SPRING/SUMMER 2023 CALIFORNIA OAKS

Riparian hardwood habitat important for fisheries

by Angela Moskow, California Oaks

iparian oaks benefit fishes by shading and cooling aquatic corridors, maintaining water quality through soil retention and capture of sediment and nutrients in runoff, minimizing channel erosion by slowing surface runoff, recharging groundwater, and providing plant and animal habitat. Oaks and other hardwoods also play a vital role within waterways. This is another facet of the story about oaks and biodiversity—a story about what is at stake and the need for California to protect its oak ecosystems.

Oaks and other hardwoods are a source of large woody debris, important in-stream habitat for fishes, including imperiled species. Large woody debris provides cover and shelter, facilitates pool formation, sustains aquatic food webs, and affects the deposition of sediment. Conifers have long been understood to provide this type of important in-stream fish habitat, yet many watersheds, including those that support anadromous fishes, have few or no conifers.

Dissertation research completed by Jeff Opperman, PhD, identified hardwood trees in Northern California that provided instream large woody debris but remained rooted and living.1 Many were living at the channel margin and were either standing or had fallen into the channel. A smaller percentage of hardwood large woody debris was from

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River Ridge Ranch & Institute Advanced mitigation for Southern California transportation projects to include "Greenprint" El Dorado oak litigation settlement

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Cultural burning Restoration of Santa Rosa Island cloud forests



Magnificent oaks grow along Hat Creek, famed for its trout fishery.

channel. Hardwood structures with a key which discusses the role of large woody living piece in these waterways were signifi- hardwood debris in providing in-stream cantly larger, more persistent, and more likely habitat.³ These findings have not resulted in to cause a pool than those without a living the development of new measures to protect connection. The living root structure compensated for the smaller size of the trees and faster through oak woodlands and savannas. decay rate of hardwoods and it also provided stability during high flow events.

Subsequent analysis in other California riparian systems confirmed the importance of hardwoods for in-stream habitat. In a paper about Southern California steelhead (Oncorhynchus mykiss), federally designated as endangered and a candidate for state listing, the authors theorized that the in-stream role of hardwoods in pool formation is an important component of steelhead habitat in central-coastal California streams.2

informed Maintaining Wood in Streams: A Vital Action for Fish Conservation, a University

rootwads and logs with rootwads within the of California publication for land managers, oaks and the health of waterways that flow

The Spring-Summer 2021 issue of Oaks reported on endangered, threatened, and candidate vertebrate species dependent upon oak (Quercus) and tanoak (Notholithocarpus densiflorus) habitat and Quercus-associated listed and candidate plant and invertebrate species. The vertebrate listing was derived from the California Wildlife Habitat Relationship information system, which does not track aquatic vertebrates. Adding imperiled fishes to the 34 listed and candidate vertebrate species that are dependent upon oak habitat under-The research by Opperman and others scores the need for California to improve the regulatory regime for oaks.4 In addition to

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Oak protections necessary to sustain California's unique biodiversity



Oaks at Mount Diablo State Park

alifornia's environmental challenges require perseverance, innovation, and collaboration across multiple sectors. These are the attributes of projects described in this newsletter. Protection measures are also needed to keep the state's native oaks standing.

The 1994 Joint Policy on Hardwoods issued by California's Fish and Game Commission and Board of Forestry and Fire Protection (then State Board of Forestry) states that their respective agencies should be guided by the position that hardwood harvesting and other land uses should be conducted in a sustainable manner that: "secures regeneration of all hardwood species, enhances the protection of fish, wildlife and plants of hardwood habitats, allows adequate recruitment of other native vegetation in hardwood habitats and meets state and federal water quality standards." It also recognizes the role of hardwoods outside of waterways, but not instream. Further, it identifies "the need

for statewide legislation and...regulatory action, if necessary, to control harvesting and conversion of hardwood-rangelands using existing statutes" if current measures, which rely on local and county protections, fail to adequately address hardwood management and conservation.

As reported in the Spring-Summer 2022 issue of *Oaks*, California ranks at the bottom of the United States in conserving lands characterized by NatureServe as "areas of unprotected biodiversity importance." Many of these unprotected areas are oak woodlands. Nonfederal timberlands, where conifers are dominant, are subject to California's Forest Practice Act whereas rangelands and other landscapes where hardwoods dominate are not protected by comprehensive state regulations.

These different regulatory regimes have divergent ecosystem outcomes. For example, California's Forests and Rangelands 2017 Assessment summarized water quality conditions in non-federal timberland compared to rangelands, finding 62% of forest streams in good condition compared to 34% for rangelands, with 21% of rangeland streams in poor and 21% in very poor condition.2

California's reliance on local oak protection efforts has failed. Threats to oaks from habitat conversion and fragmentation, changed rainfall patterns, diminishing groundwater supplies, greater climatic stresses, new pathogens, expansion of non-native annual grasses, wildfires of extreme severity, and grazing and browsing pressure have escalated since the joint policies were written. This prompted a member of California Oaks Coalition to pursue legal action to challenge El Dorado County's oak removal policies. The article on page 8 describes this effort.

It is past time for the state to act responsibly to achieve no-net-loss of oak ecosystems, California's primary old-growth resource.

Sincerely,

Janet S. Cobb, Executive Officer California Wildlife Foundation/California Oaks

California Oaks Coalition

California Oaks Coalition brings together international, national, Tribal, state, regional, and local organizations to conserve and perpetuate the state's primary old-growth resource. Members of California Oaks Coalition are united by the vital role of oaks in sequestering carbon, maintaining healthy watersheds, providing habitat, and sustaining cultural values.

Amah Mutsun Land Trust

American River Conservancy

American River Watershed Institute

AquAlliance

Banning Ranch Conservancy

Butte Environmental Council

California Institute for Biodiversity (CIB)

California Invasive Plant Council (Cal-IPC)

California Native Plant Society (CNPS), including Dorothy King Young Chapter, San Diego Restoration Committee, Sanhedrin Chapter, and Yerba Buena Chapter

California Rangeland Trust

California State University Chico Ecological Reserves

California Water Impact Network (C-WIN)

California Wilderness Coalition (CalWild)

Californians for Western Wilderness (CalUWild)

Canopy

Center for Biological Diversity

Central Coast Heritage Tree Foundation

Chimineas Ranch Foundation

Clover Valley Foundation

Conejo Oak Tree Advocates

Confluence West

Dumbarton Oaks Park Conservancy

Earth Discovery Institute

Elder Creek Oak Sanctuary

Endangered Habitats Conservancy

Endangered Habitats League

Environmental Defense Center

Environmental Protection Information Center (EPIC)

Environmental Water Caucus

Foothill Conservancy

Forests Forever

Friends of Harbors, Beaches and Parks

Friends of Olompali

Friends of the Richmond Hills

Friends of Spenceville

Global Conservation Consortium for Oak (GCCO)

Hills For Everyone

Laguna de Santa Rosa Foundation

¹ Hamilton, H, et al. 2022. "Increasing taxonomic diversity and spatial resolution clarifies opportunities for protecting U.S. imperiled species." Ecological Applications. 2022;e2534. doi.org/10.1002/eap.2534 ² Ferkovich, RL et al. California's Forests and Rangelands 2017 Assessment. frap.fire.ca.gov/media/4babn 5pw/assessment2017.pdf. p 214, 220.

LandPaths

Lomakatsi Restoration Project

Loma Prieta Resource Conservation District

Los Padres ForestWatch

Lower Kings River Association

Mountains Recreation and Conservation Authority

Northern California Regional Land Trust

Placer Land Trust

Planning and Conservation League

Point Blue Conservation Science

Redbud Audubon Society-Lake County

Redlands Conservancy

Resource Conservation District of Santa Monica Mountains

River Partners

River Ridge Institute

Rural Communities United

Sacramento Tree Foundation

Sacramento Valley Conservancy

Santa Barbara Botanic Garden

Santa Clarita Organization for Planning and the Environment (SCOPE)

Save Lafayette Trees

Save Napa Valley

Sequoia Riverlands Trust

Shasta Environmental Alliance

Sierra Club Northern California Forest Committee-Oak Woodland Subcommittee

Sierra Club Placer Group

Sierra Foothill Conservancy

Tejon Ranch Conservancy

Tending the Ancient Shoreline Hill

Tuleyome

Tuolumne River Trust

Universidade de Trás-os-Montes e Alto Douro, Department of Forest and Landscape (Vila Real, Portugal)

University of California, Los Angeles, Mildred E. Mathias Botanical Garden

Woodland Tree Foundation

California Oaks provides four areas of support for coalition members:

- 1) Research and advocacy updates.
- 2) Information to educate and engage the public.
- 3) Tools for participating in planning processes and educating opinion leaders.
- 4) Materials to inform local, regional, and state governmental agencies of the opportunities for and benefits of protecting oak woodlands.

For more information, please contact Oaks Network Manager Angela Moskow, amoskow@ californiaoaks.org.

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supporting aquatic and terrestrial biodiversity, oak protection measures would improve watershed health, protect the sequestration of hundreds of millions of metric tons of carbon, and perpetuate culturally significant landscapes.

- ¹ Opperman JJ. 2002. Anadromous Fish Habitat in California's Mediterranean-climate Watersheds: Influences of Riparian Vegetation, Instream Large Woody Debris, and Watershed-scale Land Use. Berkeley, CA: University of California. 268 p. PhD dissertation.
- ² Thompson LC, et al. 2012. Southern Steelhead, Hard Woody Debris, and Temperature in a California Central Coast Watershed. Transactions of the American Fisheries Society, 141:2, 275-284.
- ³ Opperman JJ, et al. 2006. Maintaining Wood in Streams: A Vital Action for Fish Conservation. University of California, Agriculture and Natural Resources Publication 8157, p 5-6.
- ⁴ Humboldt marten, the 34th vertebrate, was added to the list after the newsletter's publication when California Wildlife Foundation/ California Oaks learned of its dependence on tanoak in Slauson, KM, et al. 2019. A conservation assessment and strategy for the Humboldt marten in California and Oregon. Gen. Tech. Rep. PSW-GTR-260. U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. Arcata, CA. 121.

Acknowledgements

The Board of Directors supports the important conservation efforts of California Wildlife Foundation/California Oaks (CWF/CO). Thanks to Ellen Maldonado, Chair; Jim Lightbody, Treasurer; and Lynn Barris, Secretary, for their time and dedication to California's environment.

Special thanks to CWF/CO Advisor Janet L. Byron, who provided editorial support and guidance in development of the newsletter; to David Lewis (Marin and Napa County Director, University of California Cooperative Extension and North Bay Watershed Management Advisor), Jon Rosenfield, PhD (Senior Scientist, San Francisco Baykeeper), and CWF/CO Advisor Diane Walton, PhD, who reviewed the article on oaks and fishes; and to Tom Gaman CWF/CO Advisor and Registered Professional Forester, who created the oak maps described in the Resources column.

Many thanks also to Stephanie Berger for helping with the newsletter, and to CWF/ CO's stellar volunteer, Rosemarie Aguilar, for her ongoing assistance.

RESOURCES

RESOURCES FOR OAK IDENTIFICATION

Knowing where oaks are growing is critical to their survival.

The California OakWatch project (https://www. inaturalist.org/projects/california-oakwatch) on iNaturalist is a collaboration of California Native Plant Society (California Oaks Coalition member), Global Conservation Consortium for Oak (California Oaks Coalition member), and San Diego Zoo Wildlife Alliance that collects data on oaks native to the California Floristic Province—an area from Santa Barbara County to the 30th parallel in Baja California Norte, México.

California OakWatch has two videos on oak identification and hosts the Identification Guide for Priority, Threatened California Oaks at https://www.inaturalist.org/projects/califor nia-oakwatch/journal/archives/2022/11; the guide can also be downloaded at: bit.ly/ 3Yd2YTv. The guide includes six focal species of conservation concern: Cedros Island oak (Quercus cedrosensis), Nuttall's scrub oak (Q. dumosa), Engelmann oak (Q. engelmannii), island scrub oak (Q. pacifica), Santa Cruz Island oak (Q. parvula), and island oak (Q. tomentella). It also includes two hybrid oaks, as well as interior live oak (Q. wislizeni) and shrub oak (Q. berberidifolia), which hybridize with some of the focal species.

Also consider joining California OakWatch, if you are able to contribute data to this platform.



Scan this QR code to connect with California OakWatch.

OAK MAPS

The California Oaks website has a page (https: //californiaoaks.org/oak-maps/) with downloadable maps that show estimated acreage for eight native California Quercus species: coast live oak (Quercus agrifolia), canyon live oak (Q. chrysolepis), blue oak (Q. douglasii), Engelmann oak (Q. engelmannii), garry oak (Q. garryana), California black oak (Q. kelloggii), valley oak (Q. lobata), and interior live oak (Q. wislizeni) as well as tanoak (Notholithocarpus densiflorus). Hardwood and conifer basal area maps are also presented.

The maps were produced by Tom Gaman, California Wildlife Foundation/California Oaks Advisor and Registered Professional Forester.

Bringing good fire back to the land through Indigenous stewardship

by Madison Wilson, Indigenous Stewardship Fellow and Amber Pairis, Founder and Lead Advisor, Climate Science Alliance

or thousands of years, fire was a key tool used to steward California's cultural landscape by cycling underbrush back into the soil, promoting germination and resprouting of fire-adapted plants, limiting pests, and promoting biodiversity. These practices are now commonly known as "cultural burning," "good fire," and "cultural fire."

Fire suppression began in California with Spanish colonization and continues to this day across the West. Total bans on cultural fire practices were implemented in 1850 under California's Act for the Government and Protection of Indians (https://www.courts.ca.gov/ documents/IB.pdf), also referred to as the "Indian Indenture Act." This legislation, which is known for its role in the forced servitude of California's Indigenous peoples, also specifically banned the use of "prairie fire," with punishment for any person who did not "use proper exertions to extinguish the fire."

This and other measures, which resulted in genocide and the removal of Indigenous peoples as stewards of the land, heightened the risk of extreme fires. The risk is exacerbated by the introduction of nonnative plants, urban and suburban expansion, climate change, increased ignition sources, and alteration of the region's hydrology. California, accordingly, has seen an increase in extreme fire events that severely impact human and nonhuman communities. Fire suppression messages have further complicated the public's relationship with fire. Today, the practice of fire suppression is playing out across the landscape with catastrophic fire events that are capable of ting for its use (see: https://bit.ly/3JtzhYt). transforming our natural and human communities.



A low intensity burn of oak underbrush.

Fire is an inherent and necessary part of California's ecology, a key tool in Western land management strategies, and a crucial component of cultural health for many fire-connected knowledge into technical training, all under region to establish Indigenous-led crews Indigenous communities. Cultural burning the umbrella of climate-informed conserva- trained in fire, forestry, and fuels management practices focus on land revitalization while tion, stewardship, and restoration. The program



We're starting to see

the smoke; eventually

we will see the flame.

—Wesley G. Ruise Jr.,

Fire Chief of the La

Jolla Band of

Luiseño Indians

Participants gather around an oak tree at a Stewardship Pathways training event.

prescribed-burn practices employed by federal invites Indigenous peoples from across Califorand state agencies focus more narrowly on fuel nia who are interested in creating or expanding reduction. Though cultural burning has been a career focused on climate stewardship practiced for thousands of years, past and informed by traditional knowledge systems. current regulations and requirements imposed The program has different training themes, or on federal trust-lands are significant barriers. pathways, one of which is specifically dedicated Legislation passed in 2022 and state strategic to Indigenous Fire Stewardship. planning initiatives reaffirmed the rights of Indigenous peoples to cultural burning prac- exploring different means for bringing cultural tices, while recognizing beneficial fire as a burning back to the land, supporting and valuable tool and seeking to streamline permit-leading prescribed fire management, and

Alliance, fiscally sponsored by California to build capacity for economic and workforce

Wildlife Foundation, is working collaboratively with our Tribal Working Group (www.climate sciencealliance.org/tribal-workinggroup) to advance Tribal co-stewardship of all ancestral lands and safeguard Southern California's Tribal communities and culture from negative impacts of climate

change. The Stewardship Pathways Training their ancestral homelands. Program (www.climatesciencealliance.org/stew ardship-pathways) was launched by the is working with agency partners including CAL working group in 2022 to focus on equal valua- FIRE, U.S. Forest Service, Bureau of Indian tion of ways of knowing, with an emphasis on Affairs, California State Parks, and other the integration of climate science and cultural entities that oversee fire management in the

Many Indigenous communities are actively advancing a model for co-management of Stewardship Pathways Training Program: ancestral homelands that are managed by To leverage this opportunity, Climate Science non-Tribal entities. The program was created

> development while ensuring that Indigenous communities are given the space to lead and advance fire stewardship and restoration actions their lands. Stewardship Pathways also encourages collaboration and cooperation between state and local jurisdictional partners and Indigenous peoples on

The Indigenous Fire Stewardship Pathway

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to advance resilient and adaptive pathways for conserving the land in the face of climate change. Serving as a model for equitable and sustainable economic and workforce development, the Indigenous Fire Stewardship Pathway is working towards a stand-alone, year-round, and Indigenous-led forestry and fuels hand crew to reduce the potential for high severity wildfire by creating defensible space and implementing fuels abatement.

Since its beginnings, the Stewardship Pathways program has hosted seven Indigenous Fire Stewardship events, including wildfire and fuels management, wildland fire safety, wildland fire chainsaws, and basic firefighter trainings. The trainings also include the 2022 Southwestern Tribal Climate Change Summit (www.climatescien cealliance.org/2022-tribal-summit) and the more recent Cultural Burning Demonstration and Awareness Training, which were designed to connect cultural practitioners and Tribal and non-Tribal communities to focus on kinship with fire, build awareness, and overcome cultural burning challenges.

The first Cultural Burning Demonstration and Awareness Workshop was held to bring together elders, youth, practitioners, and non-Tribal fire managers to discuss Tribal fire stewardship and its role in Indigenous land stewardship in January 2023. The La Jolla Band of Luiseño Indians hosted over 100 practitioners and participants who shared knowledge and stories of fire throughout the day, fueling excitement and a spirit of collaboration.

"We're starting to see the smoke; eventually we will see the flame," said Wesley G. Ruise Jr., Fire Chief of the La Jolla Band of Luiseño Indians.



A word cloud around the theme of fire created by participants at the Cultural Burn Awareness Training.

Acknowledgements: The Stewardship Pathways program began as a pilot effort through the Resilient Restoration project, funded by the California Strategic Growth Council, and has since grown due to funding and support

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Restoring the cloud forests of Santa Rosa Island



An ancient stand of island oaks (*Quercus tomentella*), surrounded by mature chaparral, is draped in fog on Black Mountain, Santa Rosa Island.

by Keith Lombardo, PhD, Director, Southern California Learning Center, National Park Service

Off the coast of Southern California sits Santa Rosa Island, one of five islands in the area managed by the National Park Service. A forest of island oak trees (*Quercus tomentella*), surrounded by a dense mix of native chaparral, used to dominate the landscape across the highest reaches of this remote island. The ecosystem flourished due to the consistent fog cover that blanketed the island—a phenomenon caused by condensation of moist ocean air. "Cloud forests" persisted on Santa Rosa Island for generations.

Dense fog still covers the mountains of Santa Rosa Island, but the landscape has changed dramatically. In the late 1800s and early 1900s, livestock grazing, military development, and oil exploration reduced the native ground cover to nearly zero. Only small patches of native plants, found in the deepest corners of the island, were able to survive this period of rapid transformation. The once-mighty island oak forests were reduced to isolated, remnant stands.

When the National Park Service took over management of the island in 1980, one of its first acts was to remove all the livestock. Once these animals were eliminated from the ecological framework, the work of bringing this native landscape back to its former glorious state could begin. Restoration of this ecosystem is a huge task and many partners have contributed mightily to the effort, but none more than Kathryn McEachern, PhD, of the U.S. Geological Survey. Stabilizing and protecting the remaining oaks was her priority. But, Dr. McEachern and her team quickly realized that stabilization was reliant on restoring the understory of chaparral plants, whose root systems hold water and soil in place and provide shade for young oaks to become established.

Recreating an ecosystem from scratch was incredibly difficult and required a lot of experimentation. First, scientists had to devise methods to capture fog and direct it into the ground. So, many different fog collectors were developed, built, and deployed. Then Park Service restoration ecologists had to determine which native species would be best suited to pioneer restoration of the island. Greenhouses were built and stocked with plants grown from local native seeds. After decades of dedication and perseverance, the fruits of these efforts are manifest. Thousands of plants have been successfully placed into the ground and thousands more have come back on their own now that they are no longer under grazing pressure.

When walking through the island oak forests, I like to imagine what they looked like long ago and what they may look like in a hundred years. There are times when I feel disheartened that I may never see the forest in its full glory; but I always find hope knowing that the National Park Service, with the support of an incredible community of partners, is restoring this magical place to be enjoyed by future generations. To learn more about restoration efforts on Santa Rosa Island, please visit: bit.ly/3mu2Xgn.

California Wildlife Foundation is partnering with the National Park Service to provide fiscal administration for this important work, enabling the project to collect photographic images and develop science communications to educate and engage the public.

The restoration of Santa Rosa Island's cloud forests advances the Oaks of the Californias effort, focused on conservation and recovery of six imperiled oak species of the California Floristic Province. Visit www.global conservationconsortia.org/2022/08/16/oaks-of-the-californias-conservation-planning-2/ to learn more.

Oak lands used for conservation, restoration, teaching, and research



Students planting valley, blue, and interior live oak amid livestock pastures at River Ridge Ranch. by Gary Adest, PhD, owner of River Ridge Ranch and President of River Ridge Institute

facility located near the southern Sierra land management. We recently produced a foothill town of Springville. The 722-acre series of streambed restoration workshops ranch, within the ancestral home of the that emphasized erosion prevention and Yaudanchi Band of the Foothill Yokuts Tribe repair for the middle watersheds of working until European occupation in 1859, includes landscapes where oaks grow. Intermittent or the north fork of the Tule River and borders seasonal streams are of enormous importance the 323,000-acre Giant Sequoia National to the hydrology of the arid West.² They Monument. It is home to 100 bird, 37 represent an untapped tool in improving mammal, and approximately 20 amphibian water conservation for the benefit of working and reptilian species as well as plants (includ- ranches and downstream populations. ing four oak species), fungi, and thousands of species of insects and other invertebrates.¹ managers, and personnel of nongovernmental

ogy, carbon cycling, Tribal communities, viewsheds, recreation, livelihoods, and lifestyles downstream water availability, and enhance nia Oaks Coalition, is devoted to keeping YouTube: https://tinyurl.com/mvu3yhbb. Streamthese places physically and functionally bed improvements, such as excluding liveintact.

conservation. We purchased what was to documented on River Ridge in August 2022. become River Ridge Ranch & Institute when ly what it was!

station, and recreation and education venue, Ecosystems and Classrooms.

aks are the defining and unifying which is protected by a conservation easeprinciple of River Ridge Ranch & ment. A 501(c)(3) organization, the mission Institute, an ecological conserva- of River Ridge Institute is to educate about tion, research, and education and demonstrate sustainable and regenerative

The workshops trained ranchers, land Because every aspect of our oak lands is organizations. We also produced a series of six vitally important—to species diversity, hydrol- videos explaining how to slow water, improve groundwater penetration and storage, improve -River Ridge Institute, a member of Califor- wildlife habitat. The videos are available on stock and planting native trees and shrubs, When my wife, Barbara Brydolf, PhD, have already yielded important conservation and I bought the old Negus Ranch in 1998, we results. Willow Flycatcher (Empidonax traillii), did not have a specific plan in mind beyond a state designated endangered species, was

An outdoor classroom: Over the last it looked as if the land would end up as a two decades we have hosted 10,000 kindermajor housing development. We thought we garten through seventh-grade students for a had a better idea—we just did not know exact- day of conservation-based outdoor education called Trout in the Classroom. That curricu-River Ridge has become a unique combi- lum was recently updated to utilize oaks and nation of working ranch, biological field acorns rather than trout, and titled Acorns,

We have also hosted university classes in archaeology, environmental science, policy, and geography. A five-year partnership with the Geography Department at California State University, Long Beach, has produced dozens of master's theses and educated hundreds of college students about oaks and their importance.

Amanda Wu, PhD, a postdoctoral scholar at Stanford University, researched fire impacts on oaks in 2022 and will return to investigate fungi in the tops of blue oaks.

Creating access to higher education for Tulare County youth: River Ridge Ranch & Institute is embarking on a new project in the spring of 2023, A Taste of College, to provide Tulare County youth with first-hand experience in attending a college class by utilizing the ranch to introduce students to college classes. Tulare is California's seventh largest county, yet it has no four-year college. So, how do high schoolers get an idea of what higher education is about? We are inviting first year and sophomore high school students-many of whom have no family members who have attended college—to observe college classes taught on the ranch.

High school students will visit River Ridge while college classes are in session. The program will provide transportation to the ranch as needed. The students will go on a walking tour to learn about how the land is being managed for biodiversity, ecosystem resilience, and sustainable income, making stops at various sessions being taught throughout the ranch. They will be able to visit faculty at information tables, interact with college students, take home new information, and gain insights into opportunities to continue their studies.

The classes include content such as Geographic Information System oak mapping studies using drones; monitoring the mortality and regeneration of oak and other tree species; learning methods for sampling soil and testing carbon content; and scientific sampling techniques

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Students, parents, and teachers learning about river ecology along the north fork of the Tule River on River Ridge Ranch.

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for birds, seeds, and small mammals.

Youth participants of Native Star Foundation (https://www.native-star.org/), a Tule River Tribal nonprofit organization, will be among the first invited to "taste" college at River Ridge. "We believe that if we take care of the land, the land will take care of us," observed, Willie Carrillo, founder of Native Star Foundation. "We believe in being good stewards of the land that we share. We believe strongly in higher education, and being able to continue to learn about the land and educating our communities."

Taste of College program partners include the Tule River Tribe; California State University, Long Beach; University of California, Merced; and Porterville Unified School District. Visit River Ridge's website (river-ridge.net/) for information on how to support these programs.

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from the San Diego Resource Conservation District, California Departments of Conservation and Fish and Wildlife, Resources Legacy Fund, San Diego Gas and Electric, and San Diego Foundation. Training for the Indigenous Fire Stewardship Pathway and the Indigenous-led Forestry and Fuels Crew would not be possible without the Southern California Interagency Wildland Fire and Fuels Cadre, a group of agency partners who contribute their time and expertise to plan and implement fire certification training. A special thank you to Joelene Tamm and Chief Wesley G. Ruise Jr. for their leadership, vision, and perseverance to bring the idea to life, the La Jolla Band of Luiseño Indians for hosting the gathering, and all members of the Tribal Working Group for their trust, guidance, knowledge, partnership, and dedication in helping advance climate resilience for the Southern California region. These local efforts of Indigenous-led fire stewardship are part of a film documentary, "Maathaw: The Fire Within Us," to be released in 2024 by Climate Science Alliance affiliated artist Condor Visual Media. The Climate Science Alliance acknowledges the Indigenous peoples on whose traditional territory we work. We honor the continued presence and resilience of Indigenous communities and nations today and thank those we work with for your friendship and your good will in our efforts to collaborate.

New regional policy a critical win for environment



This mighty oak in the Ventura River Preserve stands tall before the rugged mountains of the Los **Padres National Forest.**

by Melanie Schlotterbeck, Green Vision Coordinator, Friends of Harbors, Beaches and Parks

nia Association of Governments (SCAG)—a questions ranging from parcel zoning and regional planning agency composed of 191 streams on the property, to its proximity to cities and six counties—adopted a policy protected lands and disadvantaged commuframework for an innovative mechanism to nities, the frequency of wildfires, and more. offset impacts from transportation projects. Known as a regional advance mitigation and others, the RAMP policy was adopted by program (RAMP), SCAG's unanimous vote SCAG's Energy and Environment Commitbegins what could become a substantial tee and its Regional Council. The decision investment in land preservation and restor- incorporates the conservation community's ation. The RAMP will bundle project impacts request for a seat on the Technical Advisory and their mitigation to provide a comprehen- Committee. The next step is for SCAG to sive and strategic approach to conservation. create the advisory committee and select its It will also allow quicker permitting of members. The new committee will review infrastructure projects. SCAG's initial esti- data layers related to the Greenprint, which is mates for transportation projects in need of expected to lay the foundation to identify mitigation offsets includes a potential \$1 mitigation needs. billion investment in conservation.

lands and identifying places in need of lion (Puma concolor).1 protection. Generally called a "Greenprint,"

addition to the adoption of the RAMP, is the development and implementation. creation of a Greenprint. This tool provides an online interface for decision-makers, planners, transportation agencies, developers, nonprofits, and the public to access informa-

In February 2023, the Southern Califortion about the landscape, helping to answer

After 12 years of engagement by FHBP

Southern California is blessed with Orange County-based nonprofit Friends many species of plants and animals unique to of Harbors, Beaches and Parks (FHBP), a the local geography. From Ventura to Rivermember of California Oaks Coalition, side there are a host of oak ecosystems, many shepherded this policy through many ups with unique and imperiled oak species. The and downs since 2010. FHBP developed a RAMP offers an opportunity to protect oak RAMP with the Orange County Transporta- and other habitats impacted by transportation Authority in 2005, committing \$243.5 tion projects, meaning the entire suite of million for mitigation investments. One tool species living in and among the oaks benefit, used by FHBP was a map showing protected including top predators such as the mountain

FHBP is grateful that California Wildlife but to FHBP it is the "Green Vision Map." The Foundation/California Oaks supported the map provided a baseline inventory for the RAMP along with more than two dozen authority to determine where to invest other conservation and community groups. RAMP funds. As a result, 1,300 acres are Our voices—united behind a common protected and 350 acres are being restored, cause—are stronger together. FHBP will keep with more money still available for invest- its broad coalition apprised of opportunities to engage in the data evaluation process, and One of SCAG's key commitments, in we will assist SCAG with next steps of RAMP

¹ Blue, canyon live, interior live, and valley oak trees grow at the ranch.

 $^{^{\}overline{2}}$ Levick L, et al. 2008. The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest. U.S. Environmental Protection Agency and USDA/ARS Southwest Watershed Research Center, EPA/600/R-08/134, ARS/233046, 116 pp. https://www.epa.gov/ sites/default/files/2015-03/documents/ephemeral_ streams_report_final_508-kepner.pdf

¹ The Southern California and Central Coastal **Evolutionary Significant Units of mountain lions** are candidates for state Endangered Species Act protection.

Settlement supports wildlife corridor land acquisition in El Dorado County

by Cheryl Langley, Rural Communities United

Coalition member Rural Communities United (RCU) challenged El Dorado County's adoption of a suite of oak policies based on the grounds that the adopted policies were in violation of the California Environmental Quality Act (CEQA). A settlement was reached in January 2023.

RCU's lawsuit alleged that the county's environmental review of the oak policies the Biological Resources Policy Update to El Dorado County's 2004 General Plan, and associated Oak Resources Management Plan and Oak Resources Conservation Ordinance—was deficient in its analyses of impacts on wildlife habitat. Thomas Lippe of Thomas Michael Graf Law Offices represented RCU.

Under the approved policies, 145,552 acres (nearly 60%) of the county's estimated 246,806 acres of oak woodlands at or below 4.000 feet could be lost to residential and the final environmental impact report (EIR). Importantly, most of the anticipated developmiddle of the county. Loss of oak woodland lieu mitigation fees for the purchase of

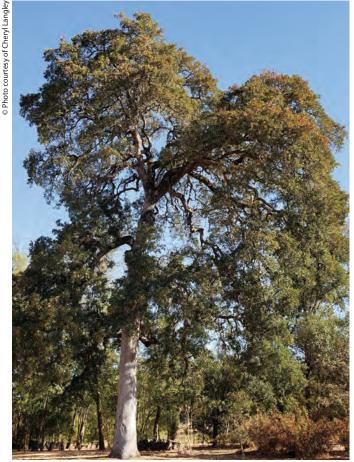
habitat along this corridor has the potential In November 2017, California Oaks to isolate wildlife populations in the north and south areas of the county. Such genetic isolation could be the most significant and calamitous impact of the adopted policies, carrying the potential for extirpation of vulnerable species from the county. The EIR did not provide an adequate discussion or mitigation of this impact. Instead, it simply admitted that the conversion of oak woodlands would have significant and unavoidable impacts with respect to the loss and fragmentation of wildlife habitat and movement corridors, but failed to provide habitat preservation in the critical Highway 50 corridor as mitigation.

RCU's court action resulted in issuance N. Lippe Law Offices and Michael Graf of of a Writ of Mandate directing the El Dorado County Board of Supervisors to partially decertify the EIR as it related to the county's determination that preserving oak woodland habitat within the Highway 50 corridor was not a feasible mitigation measure to avoid the commercial development, as articulated in loss of north-south oak woodland habitat connectivity for oak-dependent wildlife.

Subsequently, a settlement agreement ment will occur along the Highway 50 was reached in which the county agreed to set corridor, which runs east-west through the aside \$250,000 plus 20% of oak woodland in

> conservation with lands within the Highway 50 corridor as a priority, until June 30, 2035. The American River Conservancy—a California Oaks Coalition member that protects wildlife habitat, native fisheries, scenic vistas, and recreation lands within the upper American River and Cosumnes River watersheds-has been selected to identify and acquire lands within the Highway 50 corridor that are important for north-south wildlife habitat connectivity.

> RCU extends special thanks to our fellow California Oaks Coalition member organizations, which, through their continued efforts, ensure our oak woodlands are conserved and perpetuated.



Heritage blue oak in western El Dorado County

How you can help:

- · Donate to California Wildlife Foundation/California Oaks. A secure donation can be made from our website: californiaoaks.org.
- · Spend time in an oak woodland or forest. Click on californiaoaks.org/ resources for a partial listing of oak landscapes around the state that have public access.
- · Please consider including oak conservation in your financial and estate planning efforts. Information can be found at: californiaoaks.org/donate.
- Be vigilant about threats to oak woodlands and oak-forested lands in your community and consult californiaoaks.org for guidance.
- Restore oaks to areas where they historically grew.
- Sign up for the Oaks e-newsletter at californiaoaks.org.
- Support local and statewide measures to protect natural resources.
- · Hold decision-makers accountable for protecting green infrastructure.
- Learn about imperiled Southern California oaks and consider contributing oak data via California OakWatch (see the Resources Column on page 3).

California Oaks is a fund within California Wildlife Foundation, federal tax identification number 68-0234744. Contributions of cash, stocks, and bonds are tax deductible.



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