

Chhaya M. Werner

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PROFESSIONAL EXPERIENCE AND EDUCATION

USDA NIFA Postdoctoral Fellow <i>project coordinated through the University of Wyoming</i> Advisors: Lauren Hallett and Lauren Shoemaker	2021 - Present
University of Wyoming Postdoctoral Associate <i>Modelscape project</i> Advisor: Lauren Shoemaker	2020 - 2021
German Centre for Integrative Biodiversity Research Postdoctoral Researcher <i>project coordinated by University of Oulu, Finland</i> <i>and Helmholtz Centre for Environmental Research, Germany</i> Advisor: Anu Eskelinen	2019 - 2020
University of California Davis PhD in Population Biology Advisors: Truman Young and Susan Harrison	2014 - 2018
Princeton University B.A. in Ecology and Evolutionary Biology, <i>magna cum laude</i> Advisor: Stephen Pacala	2010 - 2014

PUBLICATIONS

Weiss-Lehman, CP*, **CM Werner***, CH Bowler, LM Hallett, MM Mayfield, O Godoy, L Aoyama, G Barabas, C Chu, E Ladouceur, L Larios, LG Shoemaker. Disentangling key species interactions in diverse and heterogeneous communities: a Bayesian sparse modeling approach. *Ecology Letters* in press.

Young, TP, D Kimuyu, E LaMalfa, **CM Werner**, C Jones, P Masudi, R Ang'ila, and R Sensenig. The effects of large mammalian herbivory, previous fire, and year of burn on fire behavior in an African savanna. *Ecosphere* in press.

Werner, CM, M Tuomi, and A Eskelinen. Plant traits predict persistence of nutrient effects. *Oecologia* in press.

Werner, CM, SP Harrison, HD Safford, GN Bohlman, and R Serata**. 2021. Extreme pre-fire drought decreases shrub regeneration on fertile soils. *Ecological Applications* 10.1002:e2464.

Werner, CM. 2021. Prescribed fire highlights the effects of zebra, elephants, cattle, and previous burns on savannah heterogeneity. *ESA Bulletin* 102:e01851 *annotated photo gallery*

Werner, CM, D Kimuyu, K Veblen, E LaMalfa, R Sensenig, and TP Young. 2021. Synergistic effects of herbivores and previous fire on fine-scale heterogeneity of prescribed grasslands burns. *Ecology* 102:e03270

Werner, CM, KL Stuble, AM Groves, and TP Young. 2020. Year Effects: Inter-annual variation as a driver of community assembly dynamics. *Ecology* 101:e03104

MJ Koontz, MP North, **CM Werner**, SE Fick, and AM Latimer. 2020. Local forest structure variability increases resilience to wildfire in dry western US coniferous forests. *Ecology Letters* 23:483-494

Werner, CM, DJN Young, HD Safford, and TP Young. 2019. Decreased snowpack and warmer temperatures reduce the negative effects of interspecific neighbors on regenerating conifers. *Oecologia* 191:731-743

Young, DJN, **CM Werner**, KR Welch, TP Young, HD Safford, and AM Latimer. 2019. Post-fire forest regeneration shows limited climate tracking and potential for drought-induced type conversion. *Ecology* 100:e02571

North, MP, JT Stevens, DF Greene, M Coppoletta, EE Knapp, AM Latimer, ... **CM Werner**, P Wyrsh. 2019. Reforestation for Resilience in Dry Western Forests. *Forest Ecology and Management* 432:209-224

Young, TP, KL Stuble, JA Balachowski, ME Lulow, **CM Werner**, and K Wolf. 2017. Experimental approaches to addressing climate change challenges in prairie restoration. *Grasslands special issue: Climate change and grasslands*. 27:10-15

Young, TP, KL Stuble, JA Balachowski, and **CM Werner**. 2017. Using priority effects to manipulate competitive relationships in restoration. *Restoration Ecology* 25:S114-S123

Werner, CM, KJ Vaughn, KL Stuble, K Wolf, and TP Young. 2016. Persistent asymmetrical priority effects in a California grassland restoration experiment. *Ecological Applications* 26:1624-1632

co-first authors* *Undergraduate mentee*

GRANTS, FELLOWSHIPS, AND AWARDS

USDA NIFA Postdoctoral Fellowship Program	<i>\$165,000</i>	2021 - 2023
NSF Graduate Research Fellowship Program	<i>\$138,000</i>	2016 - 2018
UC Davis Plant Sciences MacDonald Fellowship	<i>\$80,000</i>	2014 - 2018
Henry A. Jastro graduate research scholarships	<i>\$7850</i>	2015 - 2018
University of California ISEECI graduate student research fellowship	<i>\$11,500</i>	2016
University of California Natural Reserve System research grant	<i>\$1200</i>	2016
Ben A. Madson scholarship	<i>\$1000</i>	2015
Leslie Kilman Johnson senior thesis award		2014

TEACHING

Fire Ecology February 2020
Instructor Leipzig, Germany

- Taught a four-day intensive workshop on fire ecology for graduate students. Gave discussion-based lectures, and designed a series of assignments to stimulate in-depth investigation of students' study systems for a breadth of topics and presentation styles.

Plant Communities of California Spring Quarters 2016 and 2017
Teaching Assistant Davis, CA

- In 2017, co-lead the field course of the class, an in-situ approach to botany and ecology in California communities, while the instructor was on sabbatical. Wrote and delivered field lectures, planned itineraries, developed research-based homework assignments, and wrote and graded exams.
- In 2016, assisted in coordinating and teaching the field course. In both years guest lectured for the lecture section of the class, including "Fire Ecology" and "Lower Montane Forests"

Principles of Ecology and Evolution Winter Quarter 2016
Teaching Assistant Davis, CA

- Ran two lab sections of the UC Davis course, part of the Introduction to Biology series.

Invited Guest Lectures

- "Recovery of tundra communities from nutrient deposition," for University of Wyoming course Introduction to Experimental Design, 2021.
- "Ecological restoration after dam removal," field lecture in Olympic National Park for Olympic College students, 2018.
- "Fire ecology in savanna ecosystems", field lecture at Mpala Research Station, Kenya for Princeton University course Ecology and Conservation of African Landscapes, 2018.

MENTORING AND SERVICE

UW Biology Department DEI Committee *Committee Member*

Current
Laramie, WY

- Working with inaugural DEI committee for the Biology Department at University of Wyoming to improve access to field safety training and gear, recommend equitable graduate student application and hiring practices, and provide resources for reporting and preventing harassment.

Women of Color in Ecology and Evolutionary Biology *Advisory Board*

Current
Slack Network

- Advisory board member for a Slack networking and support group for women of color in ecology and evolutionary biology. Helped draft a code of contact, onboard new members, and organize peer mentoring groups.

Chaparral Drought and Fire *Mentor*

2016 - 2018
Davis, CA

- Mentored UC Davis undergraduate Rebecca Serata for three years on my fieldwork project. Taught plant identification and community survey skills in the field, and analysis of data. Included Rebecca on the manuscript writing and submission process as a coauthor. Additionally, assisted Rebecca in developing an independent sub-project, which she presented as a poster at the California Invasive Plant Council symposium.

Sierra Nevada Post-fire Regeneration *Fieldwork Coordinator*

2016 - 2018
Davis, CA

- Led and mentored nine undergraduate research assistants on my fieldwork project, including multiple students who worked at least 30 hours for official internship credit. Students helped with construction of field experiment and data collection.

Natural Areas Conference *Student and Volunteer Committee Chair*

2016
Davis, CA

- Served on the organizing committee for the 43rd Natural Areas Conference. Recruited student participants, and organized activities, awards, and volunteer opportunities for student attendees.

Women in Science and Engineering Mentoring *Mentor*

2015 - 2016
Davis, CA

- Mentored a UC Davis undergraduate student in the Women in Science and Engineering program.

SELECTED PRESENTATIONS

University of California Santa Barbara EEMB department. October 11, 2021. *Invited Talk: Plant community dynamics in a variable world*

University of Wyoming Department of Botany. February 4, 2021. **Invited Talk:** *Plant community dynamics in a variable world*

Ecological Society of America 106th Annual Meeting, virtual. August 2021. **Talk:** *Improving insight and predictability of community dynamics through a sparse modeling framework*

Ecological Society of America 105th Annual Meeting, virtual. August 2020. **Talk:** *Plant traits predict persistence of nutrient enrichment in arctic tundra*

British Ecological Society. Belfast, Northern Ireland. December 12, 2019. **Talk:** *Recovery of tundra communities from nutrient deposition*

German Centre for Integrative Biodiversity Research seminar. Leipzig, Germany. March 6, 2019. **Invited Talk:** *Priority promotes coexistence in a grassland restoration experiment*

Oikos Finland Conference on Ecology and Evolutionary Biology. Oulu, Finland. February 5, 2019. **Talk:** *Extreme pre-fire drought decreases shrub regeneration after fire*

Ecological Society of America 103rd Annual Meeting, New Orleans, LA. August 8, 2018. **Talk:** *Post-fire regeneration on harsh soils is more resilient to climate change.*

Ecological Society of America 102nd Annual Meeting, Portland, OR. August 9, 2017. **Poster:** *Post-fire recruitment of two conifer species under manipulated drought and shrub competition conditions*

Northwest Science Association 88th Annual Meeting, Ashland OR. May 31, 2017 **Invited Talk:** *Post-fire climate as a driver of forest community regeneration*

Northwest Science Association 88th Annual Meeting, Ashland OR. May 30, 2017. **Poster:** *Spatial and temporal contingency in rapid primary succession following removal of the Elwha River dams*

Center for Population Biology seminar series, University of California Davis. November 22, 2016. **Talk:** *Plant community responses to post-fire drought*

Natural Areas Conference 43rd Annual Meeting, Davis CA. October 19, 2016. **Talk:** *Post-fire climate as a driver of forest community regeneration*

Princeton Environmental Institute's Discovery Day. Princeton, NJ. May 2014. **Poster:** *Restoration, regrowth, and invasion in the drained Elwha River reservoirs*

TECHNICAL STRENGTHS

Main Computer Language	R
Experience with	Stan, GIS, MATLAB, Javascript, Arduino
Other Tools	LaTeX, Google Earth Engine, LANDIS-ii, ImageJ