

ANNAPURNA C. POST-LEON

Salt Lake City, UT

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EDUCATION

University of Utah

PhD in Biology | GPA: 4.00

August 2021 – present

Graduation expected May 2026

Reed College

B.A. in Biology | GPA: 3.39

August 2016 – May 2020

RESEARCH EXPERIENCE

Doctoral Research

Advisor: Dr. William Anderegg

August 2021 – present

University of Utah, Salt Lake City, UT

- Three-chapter dissertation project exploring the effects of wildfire and smoke on tree physiology
- Manuscript for chapter 1 of dissertation currently in preparation

Post-Baccalaureate Research Assistant

Supervisor: Dr. Aaron Ramirez

September 2020 – July 2021

Reed College, Portland, OR

- Wrote and published manuscript on impacts of wildfire and drought on bigcone Douglas-fir using remote sensing and physiology data
- Assisted with data collection for the Portland State University Smart Trees Project

Post-Baccalaureate Summer Research Fellow

Supervisor: Dr. Aaron Ramirez

June 2020 – August 2020

Reed College, Portland, OR

- Summer research project using remote sensing and NOAA weather station data to explore long-term trends in fog and the effects of fog on canopy greenness at 24 sites along the Pacific west coast

Undergraduate Senior Thesis in Biology

Advisor: Dr. Aaron Ramirez

September 2019 – May 2020

Reed College, Portland, OR

- Research-based undergraduate thesis exploring whether Pacific Northwest tree species may absorb water through bark to mitigate gravitational drought stress
- 67-page thesis written and successfully defended to interdisciplinary panel of professors in May 2020

DAAD RISE Germany Summer Research Internship in Forestry

Supervisor: Amani Lwila

May 2019 – August 2019
University of Göttingen, Göttingen, Germany

- Collected and prepared soil samples, identified roots by species, and imaged roots for PhD candidate Amani Lwila's dissertation on the effects of tree species composition on root biomass and area in managed German forests

Undergraduate Summer Research Fellow

Supervisor: Dr. Aaron Ramirez

June 2018 – August 2017

Reed College, Portland, OR

- Ecophysiological fieldwork on drought physiology of bigcone Douglas-fir in southern California
- Explored the effects of elevation and aspect on bigcone Douglas-fir drought stress

Marttala Memorial Herbarium Summer Research Fellow

Supervisor: Dr. Keith Karoly

June 2017 – August 2018

Reed College, Portland, OR

- Prepared, mounted, and electronically accessed herbarium specimens for the Reed herbarium

MENTORSHIP & TEACHING EXPERIENCE

Graduate Research Supervisor

June 2022 – present

Advisor: Dr William Anderegg

University of Utah, Salt Lake City, UT

- Supervised and informally mentored multiple undergraduate research assistants
- Taught students ecophysiological techniques, data analysis, helped with writing applications for funding

Graduate Teaching Assistant: Global Environmental Issues

Fall 2024 & Fall 2021

Instructor: Dr William Anderegg

University of Utah, Salt Lake City, UT

- Graded exams, homework assignments, and research papers; held exam review sessions
- In 2024 only, created and taught 5 lectures

Graduate Teaching Assistant: Ecosystem Ecology

Spring 2022

Instructor: Dr. David Bowling

University of Utah, Salt Lake City, UT

- Graded exams and homework, held exam review sessions, facilitated class discussions
- Developed and taught two lectures on drought and wildfire

NearPeer Mentor

February 2020 – March 2020

Supervisors: Dr. Aaron Ramirez & Dr. Hannah Prather

Reed College, Portland, OR

- Mentored middle-school student for science fair project exploring the differences in hydraulic conductivity between conifers and angiosperms

Science Outreach Teacher

September 2018 – March 2020

Supervisor: Presence O'Neal

Reed College, Portland, OR

- Taught curriculum focused on climate science to fourth and fifth graders in public Portland schools

Undergraduate Teaching Assistant: Leaves to Landscapes Lab

Fall 2019

Instructor: Aaron Ramirez

Reed College, Portland, OR

- Helped plan both day and overnight camping field trips, explained ecological and botanical concepts to students, assisted with equipment set-up and class project data collection, graded field quizzes

Undergraduate Teaching Assistant: Introductory Chemistry Lab

Spring 2019

Instructor: Dr. Danielle Cass

Reed College, Portland, OR

- Assisted weekly with equipment and materials set-up, graded lab notebooks, explained course concepts

Writing Tutor

September 2019 – May 2020

Reed College Writing Center

Reed College, Portland, OR

- Individual free tutoring, worked closely with students to help them construct strong, grammatically correct arguments for academic papers in a wide variety of fields

FELLOWSHIPS & AWARDS

A. Herbert Gold and Marian W. Gold Scholarship

September 2023

University of Utah | Award: \$2500

Kurt Gerstle Fellowship

May 2023

Colorado Mountain Club Foundation | Award: \$2000

NSF Graduate Research Fellowship Program: Honorable Mention

April 2023

National Science Foundation | Award: \$0

Milton L. Fischer Memorial Field Research Award <i>Reed College</i> Award: \$5300	Summer 2020
DAAD RISE Germany Summer Research Internship <i>DAAD RISE Germany</i> Award: €2250 + travel	Summer 2019
Arch and Fran Diack Student Field Research Award <i>Reed College</i> Award: \$4800	Summer 2017
Marttala Memorial Herbarium Summer Research Fellowship <i>Reed College</i> Award: \$4500	Summer 2018

ACADEMIC COMMENDATIONS

Commendation for Excellence in Scholarship	<i>2019 – 2020 academic year</i>
Commendation for Excellence in Scholarship	<i>2018 – 2019 academic year</i>
Commendation for Exceptional Performance on Junior Qualifying Exam	<i>Spring 2019</i>

PUBLICATIONS

Post-Leon, AC, and Anderegg WRL. *In prep.* Species-specific impacts of wildfire on physiological and hydraulic traits in four species of Rocky Mountain trees.

Post-Leon, AC, Dryak M, Zhu E, De Guzman ME, Salladay R, Moritz MA, AML Parkinson, and Ramirez AR. 2022. Integration of landscape-level remote sensing and tree-level ecophysiology reveals drought refugia for a rare endemic, bigcone Douglas-fir. *Frontiers in Forests and Global Change* **5**.

Lwila, AS, **Post-Leon AC**, Ammer C, and Mund M. 2023. Site properties, species identity, and species mixture affect fine root production, mortality, and turnover rate in pure and mixed forests of European Beech, Norway spruce, and Douglas-fir. *Ecological Indicators* **147**.

CONFERENCE POSTERS & PRESENTATIONS

“Species-specific impacts of wildfire on xylem resistance to embolism in western North American forests” Xylem International Meeting	<i>March 2025</i>
“Wildfire affects tree physiological traits in southwestern Colorado, USA” Gordon Research Conference on Multiscale Plant Vascular Biology (poster)	<i>June 2024</i>
“Impacts of smoke on tree physiological health at Fishlake National Forest, Utah” Association for Fire Ecology Congress	<i>December 2023</i>
“Wildfire affects tree physiological responses to drought in southwestern Colorado, USA” Ecological Society of America Conference	<i>August 2023</i>
“Wildfire Affects Forest Responses to Drought in Southwestern Colorado, USA” American Geophysics Union Fall 2022 Meeting (poster)	<i>December 16, 2022</i>

OTHER PRESENTATIONS

“Wildfire affects tree physiology in southwestern Colorado” University of Utah, School of Biological Sciences Scientific Speaking	<i>November 14, 2024</i>
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“Form, Function, and Forest Memory”

University of Utah Science and Literature Symposium (invited talk)

April 10, 2024

“Wildfires and Climate Change in the Western US”

Utah Prison Education Program (guest lecture)

March 25, 2024

“Impacts of smoke on tree physiological health at Fishlake National Forest, Utah”

University of Utah, School of Biological Sciences Scientific Speaking

February 2, 2024

“Wildfire affects tree drought physiology”

University of Utah, School of Biological Sciences Scientific Speaking

April 13, 2023

“Wildfire in the Western US”

Weber State University (invited seminar)

February 17, 2023

“Effects of Fog on Coastal Vegetation Health in Washington, Oregon, and California”

Reed College Summer Research Lightning Talks

August 28, 2020

“Barking Up the Right Tree: Bark Water Uptake in Bigleaf Maple, Douglas-fir, and Coast Redwood”

Students Talking About Research, Reed College Biology Department

February 21, 2020

“Wildfire, Drought, Forests, and Climate Change”

University of Göttingen Department of Forestry

August 12, 2019

“Effects of Elevation and Aspect on Seasonal Drought Response in Bigcone Douglas-fir”

Reed College Summer Research Poster Session

August 31, 2018

SKILLS

Computer Programs

R Statistical Packages, Python, QGIS, Google Earth Engine, ENVI Geospatial Analysis Software, GitHub, HTML, L^AT_EX

General Research

Academic writing, protocol development, data analysis, collaboration, mentorship, teaching, presenting

Plant Physiological Measurements

Water potential using pressure chamber, gas exchange using LiCor and steady-state porometer, chlorophyll fluorescence using fluorometer, hydraulic conductivity using Sperry apparatus, pressure-volume curves, vulnerability curves using centrifuge and drydown, thermotolerance curves, soil coring, tree root species identification