

Curriculum Vitae

Arely Castillo

Arizona State University
School of Life Sciences
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Education:

(* indicates expected graduation date)

05/2026* Master of Science in Biological Science
 College of Liberal Arts and Sciences, Arizona State University (Tempe, AZ)
 Accelerated Master's Degree

05/2025* Bachelor of Science in Biological Sciences (Conservation Biology and Ecology)
 College of Liberal Arts and Sciences, Arizona State University (Tempe, AZ)
 4+1 Accelerated BS/MS Student

06/2023 Associate of Science in Biology
 College of the Canyons (Santa Clarita, CA)

06/2022 Associate of Arts in Math & Science
 College of the Canyons (Santa Clarita, CA)

12/2021 Associate of Arts in Social & Behavioral Science
 College of the Canyons (Santa Clarita, CA)

Fieldwork Experience:

April 2025 - current:

Master's fieldwork in analyzing the recovery of plant communities, both native and non-native, across 82,000 acres of the Sonoran Desert, focusing on how abiotic factors affect spatial heterogeneity using belt transects, line-point intercept surveys, and Daubenmire plots to investigate the interactions between fire severity, soil properties, elevation, and topography.

March 2025 - current:

Volunteer work with CAP-LTER in annual biomass harvest and community composition surveys at each of the 9 DesFert sites throughout the Phoenix valley.

June-August 2024 (3 months):

Undergraduate fieldwork in preliminary research on the abundance of biological crust in altered long-term rainfall manipulation experiments using line-point intercept surveys. Preliminary research on the causes and consequences of alternative ecosystem states and the expansion of woody plants into grasslands resulting in more "desert-like" conditions.

Professional Activities:

2024 - Undergraduate and Graduate Researcher in Ecology
 School of Life Science, Arizona State University
 Primary Advisor: Dr. Heather Throop

2024 Research Internship for Undergraduates in Ecology
 School of Life Science, Arizona State University
 Primary Advisor: Dr. Osvaldo Sala

2023-2024 Data Processor in Entomology
 Natural History Collections, Arizona State University
 Primary Advisors: Dr. Nico Franz and Dr. Sangmi Lee

2023 Undergraduate Research Scholar in Microbiology
 School of Life Science, Arizona State University
 Primary Advisor: Dr. Hinsby Cadillo-Quiroz

2022-2023 Project Manager, NASA Great Lunar Expedition for Everyone
 National Space Grant Consortia, University of Colorado, Boulder
 Primary Advisor: Chris Koehler

2021-2023 President, Astronomy and Physics Club
 College of the Canyons
 Primary Advisor: Teresa Ciardi

2022 Science Member, NASA Lucy Student Pipeline Accelerator & Competency Enabler
 Arizona State University
 Primary Advisors: Sheri Klug Boostra and Dan Garcia

2022 Project Manager, NASA Community College Aerospace Scholars
 Oklahoma State University
 Primary Advisors: Kriston Clanton and Lisa Mitchel

Conference Presentations:

2025 (Accepted, forthcoming) **Castillo, A.**, Sanín, M.J., Steger, L., Rowsey, D., Throop, H. Vegetation Responses to Fire in the Sonoran Desert. School of Life Sciences Undergraduate Research Symposium, Tempe, AZ, April 25. Poster

2025 **Castillo, A.**, Sanín, M.J., Steger, L., Rowsey, D., Throop, H. Vegetation Responses to Fire in the Sonoran Desert. WAESO Student Research Conference, Tempe, AZ. February 24-25. Poster

2024 **Castillo, A.**, Horne, T., Sutter, B., Sala, O.E. Exploring Biocrust Responses to Altered Precipitation Patterns: Insights from Long-Term Manipulation Plots. NDiSTEM Conference, Phoenix, AZ, October 31-November 2. Poster

2024 Sanchez Carreon, A., Garcia, H., I. Ali, I., **Castillo, A.**, Kakkad, S., Markichevich, B., McDaniel-Pulver, M., Mulder, D. Nguyen, S., Quintana, R., Soto, N., Swonger, C., Vael, L., Cadillo-Quiroz, H. Assessing Soil Membrane Substrate System Cultivation vs. Traditional Methods for Isolating Microbial Strains from the Howland Forest, Maine. Southern Nevada ASM Branch Meeting 2024, Las Vegas, Nevada, April 13. Poster

Fellowships & Grants:

2025 Gertrude Claypool Scholarship
Arizona Federation of Garden Clubs
(\$8,000)

2025 GCA Award in Desert Studies
Garden Club of America
(\$4,000)

2025 Western Alliance to Expand Student Opportunities (WAESO) Fellowship
Arizona State University
Vegetation Responses to Fire in the Sonoran Desert
(\$1,000)

2024 Embark Fellowship
Arizona State University
Exploring Biocrust Responses to Altered Precipitation Patterns: Insights from Long-Term Manipulation Plots.
(\$2,500)

2024 Danielle Aronson Memorial Award
School of Life Science, Arizona State University
(\$6,628)

2024 Stacy A. (Hawes) Melle Scholarship
Arizona State University
(\$2,500)

(Total Funds Awarded: \$24,628)

Awards:

2025 Third Place Poster Award
WAESO Student Research Conference

2024 Dean's List Fall of 2024
College of Liberal Arts and Sciences, Arizona State University

2024 Dean's List Spring of 2024
College of Liberal Arts and Sciences, Arizona State University

2023 Dean's List Fall of 2023
College of Liberal Arts and Sciences, Arizona State University

2023	Honors College of the Canyons
2022	Cum Laude College of the Canyons
2022	Certificate of Completion L'SPACE Mission Concept Academy, Arizona State University
2022	Certificate of Achievement (2) NASA Community College Aerospace Scholars, Oklahoma State University
2021	Cum Laude College of the Canyons

Previous Positions:

2022-2023 Chemistry Tutor
College of the Canyons (Santa Clarita, CA)

Press Coverage:

The Signal News Article Interview, “‘Star Party’ shines again at COC Canyon Country”, 2022
<https://signalscv.com/2022/11/star-party-shines-again-at-coc-canyon-country/>

Science Talks, CCC Star Party Pamphlet Contributing Writer, “Aerospace & Science Team Update”, 2022
https://issuu.com/cocpio/docs/25641909_js_star_party_fa22_flip_book?fr=sNjYzNDOxMTA1QDU,2022

The Paw Print Interview, “Star Party”, 2022
https://www.canyons.edu/_resources/documents/studentservices/studentdevelopment/asg-misc/PawPrint_May_June2022.pdf

SCVtv News Article, “April 22: Star Party at COC Canyon Country”, 2022
<https://scvnews.com/april-22-star-party-at-coc-canyon-country-campus/>

The Signal News Article Interview, “COC Aerospace and Sciences Team seeks funding for space experiments”, 2022
<https://signalscv.com/2022/07/coc-aerospace-and-sciences-team-seeks-funding-for-space-experiments/>