

Alexandra Lalor (she/her)

Curriculum Vitae

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Research Interests

Fire ecology, dendrochronology, forest regeneration

Education

- Feb 8th 2021 – Dec 16th 2022 **University of Arizona**, Tucson AZ, GPA 4.0
M.S. Natural Resources Studies, Outstanding Thesis
Thesis: *Mortality Thresholds of Juvenile Trees to Drought and Heatwaves: Implications for Forest Regeneration across a Landscape Gradient*
- Aug 12th 2013 – May 13th 2017 **University of California**, Berkeley CA, GPA 3.8
B.S. Honors Environmental Science Major
Thesis: *Multi-Scale Analysis of Grazing Impacts on Biodiversity at Point Reyes National Seashore*
- May 27th 2018 – June 24th 2018 **Universidad Autónoma Metropolitana**, México
Spanish and Mexican Culture, Modern Mexico, Social Movements of Mexico
- July 20th 2015 – Oct 22nd 2015 **University of Cape Town**, South Africa
Conservation Science, Urban Studies
- June 21st 2014 – July 5th 2014 **Monterey Bay California State University**, California Channel Islands
Wildlands Studies: *The California Channel Islands Project: Wildlife Recovery and Reintroduction*

Publications

- 2023 **Lalor, A. R.**, Law, D. J., Breshears, D. D., Falk, D. A., Field, J. P., Loehman, R. A., Triepke, F. J., & Barron-Gafford, G. A. (2023). Mortality thresholds of juvenile trees to drought and heatwaves: implications for forest regeneration across a landscape gradient. *Frontiers in Forests and Global Change*, 6, Article 1198156. <https://doi.org/10.3389/ffgc.2023.1198156>

Peer Reviews

- 2022 **Ecosphere**, 1 publication

Research Projects

- Feb 8th 2021 – Dec 16th 2022 [**Mortality Thresholds of Juvenile Trees to Drought and Heatwaves: Implications for Forest Regeneration across a Landscape Gradient**](#)
Master's Thesis, University of Arizona
- Jan 19th 2016 – May 12th 2017 [**Multi-Scale Analysis of Grazing Impacts on Biodiversity at Point Reyes National Seashore**](#)
Senior Thesis, University of California Berkeley

Professional Experience

Dec 3rd 2023 –
present

Grand Canyon National Park, North Rim AZ

Assistant Lead Fire Effects Monitor, GS-6 (permanent)

- Crew leadership and program management
- Monitoring the effectiveness of prescribed fire treatments using long-term forest plots
- Collecting forest data such as plot photos, tree growth, shrub abundance, plant species composition, fuel loading, and seedling counts
- Wildland firefighting and prescribed burn operations

May 8th 2023 –
Oct 27th 2023

USGS Western Ecological Research Center, Three Rivers CA

Lead Biological Science Technician, GG-7

- Leading researchers into backcountry field sites to collect fuel data in recently burned and unburned Sequoia groves at Sequoia-Kings Canyon National Parks
- Analyzing forest regeneration and seedling abundance

May 9th 2021 –
Nov 6th 2021

Grand Canyon National Park, North Rim AZ

Assistant Lead Fire Effects Monitor, GS-6

- Collecting forest data such as plot photos, tree growth, shrub abundance, plant species composition, fuel loading, and seedling counts
- Plant identification of grasses, forbs, trees, and shrubs
- Wildland firefighting and prescribed burn operations
- Crew leadership and program management

May 10th 2020 –
Nov 21st 2020

Grand Canyon National Park, North Rim AZ

Fire Effects Monitor, GS-5

- Monitoring the effectiveness of prescribed fire treatments using long-term forest plots
- Collecting forest data such as plot photos, tree growth, shrub abundance, plant species composition, fuel loading, and seedling counts
- Plant identification of grasses, forbs, trees, and shrubs
- Wildland firefighting and prescribed burn operations

Nov 8th 2019 –
March 16th 2020

Good Life Ceramics, Santa Cruz CA

Storefront Manager

- Opening and closing the storefront, cashiering, managing studio membership
- Assisting members in finding supplies, buying clay, and following studio protocol
- Loading and unloading the kiln, recycling clay and operating pug machines
- Teaching walk-in customers to hand build selected projects

May 13th 2019 –
Oct 24th 2019

North Cascades National Park, Marblemount WA

Fire Effects Monitor and Fire Dispatcher, GS-3

- Monitoring the effectiveness of prescribed fire treatments using long-term forest plots
- Collecting forest data such as plot photos, tree growth, shrub abundance, plant species composition, fuel loading, and seedling counts
- Plant identification of grasses, forbs, trees, and shrubs
- Curation of tree cores and verifying fire scars using dendrochronology
- Wildland firefighting and pile burn experience
- Communications center radio dispatching

Sept 5th 2018 –
Dec 19th 2018

Luquillo Long-Term Ecological Research Program, El Yunque Puerto Rico

Tropical Field Research Intern

- Measuring forest characteristics such as canopy photos, fern surveys, litter processing, and coarse wood debris surveys
- Coquí and Anole abundance surveys
- Coring soils for microbial studies
- Carbon studies in warming plots through analysis of root growth
- Data entry, quality control, and data analysis
- Experience living and working in a tropical ecosystem

May 22nd 2017 –
May 18th 2018

US Geological Survey, Santa Fe NM

Dendrochronology Research Intern

- Reconstructing fire history in New Mexico using dendrochronology, fire scars, tree growth response, and cross dating methods to date fire events over the past 900 years
- Assisting in long term tree mortality monitoring, including demography plots, dendroband measurements, vegetation transects, and fire effects forest plots
- Familiarity with R statistical programming and analyzing spatial pattern using GIS
- Extensive hiking across mountainous regions identifying fire scarred trees, carrying heavy loads
- Experience with power tools such as chainsaws, belt sanders, and bandsaws

Sept 17th 2016 –
May 12th 2017

Student Environmental Resource Center, Berkeley CA

Events Associate

- Managing student events, distributing funds, and coordinating outreach
- Hosting a film with the Green Film Festival
- Coordinating the Earth Week Planning Committee to build a weeklong program and structure for student events during Earth Week
- Connect with environmental professionals and host career networking events
- Strategic, long-term planning and evaluation of existing and future SERC programs

Jan 20th 2015 –
May 12th 2017

Cal Dining Sustainability Team, Berkeley CA

Zero Waste Coordinator

- Working with dining facilities and students to promote food literacy and waste reduction – organizing recycling challenges, donation programs, and gardening events
- Initiating educational programs, such as food waste audits and designing signage
- Implementing large scale local food night in the dining halls across campus.
- Closely working with a small team and communicating with workers and managers
- Independently working on and initiating new projects related to food sustainability
- Initiating Weigh-Your-Waste events in the dining halls to highlight post-consumer food waste and kitchen waste, including recruiting and organizing volunteers

Sept 15th 2014 –
May 14th 2015

Berkeley Student Food Collective, Berkeley CA

Storefront Shift Lead

- Training storefront members in basic store management, such as product organization, labeling, cleaning, and cashiering
- Assisting the manager in tasks such as making orders and pricing products
- Experience handling money and transactions as a cashier

Volunteer Experience

- Nov 30th 2020 – March 5th 2021 **Walnut Canyon National Monument**, Flagstaff AZ
Natural Resources Volunteer, 32 hours/week
- Assisting with Walnut Canyon's large tree protection plan to document large-diameter ponderosa pines for climate change comparison
 - Learning of Walnut Canyon's past fire history dendrochronology studies and prescribed burn operations, as well as current prescribed burn management plans

Professional Involvements

- August 2022 – December 2022 **Natural Resources Graduate Student Organization (NRGSO)**, Tucson AZ
Representative for Natural Resources Studies
- Elected officer to serve the departmental student organization, providing a forum to share research, promote leadership, and encourage graduate student fellowship
- March 2020 – May 2021 **Student Environmental Resource Center**, Berkeley CA
Alumni Committee Member
- Selected member of the SERC Alumni Committee, tasked with increasing avenues for alumni to engage with SERC programs
- January – April '16, '17, '18, '19 **Zero Waste Youth USA**, San Francisco CA
Committee Member
- Recruiting speakers and volunteers for the Zero Waste Youth Convergence as a part of the planning committee
 - Selected participant and speaker for international Zero Waste Youth meeting in Brazil, October 2017
- February – April '14, '15, '16, '17 **Earth Week Planning Committee**, Berkeley CA
Committee Member
- Organizing campus-wide events during Earth Week
 - Coordinating with sustainability and environmentally related groups on campus
- September 2013 – May 2017 **Berkeley Student Food Collective**, Berkeley CA
Committee member, cashier, storefront worker, and food prep worker
- Basic store management at a food co-op, including cashiering, restocking products, opening and closing the storefront, cleaning, and organizing shifts

Mentorships

- August 2022 – May 2023 **Association for Fire Ecology (AFE)**, Tucson AZ (virtual)
- Selected participant of the AFE Mentoring Futures Program
 - **Mentor:** Blanca Cespedes
- August 2022 – December 2022 **Natural Resources Graduate Student Organization (NRGSO)**, Tucson AZ
- Mentor of incoming graduate students in the Natural Resources Department
 - **Mentees:** Stephanie Brennan and Garland Speight
- August 2021 – May 2022 **Women in Science and Engineering (WISE)**, Tucson AZ
- Selected participant in the STEM Mentorship Program
 - **Mentor:** Judith Bronstein

January 2019 –
May 2021

[Student Environmental Resource Center](#), Berkeley CA

- Mentor of undergraduate Berkeley students:
- **Mentees:** Emma Centeno (Fall 2020 – Spring 2021), Mykaela Barnes (Fall 2019 – Spring 2020), Peyton White (Fall 2019 – Spring 2020), Skye Michel (Spring 2019)

Invited Talks

April 2021

SERC Springside Alumni Chat, virtual
SERC Virtual Earth Week event, zoom presentation, college students
University of California, Berkeley CA. April 22 2021.

Workshops and Presentations

December 2022

Masters Defense Presentation, Tucson AZ
Mortality Thresholds of Juvenile Trees to Drought and Heatwaves: Implications for Forest Regeneration across a Landscape Gradient

December 2022

Roots for Resilience Presentation, Tucson AZ
CyVerse Tools for Reproducible Color Analysis

November 2022

Research Insights in Semiarid Ecosystems (RISE) Symposium, Tucson AZ
Patterns and Mechanisms of Climate and Fire Resilience in Sky Island Forests

April 2022

Arizona Institute for Resilient Environments and Societies (AIRES) Experiential Learning Student Showcase, Poster Session, Tucson AZ
[Parsed & Parched: Bridging Culture and Ecology Through Borderland Waters](#)

April 2022

Climate Resilience and Adaptation Lightning Talks, Tucson AZ
Hotter Droughts: Seedling Responses to Heatwaves and Drought in Post-Fire Recovery

March 2018

Zero Waste Youth USA convergence, San Francisco CA
Lessons Learned from Zero Waste Youth Brazil

March 2018

Northern California Recycling Association Recycling Update Conference, San Francisco CA
Lessons Learned from Zero Waste Youth Brazil

October 2017

Zero Waste Youth International Convergence, Brazil
Zero Waste Youth USA – Florianópolis, Brazil
Food Waste at University of California Berkeley – Joinville, Brazil

May 2017

Honors Environmental Science Thesis Presentation and Poster Session, Berkeley CA
Multi-Scale Analysis of Grazing Impacts on Biodiversity at Point Reyes National Seashore

November 2016

Powershift Convergence, Berkeley CA
Deconstructing Zero Waste Privilege

March 2016

Zero Waste Youth USA Convergence, San Francisco CA
Food Waste Reduction at Cal Dining

Professional Development

- September 2022 – November 2022 **Foundational Open Science Skills Workshop**, Tucson AZ (virtual)
CyVerse
- 10-week workshop covering the principles and practice of open science, developing data management plans and metadata standards, and using CyVerse infrastructure
- December 2021 **9th International Fire Ecology and Management Congress**, Tucson AZ (virtual)
Association for Fire Ecology
- 4-day conference including workshops, presentations, and discussion groups

Professional Memberships

- December 2021 – present Association for Fire Ecology

Fellowships

- August 2022 – December 2022 **Roots for Resilience (R4R)** (\$7,000), Tucson AZ
- Training and support on open, reproducible science and computational infrastructure to enhance research focused on resiliency in the environment
- August 2021 – May 2022 **University Climate Change Coalition (UC3)** (\$3,500), Tucson AZ
- In collaboration with the Sky Island Alliance, we developed a storymap highlighting threats to culturally and ecologically important water sources along borderland regions
 - [Parsed & Parched: Bridging Culture and Ecology Through Borderland Waters](#)

Grant Writing Experience

- March 2022 **Graduate & Professional Student Council (GPSC) Travel Grant** (\$2,000), Tucson AZ
- 2022 North American Dendroecological Fieldweek (NADEF) in Quebec Canada
- January 2016 – May 2017 **Expanding Zero Waste in the Residence Halls** (\$12,000), Berkeley CA
- Furnish the residence halls with compost and recycling bins to help reach the campus zero waste goals
- January 2015 – June 2016 **Bulk Bins at Cal Dining** (\$6,000), Berkeley CA
- Establish bulk bins in retail locations across UC Berkeley to assist the college in achieving their zero waste goals

Scholarships

- 2022 – 2023 **Alma L. Wilson Memorial Scholarship in Agriculture – Shared** (\$1,162), University of Arizona
- 2022 – 2023 **Graduate AFAT Scholarship** (\$3,000), University of Arizona
- 2022 – 2023 **Natural Resources Tuition Scholarship** (\$2,595), University of Arizona
- 2021 – 2022 **Natural Resources Tuition Scholarship** (\$3,026), University of Arizona
- 2021 – 2022 **Hope I. Jones Scholarship** (\$812), University of Arizona
- 2021 – 2022 **Clifford W. Carstens Jr. Scholarship** (\$1,020), University of Arizona
- 2021 – 2022 **Joe K. Fannin Scholarship – Rotates** (\$442), University of Arizona
- 2021 **HEERF III Grant** (\$2,750), University of Arizona

Honors and Awards

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| 2023 | Outstanding Thesis Award , University of Arizona |
| 2022 | Roots for Resilience Fellowship awardee , University of Arizona |
| 2021 | University Climate Change Coalition Fellowship awardee , University of Arizona |
| 2020, '21 | Outstanding Performance Award , Grand Canyon National Park |
| 2016 | Spot Award , Cal Dining Sustainability Team, Berkeley CA |
| 2014, '15, '16, '17 | Dean's Honors , University of California Berkeley |

Languages

Intermediate Spanish (reading, writing, and oral communication)

Red Card Qualifications

FFT2 (Qualified) Wildland Firefighter – National Wildfire Coordinating Group (NWCG)
REAF (Qualified) Fireline Resource Advisor – NWCG
FEMO (Trainee) Fire Effects Monitor – NWCG
FAL3 (Trainee) Basic Faller – NWCG

Certifications

Wilderness First Aid – US Geological Survey
First Aid CPR AED – American Heart Association
CA Food Handler – American National Standards Institute (ANSI) approved
Open Water Scuba – Professional Association of Diving Instructors (PADI)

Skills

R programming
Ceramics experience (kiln operation, glaze mixing, studio management)
Wood working with heavy power tools (chainsaws, bandsaws, hand saws, belt sanders, etc.)
Clean driving record, experienced in automatic and manual drive