HTML  
**Visual Art:** DSLR photography, 360 photosphere photography, Adobe Creative Suite, Canva  
**General:** Microsoft Office Suite, Google Workspace Suite  
**Species Identification:** native bees, bumble bees, butterflies, moths, flowering plants, trees

## CERTIFICATIONS

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| <b>Wilderness First Responder</b><br>NOLS Wilderness Medicine  | 2025      |
| <b>Epinephrine Auto-injector</b><br>NOLS Wilderness Medicine   | 2025      |
| <b>Adult, Child, Infant CPR, AED, and Airway Management</b><br>NOLS Wilderness Medicine  | 2025      |
| <b>Certified Project WET General Facilitator</b><br>Water Education Foundation: Project Water Education Today                      | 2021      |
| <b>Certified Project WET Climate Change in California Facilitator</b><br>Water Education Foundation: Project Water Education Today | 2021      |
| <b>Certified Peer Educator</b><br>National Association of Student Personnel Administrators   | 2020      |
| <b>Naturalist 1</b><br>Catalina Island Conservancy   | 2020      |
| <b>Wilderness First Aid</b><br>Emergency Care and Safety Institute   | 2018-2020 |

## RESEARCH EXPERIENCE

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### **Inventory of beaver and other semi-aquatic furbearers to inform harvest management decisions at Apostle Islands National Lakeshore** 2025 - Present

*PI: Dr. Emily Fairfax*

Placing game cameras in beaver wetlands to collect data on which dams are being actively maintained by beavers and to observe additional animals that live in beaver-modified ecosystems to quantify biodiversity of these ecosystems.

### **Wyoming Beaver Dam and Vegetation Validation** 2025

*PI: Dr. Emily Fairfax*

Led a team of undergraduate researchers to collect field data on beaver dam location, vegetation in and around the beaver-modified ecosystem, and quantify cattle grazing activity of beaver-modified and non-beaver modified ecosystems.

### **Using Beaver Dams to Conserve Salmon Spawning and Rearing Habitat in the Moose River Watershed** 2024- Present

US Fish and Wildlife Service Kenai National Wildlife Refuge

*PI: Dr. Emily Fairfax*

A collaboration with the US Fish and Wildlife Service, Kenai National Wildlife Refuge, to quantify beaver impact on the refuge. The project consists of mapping beaver dams, using the Beaver Restoration Assessment Tool (BRAT) to determine maximum beaver dam capacity of streams within the refuge, and using remote sensing and GIS methods to determine environmental impacts of beaver dams on the vegetation surrounding beaver-modified ecosystems. Advised on placement of water quality instruments for a project to use Beaver Dam Analogues (BDAs) to rewet burned peatlands.

### **Mapping Beaver Dams in the Apostle Islands** 2023

*PI: Dr. Emily Fairfax*

Using Google Earth Engine to map beaver dams within the Apostle Islands across 30 years to measure beaver occupancy and influence on the islands.

### **EEAGER Validation** 2023

*PI: Dr. Emily Fairfax*

Using Google Earth to go through the EEAGER (Earth Engine Automated Geospatial Element Recognition) outputs to select areas of output that are not beaver dams to improve model accuracy.

### **Learning Sustainability and Nature-Based Solutions - Youth Ambassadors for Climate Science on the Road to COP28** 2023

Youth Environmental Alliance in Higher Education and the Smithsonian Institute

*PI: Dr. Gillian Bowser, Dr. Susie Ho, and the Smithsonian Institute*

A partnership between the Youth Environmental Alliance in Higher Education and the Smithsonian Institute. Lead graduate student working with the Senior Advisor for Global Strategy, Director of Smithsonian Science Education Center, Manager of Ocean Education & Outreach, and National Outreach Manager of the Smithsonian to develop resources for students in the US and in Australia to implement sustainability and advocate for nature-based solutions in their communities.

**3DNaturalists: Data, Discovery, Diversity!**

2023

*PIs: Dr. Gillian Bowser and Dr. Phil Halliwell*

Lead on communications and project revisioning. 3DNaturalists encourage student engagement with data, encouraging scientific discovery and involving students from diverse backgrounds. Created a logo, branding guide, and project website for further development of the project. The main project focuses on how to get diverse populations engaged in community science projects on pollinators.

**Early Career Ringos**

2022 - 2023

United Nations Framework Convention on Climate Change

*PI: Dr. Gillian Bowser, Dr. Susie Ho, Dr. Tracy Bach, and Dr. Beth Martin*

Formalized network of early career researchers within the United Nations Framework Convention on Climate Change (UNFCCC) Research and Independent Nongovernmental Organisations Constituency Group. Established a position statement with goals, deliverables, and action items for early career researchers interested in getting involved in the UNFCCC processes. Currently forming a podcast and social media channels with informative content about the UNFCCC.

**National Park Service Pollinator Inventory Project**

2022 - 2023

Colorado State University

*PIs: Dr. Gillian Bowser, Dr. Philip Halliwell, Dr. Tracy Ziegler, National Park Service Inventory and Monitoring Division*

Researcher for the National Park Service Pollinator Inventory Project. Collect bee, butterfly, climate and phenology data in seven National Parks and Monuments. Parks include: Dinosaur National Monument, Colorado National Monument, Fossil Butte National Monument, Yosemite National Park, Crater Lake National Park, Yellowstone National Park, and Grand Teton National Park. Methodology focuses on noninvasive sampling methods and using citizen science to identify the species collected. Perform statistical analyses on data collected and compile reports to provide to each park at the end of each field season.

**Youth Dialogues on the National Climate Assessment**

2022

*PIs: Dr. Gillian Bowser, Dr. Sarah Green, and Dr. Pamela McElwee*

Lead event planner and moderator for Youth Dialogues on the Fifth National Climate Assessment, a partnership between Youth Environmental Alliance in Higher Education and the U.S. Global Change Research Program (USGCRP). An event held to teach and encourage students to submit comments on the Fifth National Climate Assessment.

**United Nations Climate Change Conference COP27**

2022

Colorado State University

*PIs: Dr. Gillian Bowser, Dr. Sarah Green, Dr. Susie Ho, Dr. Sarah Hautzinger, Dr. Leah Dundon, Dr. Diane Husic, Dr. Pamela Templer, Dr. Mark Urban*

Lead exhibit designer for Voices and Visions: The Art and Science of Climate Action. Created an exhibit to showcase how climate action can be communicated through art and science. Collaborated with NASA, EPA, Smithsonian, NSF, and PeaceBoat US to create a collaborative exhibit. Exhibit displayed at the US Center Pavilion at the United Nations Climate Change Conference of the Parties (COP27) in Sharm el-Sheikh, Egypt.

- Rocky Mountain Sustainability and Science Network** 2022-2023  
 Colorado State University  
*PIs: Dr. Gillian Bowser and Dr. Philip Halliwell*  
 Participated in a two-week research trip to Grand Teton National Park and Yellowstone National Park, collecting data on pollinators, birds, and park visitors. Led a team of undergraduate students from diverse backgrounds to assist in teaching how to develop a research question and share what it is like to do research in a National Park.
- I See CI** 2020  
 California State University Channel Islands  
*PIs: Dr. Emily Fairfax and Dr. Kiki Patsch*  
 Developed a virtual reality tour of Santa Rosa Island to improve accessibility for people who cannot make it out to the island. Produced an interactive, virtual reality tour of Santa Rosa Island with embedded data visualizations and information using GoogleTour and GooglePoly.
- Virtual Visualization of Common Species on Santa Rosa Island** 2019-2020  
 California State University Channel Islands  
*PIs: Dr. Dan Reineman, Russell Bradley, and Dr.Emily Fairfax*  
 Identified and photographed common plant species found along three main trails on Santa Rosa Island. Collected data to create an online interactive ESRI Story Map field guide. Created individual species maps using ArcPro.
- Natural and Cultural History Research in Costa Rica** 2019  
 California State University Channel Islands  
*PIs: Dr. Don Rodriguez and Dr. Allison Alvarado*  
 Project in collaboration with California State University Channel Islands, the Great Basin Institute, Marino Las Baulas National Park, and the National University of Costa Rica. Conducted multiple projects, including mangrove monitoring, migratory birds in the surrounding wetlands, and microplastics in fish and sand crabs. Assessed change in vegetation cover surrounding previous turtle nesting sites along the Playa Grande Beach in Marino Las Baulas National Park, Costa Rica.
- The Global Rise of Illegal Sand Mining** 2019  
 California State University Channel Islands  
*PI: Dr. Kiki Patsch*  
 GIS analysis of environmental and socioeconomic impacts of illegal sand mining across the world. Created a 3D interactive map using ArcPro and ArcGIS Online of all known locations of sand mining. Compiled all information into two Story Maps: The Global Rise of Illegal Sand Mining and Eroding the Future.
- Wetland Restoration in New Orleans, Louisiana** 2018  
 California State University Channel Islands  
*PI: Dr. Sean Anderson*  
 Project in collaboration with California State University Channel Islands, Oregon State University, UCLA, and the Louisiana Woodlands Conservancy. Collected data on invasive species management and wetland health post-Hurricane Katrina. Methods included species identification, percent cover, leaf litter, diameter, and height along 100-meter transects throughout the study area.

## PEER-REVIEWED PUBLICATIONS

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Moravek, J. A., Andruss, M., **Connaughton, A.**, Miller, J., Garrity, M., Kirksey, K., & Fairfax, E. (2025). Using beaver capacity models: the importance of local knowledge. *Restoration Ecology*, e70135.

Bowser, G., Templer, P. H., Ho, S. S., Green, S. A., Hautzinger, S., Zhu-Maguire, I., **Connaughton, A.**, Dundon, L., Husic, D., Urban, M. (2023). The fierce urgency of now: integrating the youth voice at COP. *Frontiers in Ecology and the Environment*, 21(4), 164–165. <https://doi.org/10.1002/fee.2627>

## GRADUATE TEACHING ASSISTANT EXPERIENCE

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### University of Minnesota

GEOG 1502: Mapping Our World

Spring 2026

GEOG 1403 : Biogeography of the Global Garden

Fall 2024, Spring 2025, Fall 2025

### Colorado State University

NR 322: Introduction to Geographic Information Systems

Spring 2023

ESS 365: Global Environmental Justice

Fall 2022

## INVITED SPEAKING

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“Beavers, Vegetation, and Scale: the (in)consistency across biomes dissertation proposal”, Saint Anthony Falls Laboratory Tiny Talk, November 2025

“Beavers and Bees”, Saint Anthony Falls Laboratory, University of Minnesota, Speaker, October 2025

“The Importance of Youth Engagement in Climate Research”, Climate Leadership Summit, Colorado State University, Panelist, April 2023

“Park Pollinators: Coming to a National Park Near You!”, CSUCI Bee Club, California State University Channel Islands, Speaker, April 2023

“Parks, Pollinators, and Policy”. ESRM Speaker Series, California State University Channel Islands, Speaker, March 2023

“Safeguarding the future, CSU Perspectives on COP27 Global Climate Negotiations”, Colorado State University School of Global Sustainability, Panelist, February 2023

“Propagation workshop”, San Francisco State University Earth Week Series, Lead Workshop Organizer, April 2021

## ORGANIZED SESSIONS, PANELS, AND WORKSHOPS

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**Connaughton, A.** and Peterson, K., (2025) “Coffee Hour Special Blend: Brewing Up The Lore Behind Your Research”, Geography Environment and Society Coffee Hour, University of Minnesota, Lead Workshop Organizer

**Connaughton, A.**, Bailey, N., Morales, M., Dominguez-Vasquez, C., Briggs, D., Hardin, A. (2023) “Voices and Visions: The Art and Science of Climate Action, CSU at COP27”, Colorado State University International Symposium, Lead Organizer and Panelist

**Connaughton, A.**, Budnicki, B., Morales, M., Smith, A. (2023) ‘How Citizen Science Can Help You’., Colorado State University Front Range Student Ecology Symposium, Workshop Lead and Panelist

**Connaughton, A.**, Bowser, G. (2023). “Youth Dialogues on The Fifth National Climate Assessment”, National Climate Assessment and Youth Environmental Alliance in Higher Education, Event Organizer and Moderator

**Connaughton, A.** (2022). Voices and Visions: The Art and Science of Climate Action, United Nations Climate Change Conference COP27, Lead Exhibit Designer and Presenter, Sharm el-Sheikh, Egypt, November 2022

Hautzinger, S., Jackson, M., Roe, G., Timberg, C., Zhu-Maguire, I., **Connaughton, A.** (2022). “Storytelling-Dialogues for Engaging Youth in Higher Ed – Continuing to Talanoa Across COPs”, United Nations Climate Change Conference COP27, Panelist, Sharm el-Sheikh, Egypt

## CONFERENCE PRESENTATIONS

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Osorio, B., Miller, J., Hirahara, A., Kirksey, K., **Connaughton, A.**, Perez, N., Segnitz, J., and Fairfax, E. (2023). 30 Years of Beaver Damming on Lake Superior's Islands: A Remote Sensing Perspective. In *AGU Fall Meeting Abstracts* (Vol. 2023, pp. H33F-02).

## POSTER PRESENTATIONS

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**Connaughton, A.** and Fairfax, E., (2025). Beavers and phenology: A case study in the Kenai National Wildlife Refuge, Alaska, International Beaver Symposium, Inverness, Scotland

**Connaughton, A.**, Bailey, N., (2022). Pollinator Hotshots: Addressing Management Priorities for Understanding Pollinator Status Across Eight Different National Parks, 32nd Annual Meeting of the High Country Lepidopterists, Fort Collins, CO

**Connaughton, A.**, (2020). Virtual Visualization of Common Species on Santa Rosa Island, California State University Channel Islands Sage Student Research Conference, Camarillo, CA

**Connaughton, A.**, Hoberg, A., Orsborn, E. (2020). I See CI, California State University Channel Islands Summer Undergraduate Research Fellowship, Virtual

**Connaughton, A.**, Walker, S., Greene, X., Remedios, E., Alvarado, A., Rodriguez, D., (2019) Analyzing Turtle Nesting Sites in Marino Las Baulas National Park, Costa Rica, California State University Channel Islands ESRM Service Learning Showcase, Camarillo, CA

Rodriguez, D., Alvarado, A., **Connaughton, A.**, (2019). Ecosystem Monitoring in Marino Las Baulas National Park, Costa Rica, California State University Channel Islands Center for Community Engagement Best Practices in Service-Learning Award Ceremony, Camarillo, CA

**Connaughton, A.** (2018). The Culture of New Orleans, Louisiana, California State University Channel Islands ESRM Service Learning Showcase, Camarillo, CA

## MEDIA COVERAGE

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PBS News Tipping Point - [The Mighty Mississippi, A PBS News Special](#) 2025

PBS Newshour - [Why engineers are turning to beavers for insights into managing water resources](#) 2025

## PROFESSIONAL EXPERIENCE

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### **After School Abloom Co-Director**

August 2023 - May 2024

*Riversong Waldorf School, Fort Collins, CO*

Co-director for a nature-based after-school program. Main responsibilities include planning after-school locations, planning field trips to local natural spaces, and developing science lessons for ages six through ten. Ensure the safety of all children, manage confidential information, and work with local schools to boost school-age engagement in natural spaces in Fort Collins.

### **EcoPress Editor**

May 2023- August 2023

*Natural Resource Ecology Laboratory, Colorado State University, Fort Collins, CO*

Editor for the Natural Resource Ecology Laboratory EcoPress website and social media channels. Work with students, research associates, post-docs, and professors to put out articles and interviews on their research.

### **Earthwatch Institute Riggs Emerging Scientist Fellow**

May 2023 - August 2023

*Earthwatch Institute*

Fellow for Earthwatch Institute, following the Forest Owls Expedition. Fellowship consists of evaluating the Earthwatch community science model, which involves anyone from the general public engaging in a week of immersive scientific research. Participated in one week of research on the Western Screech Owl, Elf Owl, Whiskered Screech Owl, and Flammulated Owl in the Chiricahua Mountains with Hawkwatch International, Earthwatch, and the University of Idaho, with a team of six research assistants with no previous research experience. Observed owl banding, participated in tree cavity monitoring, and caught owls using mist nets.

### **YEAH Lead Fellow**

September 2022 - July 2023

*Youth Environmental Alliance in Higher Education*

Lead graduate student fellow for Youth Environmental Alliance in Higher Education, a network of universities around the world of students involved in the United Nations Framework Convention on Climate Change. Organize workshops, events, and meetings, and provide instruction on creating position statements for UNFCCC topics to college students. Led a group of students on a project at the US Center for COP27 and worked on projects, side panels, and events for COP28.

### **Graduate Research Assistant**

May 2022 - July 2023

*Colorado State University, Fort Collins, CO*

Graduate Research Assistant for the Bowser/Halliwell lab on a variety of projects, including National Park Service Pollinator Inventory, Youth Environmental Alliance in Higher Education, Learning Sustainability and Nature-Based Solutions - Youth Ambassadors for Climate Science on the Road to COP28, Rocky Mountain Sustainability and Science Network, and various other research projects. Lead on lab communications through the lab website and lab Twitter.

### **Pollinator Hotshot Crew Lead**

May 2022 - July 2023

*National Park Service Inventory and Monitoring Division and Colorado State University, CO*

Crew Lead for the National Park Service Pollinator Inventory Project. Lead crews of undergraduate students, National Park Service employees, and interns from various organizations through National Parks to collect data on bees and butterflies. Lead training on how to collect insects, field safety, and how to use GPS equipment.

### **External Affairs Intern**

June 2021 - May 2022

*Inland Empire Utilities Agency Municipal Water District, Chino, CA*

Intern for the Inland Empire Utilities Agency's Chino Creek Wetlands and Educational Park. Develop lesson plans and activities for the Water Discovery Program and the Park's virtual programs. Ensure all lessons are in correspondence with NGSS and Common Core standards. Lead tours of the Chino Creek Wetlands and Educational Park and the Carbon Canyon Regional Water Recycling Plant. Provide virtual Water Discovery field trips to local K-12 students. Monitor and create educational posts for the park's social media pages. Oversee community science projects and monitor the park's iNaturalist project. Participate in the Water Education Today Project WET Facilitator training and Climate Change in California training.

**Interpretive Park Aide**

Dec 2021 - April 2022

*Chino Hills State Park, California State Parks, Brea, CA*

Interpretive Park Aide at Chino Hills State Park. Oversee daily operations of the Visitor Center, interact with visitors, and provide information about the park. Develop and lead virtual and in-person school programs through California State Parks PORTS (Parks Online Resources for Teachers and Students) to K-12 students throughout California. Create lesson plans on biodiversity, environmental surveys, and California history. Ensure all lessons are in correspondence with NGSS and California Common Core standards. Implement and oversee community science projects on eBird and iNaturalist. Manage park social media pages, create educational videos, and lead community outreach programs.

**Disability Accommodations Support Services Administrative Assistant**

Jan 2021 - April 2021

*California State University Channel Islands, Camarillo, CA*

Area head of Note Taking Services, one of the largest accommodations offered by the department, for the Spring 2021 semester. Communicated and worked with outside vendors to provide academic accommodations to college students and ensured vendors were paid. Supervised two student assistants, hired student note takers, and made sure all students in the program are receiving their accommodations.

**Disability Accommodations Support Services Student Assistant**

Aug 2018 - Dec 2020

*California State University Channel Islands, Camarillo, CA*

Proctored exams, explained the rules of student integrity, and provided technical assistance to students and staff. Assisted professional staff with data management, developed protocols for department procedures, and trained new student assistants. Served as lead student assistant for a semester to a team of three student assistants for the Note Taking Department. Led presentations and created outreach materials to promote the department and advocate for students in the program.

**Student Undergraduate Research Fellow**

June 2020 - July 2020

*California State University Channel Islands, Camarillo, CA*

Worked with Dr.Emily Fairfax and Dr. Kiki Patsch to produce an interactive, virtual reality tour of Santa Rosa Island with embedded data visualizations and information using GoogleTour and GooglePoly. Developed a guide for the tour showing users where they are geographically and identified safety conditions to be aware of. Created maps using ESRI ArcPro, demonstrating points from the tour to locate the users.

**Microbiology Research Intern**

Feb 2019 -Aug 2019

*Southern California Coastal Water Research Project, Costa Mesa, CA*

Microbiology Research Intern for the SCCWRP Bite Regional 18 Project in collaboration with Ventura Waters, Ventura Public Health Department, and CSU Channel Islands. Processed water samples from local beaches using single-layer agar and double-layer agar assays to assess coliphage and fecal contamination. Compiled data to create weekly reports for the SCCWRP Bite Regional 18 large-scale report.

## AWARDED GRANTS AND RESEARCH SCHOLARSHIPS

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| Saint Anthony Falls Laboratory Edward Silberman Fellowship (\$8,000)                               | 2026 |
| Saint Anthony Falls Laboratory Frank and Julie Tsai Travel Award (\$500)                           | 2025 |
| University of Minnesota Department of Geography, Environment, and Society Research Award (\$1,500) | 2024 |
| University of Minnesota Beverly & Richard Fink First-Year Fellowship Award (\$6,000)               | 2024 |
| Colorado State University Graduate Degree Program in Ecology Travel Grant (\$300)                  | 2022 |
| California State University COAST Research Scholarship (\$457.28)                                  | 2020 |

## PROFESSIONAL SOCIETY MEMBERSHIP

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| American Geophysical Union | 2024-present |
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## SERVICE

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| Tabling for the Fairfax Beaver Lab at the Minnesota State Fair                           | 2025 |
| Community Outreach Interpretive Talk at the Steele County Fair                           | 2025 |
| Tabling for the Fairfax Beaver Lab at the Carleton Beaverfest                            | 2025 |
| Tabling for the Geography Department at UMN, President Rebecca Cunningham's Inauguration | 2024 |

## UNIVERSITY INVOLVEMENT

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### University of Minnesota

*Department of Geography, Environment, and Society:*

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| Graduate Education and Policy Committee Member | 2025 - present |
| Coffee Hour Committee Member                   | 2024 - present |

### Colorado State University

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| Graduate Degree Program in Ecology Peer Mentor                      | 2023        |
| CSU Front Range Student Ecology Symposium Outreach Committee Member | 2022 - 2023 |

### California State University Channel Islands

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| CSUCI Club Wellness Member  | 2020      |
| Justice and Equity with an Environmental Lens, Cofounder and Vice President | 2020      |
| Green Generation Member   | 2016-2020 |
| Surfrider Foundation of CI Member   | 2016-2019 |

## UNDERGRADUATE RESEARCH ASSISTANTS SUPERVISED

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### Pollinator Hotshot Team Research Assistants

Amanda Carlson, Colorado State University (2022-2023)  
Chloé Recouvreur, University of Dijon (2022)  
Iveta Nikantrovite, University of Derby (2022)  
Bella Tamplin, University of Derby (2022)

### Rocky Mountain Science and Sustainability Network

Ashley Herick, Moravian University (2023)  
Amanda Carlson, Colorado State University (2023)  
Kerrigan Cooney, Colorado Mountain College (2023)

## VOLUNTEER EXPERIENCE

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Ventura County Surfrider Beach Clean Up Volunteer  
Chino Hills State Park Education Volunteer

2016-2019  
2020-2021