

Kesondra Key
kesondra.key@wsu.edu

EDUCATION

PhD in Environmental Science

Indiana University

est. Fall 2020 – Spring 2024

Bloomington, IN

Bachelor's in Environmental Science

Minor: Biology

Washington State University

- GPA: 3.68; Graduated with Cum laude honors

May 2019

Vancouver, WA

APPOINTMENTS

Oak Ridge National Laboratory (Computational Earth Sciences Group)

Post Bachelor's Research Associate (HERE Program)

Oak Ridge, TN

Jun 2019-Present

City of Vancouver

Internship

Worked with public outreach through community events • Collected data on urban trees through plant I.D., health evaluation, and measurement using Tree Plotter Software

Vancouver, WA

Jun-Jul 2018

RESEARCH INTERESTS

Climate Change Impacts • Agriculture Practices • Conservation of Endangered Species • Air and Water Quality • Fire Ecology • Forest Ecology • Natural Disturbances

SKILLS

General

Scientific writing and editing • Data collection and management • Protocol creation • Fieldwork experience • Specimen handling • Autoclave • Excellent typist (90WPM) • Survey GPS trained

Computer Software

Microsoft Office (Word, Excel, PowerPoint) • ImageJ • TreePlotter Software • ArcGIS

Programming Languages

Some familiarity with R, NCAR Command Language (NCL) and Python

PUBLICATIONS

Published

Batibeniz, F., Ashfaq, M., Diffenbaugh, N., **Key, K.**, Evans, K., Turuncoglu, U., ÖnoI, B. (2020), Doubling of U.S. Population Exposure to Climate Extremes by 2050. *Earth's Future*.
doi: 10.1029/2019EF001421

In Review

Ashfaq, M., Cavazos, T., Reboita, M., Torres, A., Im, E.-S., Olusegun, C., Lincoln, A., **Key, K.**, Adeniyi, M., Tall, M., Sylla, M., Mehmood, S., Zafar, Q., Das, S., Diallo, I., Coppola, E., Giorgi, F. (2020). Robust Late 21st Century Shift in the Regional Monsoons in RegCM-CORDEX Simulations. *Climate Dynamics, in review*

RESEARCH EXPERIENCE

Post Bachelor's Research

1. Future Population Exposure to Climate Extremes Over the United States

Oak Ridge National Laboratory

Contribution: Literature review, interpretation of results, manuscript writing

*Manuscript published in **Earth's Future***

2. Global Monsoon Analysis in Regional Climate Model Simulations

Oak Ridge National Laboratory

Contribution: Literature review, interpretation of results, manuscript writing

*Manuscript in review in **Climate Dynamics***

Ongoing

3. Future Wildfire Analysis in Future Climate Projections Over the U.S.

Oak Ridge National Laboratory

Contribution: Methodology development, literature review, observed data collection and processing

Manuscript in preparation

4. Future Changes in the Types of Precipitation (Snow, Ice/Sleet, Freezing Rain, and Rain)

Oak Ridge National Laboratory

Contribution: Literature review, analysis of results

Manuscript in preparation

Undergraduate Research

2018-2019

1. Wildfire Impacts on Air Quality in the Pacific Northwest

Washington State University

Researched impacts of wildfires on air quality in western states using R, prepared report and presented

2. Herbicide Impacts on Butterfly Morphology • Grazing Impacts on Butterflies

Washington State University

*Contribution: Helped research morphological effects of herbicide on the Oregon Silverspot (*Speyeria zerene zerene*), assisted in conducting flight paths on the Silvery Blue (*Glaucopsyche lygdamus*) for research on grazing impacts, grew several butterfly hostplant species in different soil types in a controlled environment*

3. Hermit Crab Shell Selection: An Analysis of Intertidal Height

Washington State University

Contribution: Researched crustacean shell size and location within the intertidal zone, analyzed results and participated in manuscript development

PRESENTATIONS

Key, K., Ashfaq, M. (2019), Fire Hazard: Air Quality Impacts and Future Climate Change, *ORISE Poster Session at the annual Oak Ridge Poster Session Research Symposium, Oak Ridge, TN*

Key, K., Singh, D. (2019), Pacific Northwest Wildfire Effects on Air Quality, *Washington State University, Research Showcase, Vancouver, WA*

HONORS AND AWARDS

2018-2019

- *Edwin G. Schafer Memorial Scholarship*
- *Graduated with Cum laude Honors*

- *President's Honor Roll from Fall 2017 to Spring 2019*
- *Undergraduate Travel Grant of \$500*
- *Artwork published in the WSU 2018 LandEscapes Literary Journal*

SCIENTIFIC MEETINGS

Conferences and Workshops

Science Talk 2019

Portland, OR

Attended workshop on Social Strategies for Climate Communication, spoke on stage regarding research

SCIENTIFIC OUTREACH

SW Washington Business Journal

May 2019

- *Article on the WSU Research Showcase featured highlight on wildfire research*
- <https://www.vbjusa.com/news/top-stories/wsuvancouver-expands-research-showcase/>

OTHER RELEVANT EXPERIENCE

U.S. Fish and Wildlife Service

Portland, OR

Volunteer

Dec 2018-May 2019

Contribution: Helped in the preparation of the five-year review for the endangered Willamette Daisy (Erigeron decumbens), assisted in habitat restoration by planting native species for an endangered species on private land