

CURRICULUM VITAE

JULIE EDWARDS

- CONTACT University of California, Santa Barbara
Bren School of Environmental Science & Management
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pronouns: she/her
- EDUCATION UNIVERSITY OF ARIZONA Tucson, AZ
2024 Ph.D., Geography
Minor: Global Change
Primary Advisor: Dr. Kevin Anchukaitis
Dissertation: *Advances in Climate and Extreme-event Analyses Using Quantitative Wood Anatomy*
2020 M.A., Geography
Thesis: *The enigmatic northwestern North America climate response to the 1783 Laki eruption*
UNIVERSITY OF CALIFORNIA, LOS ANGELES Los Angeles, CA
2015 B.A., Geography/Environmental Studies
Minor: GIS&T, and Art History
Henry Samueli School of Engineering and Applied Science Dean's Honor List
- RESEARCH INTERESTS
Paleoclimate, dendrochronology, climate modeling, extreme events, and environmental change
- PUBLICATIONS González-Mendez, I., K.J. Anchukaitis, C. Pearson, D. Pons, D. Frank, **J. Edwards**, E. Luna, and W. Pérez, Annual chronology and climate signals in *Swietenia macrophylla* and *Cedrela odorata* (Meliaceae) in the Maya Lowlands. *Paleoceanography and Paleoclimatology*, accepted, 2025.
Leland, C., N. Davi, R. D'Arrigo, L. Andreu-Hayles, A. Pacheco-Solana, **J. Edwards**, K.J. Anchukaitis, T. Porter, M.F.J. Pisaric, M. Mant, T. Galloway, and R. Oelkers. Tree-ring evidence of the elusive 1959 summer cold event in northwestern North America, *Arctic, Antarctic, and Alpine Research*, accepted, 2025.
Edwards, J. Refining past climate records with wood anatomy. *Nature Reviews Earth & Environment – Tools of the Trade*. doi: [10.1038/s43017-025-00643-4](https://doi.org/10.1038/s43017-025-00643-4), 2025.
Edwards, J., Tintor, W. L., Nolin, A. F., Woodhouse, C. A., von Arx, G., & Anchukaitis, K. J. Multiple elevation-dependent climate signals from quantitative wood anatomical measurements of Rocky Mountain bristlecone pine. *Journal of Geophysical Research: Biogeosciences*, 130, e2024JG008307. doi: [10.1029/2024JG008307](https://doi.org/10.1029/2024JG008307), 2025.
Edwards, J., Anchukaitis, K. J., Gunnarson, B. E., Pearson, C., Seftigen, K., von Arx, G., & Linderholm, H. W. The origin of tree-ring reconstructed summer cooling in northern Europe during the 18th century eruption of Laki. *Paleoceanography and Paleoclimatology*, 37, e2021PA004386. doi: [10.1029/2021PA004386](https://doi.org/10.1029/2021PA004386), 2022.
Edwards, J., Anchukaitis, K. J., Zambri, B., Andreu-Hayles, L., Oelkers, R., D'Arrigo, R., & von Arx, G. Intra-annual climate anomalies in northwestern North America following the 1783-1784 CE Laki eruption. *Journal of Geophysical Research: Atmospheres*, 125, 2020JD033544. doi: [10.1029/2020JD033544](https://doi.org/10.1029/2020JD033544), 2021.
Meko D., Panyushkina, I., Agafonov, L., **Edwards, J.**, Impact of high flows of an Arctic river on ring widths of floodplain trees, *The Holocene*, 2020;30(6):789-798. doi: [10.1177/0959683620902217](https://doi.org/10.1177/0959683620902217), 2020.
- RESEARCH UNIVERSITY OF CALIFORNIA, SANTA BARBARA Santa Barbara, CA
2024 – Postdoctoral Researcher

Bren School of Environmental Science & Management
Advisor: Dr. Joan Dudley & Dr. Samantha Stevenson
Southern California extreme precipitation variability and drivers.

UNIVERSITY OF ARIZONA

Tucson, AZ

2018 – 2024 Graduate Research Assistant

School of Geography and Development, Laboratory of Tree-Ring Research

Advisor: Dr. Kevin Anchukaitis

High-resolution climate reconstructions of the last millennium and the effect of high latitude volcanic eruptions on climate and tree growth.

2021 – 2023 Graduate Research Assistant

School of Geography and Development, Laboratory of Tree-Ring Research

Principal Investigator: Dr. Connie Woodhouse

Climate signals in the quantitative wood anatomy of Rocky Mountain bristlecone pine

2018 – 2019 Graduate Research Assistant

Laboratory of Tree-Ring Research

Principal Investigator: Dr. Dave Meko

Quantitative and qualitative wood anatomical data as hydroclimate proxies in California and Russia

UNIVERSITY OF CALIFORNIA, LOS ANGELES

Los Angeles, CA

2017 – 2018 Research Assistant

Department of Geography

Principal Investigator: Dr. Kyle Cavanaugh

Classified health of shallow coral reef ecosystems from underwater photography.

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

Los Angeles, CA

2017 – 2018 Research Assistant

Department of Geological Sciences

Principal Investigator: Dr. Jennifer Cotton

Spatially modeled isotopic composition of small mammal species to track landscape changes over time.

PROFESSIONAL EXPERIENCE

INTERNATIONAL MEDICAL CORPS

Los Angeles, CA

2016 – 2017 GIS Technician

Provided geospatial information for emergency medical relief logistics and international program operations.

TEACHING

UNIVERSITY OF ARIZONA

Tucson, AZ

Laboratory of Tree-Ring Research

Teaching Assistant

ANTH 204 *Cultures, Catastrophe and Climate* (Fall 2020)

School of Geography and Development

Teaching Assistant, Guest Lecturer, Curriculum Development

GEOG 170A1 *Introduction to Physical Geography* (Fall 2018, Spring 2019, Fall 2019, Spring 2020)

MENTORING

Francisca Molina, B.A., Environmental Studies and Law (2023–2024)

Ana Isabel González Mendez, M.A., Geography, University of Arizona (2022–2024)

Ellie Neifeld, M.S., Geosciences, University of Arizona (2022 – 2023)

Zanubia Sethuraju, B.A. Environmental Studies, University of Arizona (2021 – 2022)

GRANTS

NSF Atmospheric and Geospace Sciences Postdoctoral Research Fellowship (AGS-PRF): *Improved Estimates of Southern California Precipitation Extremes through Model/Proxy Synthesis*, 2025-2027

SBSRI Dissertation Research Grant, 2023
Geological Society of America Graduate Student Research Grant, 2021
University of Arizona CSW Mini Grant (on behalf of the Southern Arizona chapter of AWG), 2021
American Association of Geographers Climate Specialty Group Student Grant, 2020
E-an Zen Fund Geoscience Outreach Grant (on behalf of the Southern Arizona chapter of AWG), 2020
University of Arizona Graduate & Professional Student Council Travel Grant, 2019 2020, & 2021
University of Arizona Women in STEM Student Council Travel Grant, 2019

AWARDS & FELLOWSHIPS

UCSB Bren School's Global Change Postdoctoral Fellowship, 2024
University of Arizona Roots for Resilience, 2023
P.E.O. Scholar Award, 2023
Raphael and Jolene Gruener Research Travel Award, 2023
Andrew Ellicott Douglass Memorial Scholarship, 2023
ThinkSwiss Research Scholarship, 2023
University of Arizona Galileo Circle Scholar, 2022
AAG Biogeography, Climate, and Paleoenvironmental Change Specialty Groups Student Awards, 2022
North American Dendroecological Fieldweek Graduate Fellow, 2021
Association for Tree-Ring Research Masters Thesis Award, 2021
Carson Scholars Program Fellowship, 2021
Laboratory of Tree-Ring Research Thomas P. Harlan Award, 2021
Alsie French & Edmund Schulman Memorial Scholarship, 2020
University of Arizona College of Science Scholarship Award, 2019, 2023

TALKS

Edwards, J., Anchukaitis, K. J., McAfee, S., Csank, A., Andreu-Hayles, L., D'Arrigo, R., & von Arx, G. Reconstructing past arctic climate variability through high-resolution tree-ring wood anatomical chronologies from northern Alaska. *American Geophysical Union*, San Francisco, California, December 2023

Edwards, J. Open Science Improvements in Dendrochronology and Data Processing Pipelines for Quantitative Wood Anatomy. *Laboratory of Tree-Ring Research Tree-Ring Talks*, Tucson, Arizona, November 2023

Edwards, J., Tintor, W., Nolin, A.F., Anchukaitis, K. J., Woodhouse, C., & von Arx, G. Climate signals in wood anatomy of Rocky Mountain bristlecone pine: unraveling temperature stability and multiple climate influences. *Birmensdorfer Tree-Ring Lecture*, Birmensdorf, Switzerland, June 2023

Edwards, J., Anchukaitis, K. J., McAfee, S., Csank, A., Andreu-Hayles, L., D'Arrigo, R., & von Arx, G. Records of past temperatures in wood anatomy of high-latitude trees. *Tree Rings in Archaeology, Climatology and Ecology*, Coimbra, Portugal, May 2023

Edwards, J. Seeing both the forest and the trees: dendrochronology at the cellular scale. *Dendroclimatology Conference: Past, Present, & Future*, Tucson, Arizona, May 2023

Edwards, J., Tintor, W., Anchukaitis, K. J., Woodhouse, C., & von Arx, G. Temperature signal stability in wood anatomical measurements of Rocky Mountain bristlecone pine. *Laboratory of Tree-Ring Research Tree Ring Day*, Tucson, Arizona, March 2023

Edwards, J., Anchukaitis, K. J., McAfee, S., Csank, A., Andreu-Hayles, L., D'Arrigo, R., & von Arx, G. Records of past temperatures in wood anatomy of high-latitude trees. *American Association of Geographers*, Denver, Colorado, March 2023.

Edwards, J., Anchukaitis, K. J., Gunnarson, B. E., Pearson, C., Seftigen, K., von Arx, G., & Linderholm, H. W. The origin of tree-ring reconstructed summer cooling in northern Europe during the 18th century eruption of Laki. *Laboratory of Tree-Ring Research Tree Ring Day*, virtual, March 2022.

Edwards, J., Tintor, W., Anchukaitis, K. J., Woodhouse, C., & von Arx, G. Multiple climate signals in quantitative wood anatomical measurements of Rocky Mountain bristlecone pine. *American Association of Geographers*, virtual, February 2022.

Edwards, J., Anchukaitis, K. J., Gunnarson, B. E., Pearson, C., Seftigen, K., von Arx, G., & Linderholm, H. W. The origin of tree-ring reconstructed summer cooling in northern Europe during the 18th century eruption of Laki. *American Geophysical Union*, New Orleans, Louisiana, December 2021.
** Outstanding Student Presentation Award

Edwards, J., Anderson, T., Rochner, M. Dendrogeomorphology of an avalanche chute in Rock Creek Valley, Montana. *North American Dendroecological Fieldweek*, Red Lodge, Montana, July 2021

Edwards, J., Quantitative wood anatomy: using tree-ring cell measurements to understand climate response to volcanic eruptions. *Dendrochronology Intensive Summer Course*, invited guest lecture, virtual, June 2021

Edwards, J., Anchukaitis, K. J., Andreu-Hayles, L., Oelkers, R., D'Arrigo, R., von Arx, G., Zambri, B., Linderholm, H. W., & Gunnarson, B. E. The enigmatic climate response to the 1783-1784 CE Laki eruption. *American Association of Geographers*, virtual, April 2021

POSTERS

Edwards, J., Anchukaitis, K. J., McAfee, S., Csank, A., Andreu-Hayles, L., D'Arrigo, R., & von Arx, G. Reconstructing past arctic climate variability through high-resolution tree-ring wood anatomical chronologies from northern Alaska. *University of Arizona SBSRI Research Showcase*, Tucson, Arizona, February 2024

Edwards, J., Anderson, T., Rochner, M. Avalanche and landslide event history of an avalanche chute in Rock Creek Valley, Montana using Dendrogeomorphology. *University of Arizona EarthWeek*, Tucson, Arizona, March 2022

Edwards, J., Anderson, T., Rochner, M. Avalanche and landslide event history of an avalanche chute in Rock Creek Valley, Montana using Dendrogeomorphology. *Geological Society of America Cordilleran and Rocky Mountain Joint Section Meeting*, Las Vegas, Nevada, March 2022

Edwards, J., Anchukaitis, K. J., Andreu-Hayles, L., Oelkers, R., D'Arrigo, R., von Arx, G., Zambri, B. The impact of the 1783 Laki eruption on North American climate using quantitative wood anatomy of Alaskan white spruce, *Women in Science and Engineering Excellence Banquet*, Tucson, Arizona, January 2020

Edwards, J., Anchukaitis, K. J., Andreu-Hayles, L., Oelkers, R., D'Arrigo, R., von Arx, G., Zambri, B. The impact of the 1783 Laki eruption on North American climate using quantitative wood anatomy of Alaskan white spruce, *American Geophysical Union*, San Francisco, California, December 2019

SERVICE

Laboratory of Tree-Ring Research Faculty Search Committee 2023 – 2024

Graduate Student Representative for the Laboratory of Tree-Ring Research 2021 – 2024

Session co-organizer for American Association of Geographers 2022 & 2023 meeting

Reviewer for *Climate of the Past*, and *Paleoceanography and Paleoclimatology*, and *You Are Here: The Journal of Creative Geography* 2021, 2022

Southern Arizona chapter of AWG (Association for Women Geoscientists) fundraising chair, 2020 – 2021

University of Arizona Women in STEM Student Council grant reviewer, 2020

University of Arizona Graduate Professional Student Council grant reviewer, 2020

School of Earth and Environmental Sciences EathWeek organizer 2019 – 2020

Southern Arizona Geographers Association committee member 2018 – 2020

OUTREACH

Carson Alumni Liverman Scholars Mentor

Laboratory of Tree-Ring Research tour assistant

GALS (Girls on outdoor Adventures for Leadership and Science) mentor

WISE (Women in Science and Engineering) panel organizer

PRESS "Study of wood cells helps bring past climates to life" PNAS Front Matter, July 14, 2022
"How Hot Was the Summer of 1783 Really? Trees Tell Tales" Eos, April 20, 2022
"Iceland and Alaska entangled: Ph.D. student combats uncertainties regarding the 1783 Laki volcanic eruption"
Daily Wildcat, February 28, 2021
"Alaska white spruce tell a tale of a cold summer" Fairbanks Daily News-Miner, January 19, 2020
"Das Klima-Gedächtnis" Natur, December 2019 (in German)

TRAINING National Center for Ecological Analysis and Synthesis coreR Course, October 2024
USGS fieldwork safety workshop "Safety, Science and Leadership: Coming Home in One Piece", May 2024
Cyverse Foundational Open Science Skills Course, Fall 2023
University of California, Irvine Keck Carbon Cycle Accelerator Mass Spectrometer Facility, March 2023
Paleoclimate Data Assimilation Workshop, October 2022
North American Dendroecological Fieldweek, July 2021
University of Arizona Geography Anti-racist Teaching Workshop, March 2021
LinkedEarth PaleoHack Workshop, February 2021
Network on Quantitative Wood Anatomy Virtual Workshop, November 2020
NCAR Community Earth System Model Tutorial, Boulder, CO, August 2019
6th International Training School in Quantitative Wood Anatomy, San Vito di Cadore, Italy, June 2019

TECHNICAL SKILLS

MATLAB, R, Python, JavaScript, FORTRAN
ArcGIS, QGIS, Leaflet, ENVI
Adobe Creative Suite, Agisoft Photoscan, ROXAS