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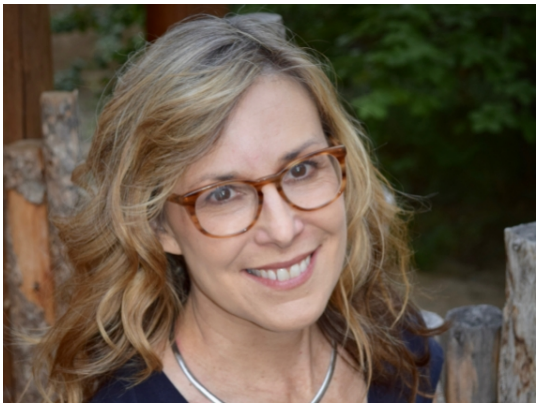
EcoClimate News Southwest

May 2022

Reflections from SW CASC Acting Federal Director, Dr. Carolyn Enquist



If you live in the Southwest, chances are you are thinking about, or even

active summer season this year. As we prepare to face these risks in the region and across the West, fire practitioners and researchers from around the world are convening throughout the month as part of the International Association of Wildland Fire Conference, with the theme, *Fire & Climate: Impacts, Issues & Futures*. The SW CASC is excited to be participating in this conference both virtually and in-person.

On May 4th, along with our partners at the Joint Fire Science Program and the USGS Wildland Fire Science Program, the SW CASC organized a virtual workshop to present an *"emerging framework for adapting to changing fire regimes."* Participants from Australia, Europe, Mexico, Canada, and around the U.S. joined us to further build out this framework, focused on developing new strategies, implementation, and cultivating the learning process that comes from evaluating effectiveness of strategies. Keep your eye out for a summary article in an upcoming issue of the IAWF professional magazine, *Wildfire*.

Across the globe, Indigenous Peoples and communities are on the frontlines of climate change impacts, which are felt drastically over land, the poles, and more arid regions like the Southwest. Yet, it is also these same communities that are leading the way in addressing these impacts with the use of *traditional practices*, such as cultural burning, that can help build an integrated form of ecosystem and cultural resilience.

In recognition of this trend, on May 24th the Southwest Fire and Climate Adaptation Partnership (SWFireCAP, founded by the SW CASC and the SW Fire Science Consortium) will be leading an in-person keynote panel presentation at the in-person IAWF conference, entitled *"Partnerships in Fire Management: Supporting Indigenous Leadership in Cultural Burning."* We are particularly excited about this keynote presentation, as the panel will feature early-career researchers from our SW CASC partner institution, University of California, Davis. Speakers include SW CASC post-doc Nina Fontana, former SW CASC Fellow Carlie Domingues, and two SW CASC funded graduate students, Deniss Martinez and Melinda Adams (https://www.swcasc.arizona.edu/researchers).

This unique group of speakers will discuss their perspectives on developing collaborations with Indigenous Peoples and provide new insights into the use of cultural fire, as both a climate adaptation strategy and a form of eco-cultural restoration. We also will explore lessons learned and best practices involving fire policy, management, and issues of governance.

If you are attending the conference, we hope that you can participate in this unique and engaging discussion!

Come Rain or Shine Podcast

Assessing Risk When Relocating Species

Image Credit: USFWS Midwest Region

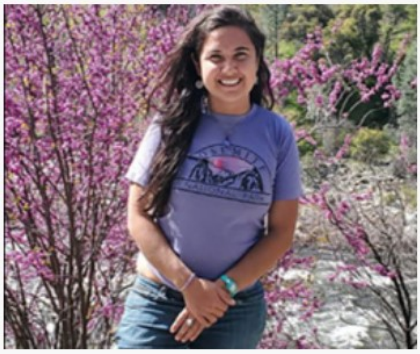
Continuing our series on managing ecosystem transformation, we sit down with Dr. Mark Schwartz, a plant ecologist at UC Davis, and Aviv Karasov-Olson, a PhD candidate at UC Davis, to discuss a new tool for assessing the biotic risks associated in a managed relocation project (referred to as assisted migration). Managed relocation is deliberately relocating, or translocating, a species outside of its historic range to meet conservation goals, especially in response to climate change.

Listen Here

Webinar Series
Native Nations and Climate Change

The Southwest Climate Adaptation Science Center (SW CASC) and the NPS Tribal Engagement & Climate Change workgroup are hosting a webinar series in Spring 2022, on the **third Thursday of April, May, and June, 12-1pm PDT**. The webinars will highlight climate adaptation projects partially funded by the SW CASC that are taking place in collaboration with local Tribal partners. You can find the recording for the April webinar here. The description and registration link for the May webinar is below. For the June webinar, click here.

Climate Adaptation



Speakers:

Irene Vasquez (left) *is enrolled with the Southern Sierra Miwuk Nation and works as a cultural ecologist for Yosemite National Park.*

Dean Tonenna (right) *is a botanist with the Bureau of Land Management in Carson City, Nevada, and has been brought up in the traditions of his people, the Kootzatukadu, a Native American Tribe, who live in the Sierra Nevada Mountains near Mono Lake and Yosemite.*

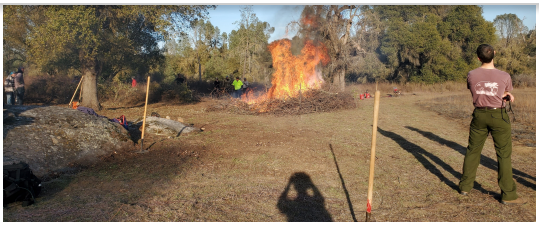
Since time immemorial, black oaks (Quercus kelloggii) have been celebrated and cared for by American Indians throughout California. Traditionally, acorn served as a main food staple and today is still widely sought and celebrated at acorn festivals and tribal gatherings. For numerous decades, black oak research in Yosemite Valley has shown poor sapling recruitment. Restoring tribal stewardship and cultural burning may help preserve black oaks and the qualities they once were renown for, contributing to a more resilient ecosystem. Dean Tonenna will additionally be discussing how the Mono Lake Kootzaduka'a approach land management and why active participation is necessary to preserve this knowledge.

***Please note: this webinar will not be recorded due to the sensitive nature of the information.*

Date: May 19, 2022
Time: 12-1 PM PDT

Register Here

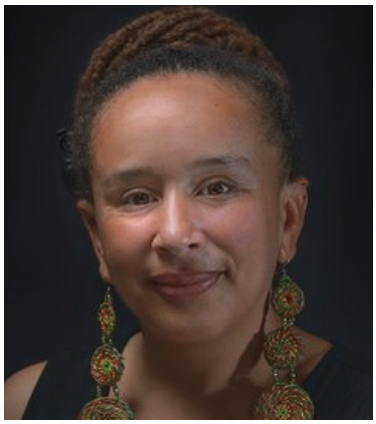
SWCASC Cultural Burning Work Highlighted in Recent Article and Video



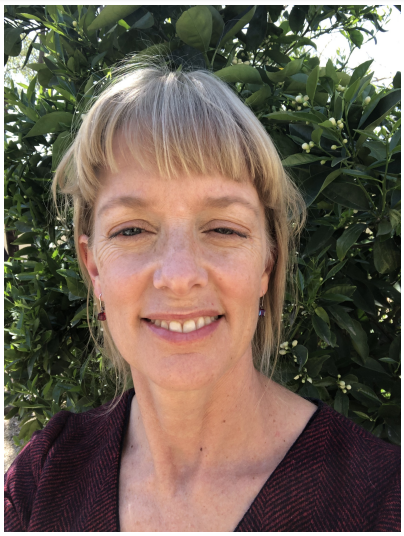
SW CASC partner, Ron Goode (North Fork Mono Tribe), and co-PI, Beth Rose Middleton Manning (UC Davis), are featured in a recent news article and video discussing cultural burning in California. The article and video outline the history of fire in California, describe cultural burning and how it is different from prescribed burning, and highlight SW CASC-funded cultural burn workshops taking place in California.

View the Article and Video Here

SWCASC UC Davis Co-PI Named 2022 Carnegie Fellow!



Dr. Beth Rose Middleton Manning, SW CASC co-PI at University of California, Davis, has been named a 2022 Andrew Carnegie Fellow. The Andrew Carnegie Fellows Program provides philanthropic support for up to two years for scholarship that addresses important and enduring issues confronting our society. Dr. Middleton Manning's project, “Healing Rivers, Communities, and Homelands: Indigenous Leadership in 21st-Century Dam Removal and River Restoration in North America,” recognizes Indigenous leadership in dam removals as central to both truth and reconciliation and climate adaptation. The study looks across multiple dam removal projects to understand the sociopolitical and institutional mechanisms supporting successful Indigenous-led efforts to remove dams and restore impacted rivers. Congratulations Dr. Middleton Manning!



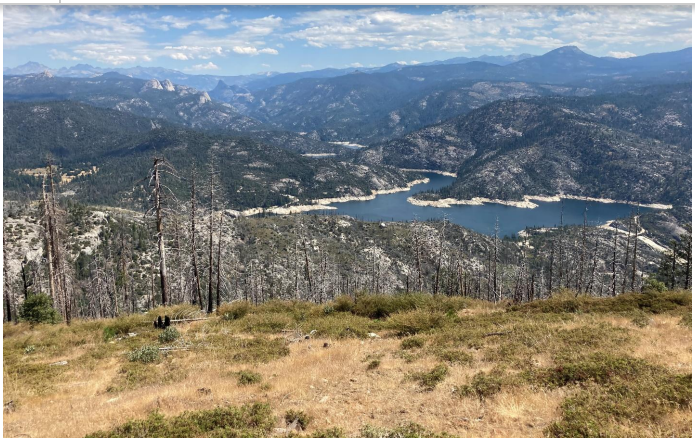
This profile is a part of our consortium profile series, highlighting the people that make up the SW CASC—what inspires them, makes them passionate about their research, and gives them hope for the future. For this profile, Bryson Mineart (SW CASC communications student assistant and undergraduate student in the University of Arizona Computer Science program) interviewed SW CASC researcher Margaret Evans, Associate Professor of Forest Ecology in the Laboratory of Tree-Ring Research at the University of Arizona.

Margaret Evans was trained as a plant ecologist and spent much of her early career focusing on the conservation of plant diversity. Her career transitioned to a focus on forests and climate change when she joined the University of Arizona's Laboratory of Tree-Ring Research. Traditionally, tree-ring samples are collected from older, more climate-sensitive trees in each population. However, Margaret has undertaken a new approach of gathering tree-ring data from "average" trees, or as she likes to call them, "Joe Schmo Trees". With this, Margaret brings a fresh perspective to tree-ring science.

Read More!

Fellows' Highlight

Building Adaptable and Resilient Science and Ecosystems



View from Sierra Vista Scenic Byway. Everything in this image burned in the Creek Fire in 2020.

Benjamin Nauman is pursuing a PhD in Geography at the University of California. Below are his reflections on the SW CASC Natural Resources Workforce Development (NRWD) Fellowship.

Every summer, my family travels to the Sierra Nevada Mountain range near Yosemite National Park. Some of my fondest memories are observing the gently flowing Merced River, the Nelder Grove of Giant Sequoias, and the sweeping vistas full of emerald, green trees. However, over the past decade, many of these locations have been lost or forever altered due to the impacts of wildfire and drought. There are many reasons for this ecological devastation, including climate change, but a major factor that is inadequately discussed is a lack of adaptability in ecological planning, and subsequent failure to build resilient ecosystems.

The experience of seeing these once thriving ecosystems unable to adapt to rapid changes led me to UCLA, where I am currently pursuing a PhD. My research principally involves examining past fire ecology in the state of California based on data from lake sediment cores. My ultimate goals are to learn more about; 1) how wildfire frequency and severity in the state has varied over millennia-long time scales in the past, 2) how it has varied in the 20th and 21st centuries, and 3) what scientists can do to prevent negative impacts of wildfires while maintaining their use as a landscape management tool. However, I have always felt there was a disconnect in my field of paleoecology research, much of which can be esoteric dealing with changes thousands of years in the past, and the actual on-the-ground policy our work helps to inform.

Read More!

Climate Change and Adaptation Training for Grasslands Conservation Practitioners - Part 1

North American grasslands are a regional priority of the U.S. Fish and Wildlife Service (FWS). The South Central CASC, in partnership with the US FWS Science Applications Program, the Northwest CASC, and the North Central CASC, will be implementing a training series for grasslands conservation practitioners starting in May 2022. Through our training series, we will introduce practitioners to the science of climate change, explore the impacts, and discuss adaptation options available.

The **May 16-27th online module** topic is: Setting the Stage: Grasslands and Climate Change. This self-paced course will provide information about the science of climate change, climate modeling and scenarios, and potential impacts of climate change on grassland ecosystems. The course will end with a live interactive session on **May 27th at 2:30pm Central Time**

More Information and Registration Links

Southwest Drought Learning Network (DLN) Annual Meeting

The Southwest DLN network is a diverse group of resource managers, scientists, state and federal government officials; tribal representatives; extension educators; and citizens interested in helping others share their experiences related to how they can respond to and recover from drought. During the annual meeting we will review the DLN structure; hear lessons learned from recent drought; get updates from state climatologists; work on team goals and projects for the coming year; and more.

Date: June 7 - 8, 2022

Location: New Mexico State University at Wooton Hall (2995 Knox St, Las Cruces, NM 88003). A virtual option will also be available.

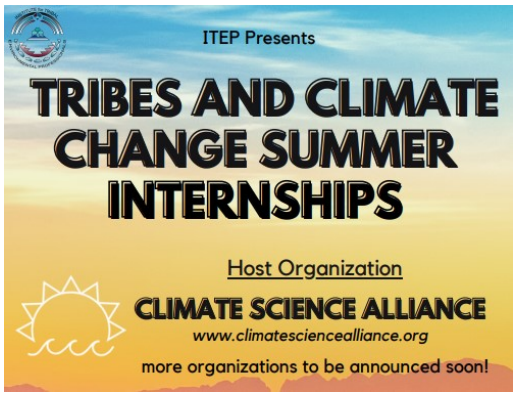
Register Here

Climate Change and Wildfire – A New Curriculum Unit for 9-12 Grade Students

Core State Standards and Next Generation Science Standards. This unit was designed to introduce high school students to the effects of climate change and rising global temperatures on wildfires. Produced in partnership with the Asombro Institute for Science Education and free for anyone to use. Access the curriculum here. Two upcoming teacher workshops on this curriculum unit: **June 27** (in-person, Las Cruces NM) and **June 28** (virtual).

More Information Here

ITEP-Climate Science Alliance Summer Internship



The Institute for Tribal Environmental Professionals (ITEP) Tribes and Climate Change Program received funding from the Bay and Paul Foundation to support student internships for the summer. These internships will engage and emphasize intergenerational teachings between elders and youth to pass on cultural teachings, language and traditional ecological knowledges. Summer cohorts of Indigenous interns will work directly with Tribal and Indigenous host organizations from across the country to work on projects specifically benefiting the Tribal climate resilience efforts. One of the host organizations is the Climate Science Alliance.

To apply for this internship, send a cover letter and resume to Althea Walker at awalker@climatesciencealliance.org. Applications will be accepted until the position is filled.

Perks

- Receive a $6,400 Stipend.
- Up to $600 to travel from your home to the internship site.
- Up to $3,200 to pay for housing at internship site.

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