

TALIA G. ANDERSON

UNIVERSITY OF ARIZONA

2024 Ph.D., Geography

Dissertation: *Rainfall variability, extreme events, and climate information in the Central American Dry Corridor*

Tucson, AZ

Thesis: *Spatiotemporal peatland productivity and climate relationships across the western South American Altiplano*

Minneapolis, MN

B.A., Spanish Studies (Honors)

Foreign study at VENUSA Institute of International Studies and Modern Languages (Mérida, Venezuela)

NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION /

Los Angeles, CA

2024 – Climate & Global Change Postdoctoral Fellow

POSTDOCTORAL FELLOW

Los Angeles, CA

2024 – National Oceanic & Atmospheric Administration Climate & Global Change Program

Research areas include seasonal forecasting and climate variability. I use instrumental observations and initialized climate models to improve seasonal rainfall forecasts for Central America.

Tucson, AZ

2021 – School of Geography, Development & Environment

Advisor: Dr. Kevin Anchukaitis

Research areas include climate variability and change, extreme events, and climate services in Central America. I use mixed methods including climate data analysis and household surveys to better understand patterns of climate variability and change in Guatemala.

Tucson, AZ

2019 Laboratory of Tree-Ring Research & School of Geography, Development & Environment

Advisor: Dr. Connie Woodhouse

Research areas include water services and supply, climate variability, and stakeholder engagement in the lower Colorado River basin. I focused on lake level variability and climate trends in Flagstaff, AZ.

Tucson, AZ

2017 – 2019 Laboratory of Tree-Ring Research & School of Geography, Development & Environment

Advisor: Dr. Kevin Anchukaitis

Research areas include dendrochronology, paleoclimate, and global change in Latin America. I evaluated the spatiotemporal variability of the Central American mid-summer drought and contributed to tree-ring chronology development in Guatemala.

Luquillo, Puerto Rico

2016 – 2017 US Forest Service/International Institute of Tropical Forestry

Assisted in the management of various projects for the Tropical Responses to Altered Climate Experiment (TRACE), the first warming experiment in a tropical ecosystem.

FIELD TECHNICIAN

Rio Grande, Puerto Rico

2016 Luquillo Long-Term Ecological Research (LTER) Site

Collected and managed data from the Luquillo Forest Dynamics Plot in order to assess changing forest dynamics as a result of land use history and environmental factors. Developed study site maps using ArcGIS.

UMN UNDERGRADUATE RESEARCH ASSISTANT

Minneapolis, MN

2014–2016 University of Minnesota Center for Dendrochronology

Worked as an assistant to Dr. Daniel Griffin, conducted tree ring dating, measurement, and analysis. Aided in training fellow undergraduate students.

PROFESSIONAL EXPERIENCE

UNIVERSITY OF MINNESOTA SPANISH & PORTUGUESE DEPARTMENT

Minneapolis, MN

2014–2016 Spanish & Portuguese Studies Peer Advisor

Provided academic support to undergraduate students, completed various office duties, managed database, and developed original projects to inform students about departmental opportunities.

AMIGOS DE LAS AMÉRICAS

Pérez Zeledón, Costa Rica

2015 Project Supervisor

Created and facilitated activities during host community visits and fieldwork sessions during national park trips for youth from the United States and Costa Rica. Effectively communicated in Spanish to ensure successful summer program.

PUBLICATIONS

Submitted or In Revision

Anderson, T. G., D. Pons, A. Xuruc, H. Rodríguez, M. J. Taylor, K. J. Anchukaitis, Complexity and mediating factors of farmers' perceptions of climate and agricultural adaptation strategies in the Guatemalan Dry Corridor, *Climatic Change*, in review, 2024.

Anderson, T. G., D. Pons, K. J. Anchukaitis, Verification and usability of seasonal climate forecasts throughout rural Dry Corridor communities, *Weather, Climate, and Society*, submitted, 2025.

Peer-Reviewed Papers

Anderson, T. G., K. A. McKinnon, D. Pons, K. J. Anchukaitis, How exceptional was the 2015–2019 Central American drought? *Geophysical Research Letters*, 2023.

Jennings, L., **T. Anderson**, A. Martinez, R. Sterling, D. David-Chavez, I. Garba, M. Hudson, N. A. Garrison, S. Russo Carroll, Applying the CARE Principles for Indigenous Data Governance to Ecology and Biodiversity Research, *Nature Ecology & Evolution*, 2023.

Anderson, T. G., D. A. Christie, R. O. Chávez, M. Olea, K. J. Anchukaitis, Spatiotemporal Peatland Productivity and Climate Relationships Across the Western South American Altiplano, *Journal of Geophysical Research – Biogeosciences*, 2021.

Chávez, R. O., D. A. Christie, M. Olea, **T. G. Anderson**, A Multiscale Productivity Assessment of High Andean Peatlands across the Chilean Altiplano Using 31 Years of Landsat Imagery, *Remote Sensing*, 2019.

Anderson, T. G., K. J. Anchukaitis, D. Pons, M. J. Taylor, Multiscale trends and precipitation extremes in the Central American Midsummer Drought, *Environmental Research Letters*, 2019.

Anderson, T. G., D. Griffin, K. J. Anchukaitis, D. Pons, M. J. Taylor, Climate sensitivity and potential vulnerability of *Abies guatemalensis* forests in Totonicapán, Guatemala, *Journal of Latin American Geography*, 2018.

Technical Reports

Anderson, T. G., C. Woodhouse, D. Ferguson, Upper Lake Mary: Lake Level Response to Climate Variability, *Internal Report, Flagstaff Water Services*, 2020.

TEACHING	<p>UNIVERSITY OF ARIZONA</p> <p>Tucson, AZ</p> <p>School of Geography, Development & Environment</p> <p>GEOG 230 <i>Our Changing Climate</i> Teaching Assistant (Spring 2021)</p> <p>GEOG 363 <i>Climate Change: Human Causes, Social Consequences, and Sustainable Responses</i> Teaching Assistant (Fall 2020)</p> <p>GEOG 170 <i>Introduction to Physical Geography</i> Teaching Assistant (Spring 2019)</p>
HONORS	<p>Andrew Ellicott Douglass Memorial Scholarship, 2023</p> <p>University of Arizona College of Science, Laboratory of Tree Ring Research Scholarship Award, 2021</p> <p>University of Arizona College of Science Galileo Circle Scholarship, 2020</p> <p>University of Arizona Women in Science and Engineering Excellence Banquet Poster Award, 2020</p> <p>Alsie French & Edmund Schulman Memorial Scholarship, Spring 2018</p> <p>10th World Dendrochronology Conference Student Poster Award, 2018</p> <p>ACTFL Certificate of Advanced Level Proficiency in Spanish, Spring 2016</p> <p>Talle Family Scholar, Fall 2015–Spring 2016</p> <p>Outstanding Senior Paper–Spanish Studies, Academic Year 2016</p>
GRANTS & FELLOWSHIPS	<p>NOAA Climate & Global Change Postdoctoral Fellowship, 2024</p> <p>Marshall Foundation Dissertation Fellowship, 2023</p> <p>P.E.O. Scholar Award, 2023</p> <p>College of Social & Behavioral Summer Dissertation Fellowship, 2023</p> <p>Climate Assessment for the Southwest (CLIMAS) Environment and Society Fellowship, 2023</p> <p>University of Arizona Roots for Resilience Research Assistantship in Data Science, 2022</p> <p>University of Arizona Carson Scholar Fellowship, 2021</p> <p>“Rainfall variability, extreme events, and vulnerability in heterogeneous social and environmental systems”, PI: Kevin Anchukaitis, coPIs: Matthew Taylor, Diego Pons, Tom Evans, Diana Liverman, NSF Human-Environment and Geographical Sciences (HEGS), BCS2049657. <i>As a graduate student, I contributed significantly to the design of the project and writing of the grant. I was funded by this grant from 06/2021–08/2023.</i></p> <p>PATHWAYS (Partnerships Along The Headwaters of the Americas for Young Scientists) Program Research Grant, Fall 2020</p> <p>University of Arizona Professional Opportunities Development Funding Grant, Fall 2020</p> <p>American Association of Geographers Climate Specialty Group Student Grant, Fall 2020</p> <p>University of Arizona Graduate Student and Professional Council Travel Grant, Fall 2021, Spring 2020, Spring 2018, and Fall 2017</p> <p>Conference of Latin American Geographers Student Travel Award, Fall 2019</p> <p>Fulbright Study and Research Grant, Spring 2018</p> <p>Mentor: Dr. Duncan Christie (Universidad Austral de Chile)</p> <p>Project: Spatiotemporal patterns of Andean peatland dynamics across the South American Altiplano</p> <p>Undergraduate Research Opportunities Program (UROP) Grant, Fall 2015</p>
PRESENTATIONS & POSTERS	<p>Anderson, T., Climate Variability and Change Across Central America and its Relevance to Agricultural Communities, <i>P.E.O. Founders’ Day Luncheon</i>, invited keynote, Yuma, Arizona, November 2024.</p>

- Anderson, T.**, D. Pons, M. J. Taylor, A. Xuruc, H. Rodríguez-Salvatierra, Z. Guido, J. A. Sullivan, D. Liverman, K. J. Anchukaitis, Complexity and mediating factors in farmers' climate perceptions and agricultural adaptation strategies in the Guatemalan Dry Corridor, *38th Conference of Latin American Geography*, San Juan, Puerto Rico, May 2024.
- Anchukaitis, K. J., Z. K. Sethuraju, D. Pons, J. Edwards, **T. Anderson**, I. Gonzalez-Mendez, M. Taylor, Dendrochronological evidence for the impacts of the 1902 Santa Maria volcanic eruption on the forests of western Guatemala, *12th Cities on Volcanoes conference*, Antigua, Guatemala, February 2024.
- Anderson, T.**, K. A. McKinnon, D. Pons, K. J. Anchukaitis, How Exceptional Was the 2015–2019 Central American Drought?, *American Geophysical Union*, San Francisco, California, December 2023.
- Anderson, T.**, Moving towards co-production and CARE in climate and tree-ring research, *Dendroclimatology Conference: Past, Present, & Future*, Tucson, Arizona, May, 2023.
- Anderson, T.**, Central American Climate Change & Migration, *University of Arizona, Latin American Studies Central American Migration: Root Causes and Lived Experiences*, invited guest lecture, April, 2023.
- Anderson, T.**, K. A. McKinnon, D. Pons, K. J. Anchukaitis, How Exceptional Was the 2015–2019 Central American Drought?, *American Association of Geographers*, Denver, Colorado, March 2023.
- Anderson, T.**, K. J. Anchukaitis, K. Morino, L. Andreu-Hayles, D. Pons, D. Griffin, E. Castellanos, M. J. Taylor, Multiproxy insights into past climate variability from a Central American tree-ring chronology network, Poster presented at *Graduate Interdisciplinary Program Research Showcase*, Tucson, Arizona, December 2022.
- Anderson, T.**, K. J. Anchukaitis, K. Morino, L. Andreu-Hayles, D. Pons, D. Griffin, E. Castellanos, M. J. Taylor, Multiproxy insights into past climate variability from a Central American tree-ring chronology network, Poster presented at *American Geophysical Union*, New Orleans, Louisiana, December 2021.
- Russo Carroll, S., **T. Anderson**, Transforming Big Data for Indigenous Futures: The CARE Principles of Indigenous Data Governance, *CGIAR Ontologies Community of Practice Webinar*, November 2021.
- Anderson, T.**, Central American Climate Change & Migration, *University of California, Santa Barbara Interdisciplinary Approaches to the Cultures, Languages, and Literatures of Latin America and Iberia*, invited guest lecture, May 2021.
- Anderson, T.**, K. J. Anchukaitis, K. Morino, D. Pons, D. Griffin, C. Leland, E. Castellanos, M. J. Taylor, Regional & local climate responses in a Central American tree-ring chronology network, *American Association of Geographers*, virtual, March 2021.
- Anderson, T.**, C. A. Woodhouse, D. B. Ferguson, Upper Lake Mary: Lake Level Response to Climate Variability, *Flagstaff Water Commission*, Tucson, Arizona, August 2020.
- Anderson, T.**, D. A. Christie, R. O. Chávez, M. Olea, K. J. Anchukaitis, Spatiotemporal peatland productivity and climate relationships across the western South America Altiplano, *Master's Thesis Defense*, Tucson, Arizona, May 2020.
- Anderson, T.**, C. A. Woodhouse, D. B. Ferguson, Upper Lake Mary: Lake Level Response to Climate Variability, *Flagstaff Water Services*, Tucson, Arizona, March 2020.
- Anderson, T.**, K. J. Anchukaitis, D. Pons, M. J. Taylor, Multiscale trends and regional precipitation extremes in the Central American Midsummer Drought, Poster presented at *Women in Science and Engineering Excellence Banquet*, Tucson, Arizona, January 2020.
- Anderson, T.**, K. J. Anchukaitis, D. Pons, M. J. Taylor, Multiscale trends and regional precipitation extremes in the Central American Midsummer Drought, *Conference of Latin American Geographers*, Antigua, Guatemala, January 2020.
- Anderson, T.**, K. J. Anchukaitis, D. Pons, M. J. Taylor, Multiscale trends and precipitation extremes in the Central American Midsummer Drought, Poster presented at *Workshop on Risk Analysis for Extremes in the Earth System*, Berkeley, California, July 2019.
- Anderson, T.**, Spatiotemporal patterns of Andean peatland dynamics across the western South American Altiplano, *Fulbright Chile Study and Research Grant Final Conference*, Santiago, Chile, November 2018.

Anderson, T., D. Griffin, K. J. Anchukaitis, D. Pons, M. J. Taylor, Climate sensitivity and potential vulnerability of pinabete (*Abies guatemalensis*) forests in Totonicapán, Guatemala, Poster presented at *10th World Dendrochronology Conference*, Thimphu, Bhutan, June 2018.

Anderson, T., Tree Rings, Climatic Change, and Water Resource Availability in the Altiplano Plateau, *Fulbright Chile Study and Research Grant Orientation*, Santiago, Chile, March 2018.

Anderson, T. Understanding Past, Present, and Future Environments through Tree Rings, *University of Arizona Financial Administrators Outreach Event*, Tucson, Arizona, February 2018.

Anderson, T., Pinabete y los bosques comunales de Totonicapán: una mirada al pasado para entender el futuro, *Universidad del Valle Progress and Potential in Dendrochronology Conference*, Guatemala City, November 2017.

Anderson, T., Pinabete y los bosques comunales de Totonicapán: una mirada al pasado para entender el futuro, *Totonicapán Community Stakeholder Meeting*, Totonicapán, Guatemala, November 2017.

Anderson, T., Desarrollo de una cronología tropical para *Abies guatemalensis* de Totonicapán, Guatemala, *Curso-Taller: Dendrocronología y sus aplicaciones hidroclimáticas y ecológicas*, Huancayo, Perú, October 2016.

Anderson, T., D. Griffin, K. J. Anchukaitis, D. Pons, M. J. Taylor. A 168-year tropical tree-ring chronology for *Abies guatemalensis* from Totonicapán, Guatemala, Poster presented at *University of Minnesota Undergraduate Research Symposium*, Minneapolis, MN, May 2016.

SERVICE

Professional reviewer of journal manuscripts for:
Quarterly Journal of the Royal Meteorological Society, 2025
Weather and Climate Extremes, 2024
Journal of Climate, 2023
Climate of the Past, 2022
Dendrochronologia, 2019, 2022
Hydrology and Earth System Sciences, 2021

Student Representative for School of Geography, Development & Environment Director Search Committee, 2023 – 2024

Student Representative for the American Association of Geographers Paleoenvironmental Change Specialty Group, 2021–2022

Panel organizer for Women in Science and Engineering (WISE) STEM Panel Series, 2019–2021

Co-president of SAGA (Southern Arizona Geographer's Association), 2020–2021

Panel Moderator of the Imagine Your STEM Future session for the University of Arizona Launching Your Career Symposium, 2021

Co-organizer for the School of Earth and Environmental Sciences Earth Week, 2020

Committee Member of SAGA (Southern Arizona Geographer's Association), 2017–2019

Rapporteur for the Science, Health and Engineering Policy and Diplomacy Conference, Sustainable Development for the Americas, November 2019

Rapporteur for the Climate and Migration in Central America and Mexico: Drought, Vulnerability, Livelihoods and Attribution Workshop, September 2019

Student Representative for the Spanish & Portuguese Studies Committee, 2015–2016

Honors Ambassador/Admissions Ambassador for the University of Minnesota, 2013–2015

Children's Program Leader for CLUES (Comunidades Latinas Unidas En Servicio), 2014

TRAINING

Climate Migration Modeling Intercomparison Workshop, November 2024

Community Earth System Model (CESM) Tutorial at the National Center for Atmospheric Research, July 2023

Cyverse Foundational Open Science Skills Course, Fall 2022
 Mitchell Hamline School of Law Effectively Communicating Science Expert Witness Training Academy,
 July 2022
 STEPS Centre Summer School on Pathways to Sustainability, May 2021
 Anti-racist Teaching Workshop, March 2021
 Alan Alda Science Communication Workshop, January 2020
 Workshop on Risk Analysis for Extremes in the Earth System, July 2019
 Curso Programación Avanzada en R para Análisis Masivo de Imágenes Satelitales (Advanced Program-
 ming Course in R for Satellite Imagery), July 2018
 10th World Dendrochronology Fieldweek, June 2018
 Curso-Taller: Dendrocronología y sus aplicaciones hidroclimáticas y ecológicas (Course-Workshop:
 hydroclimate and ecological applications in dendrochonology), Fall 2016
 Central American Dendroecological Fieldweek (CADEF), Spring 2015

PRESS/POPULAR SCIENCE

Research featured in 'In a warming world, hunger stalks Guatemala's Mayan highlands', Reuters, October,
 2023.
Research featured in 'Researchers Discover Nuanced Connection Between Climate Change And Immigra-
 tion', KJZZ Public Radio, November 2019.
Research featured in 'When Reporting Climate-Driven Human Migration, Place Matters', UA News,
 November 2019.

LANGUAGES

English – first language
 Spanish – professionally advanced