

Oaks

SPRING/SUMMER 2019

CALIFORNIA OAKS

Protecting Hornitos Ranch, a working landscape

by Bridget Fithian, Executive Director and
Jessica Thompson, Program Assistant
Sierra Foothill Conservancy

Farms and ranches dot the landscape between Yosemite and Kings Canyon National Parks. These grasslands, woodlands, and forests are home to native plants and wildlife, and they are a source of clean water. Hornitos Ranch is an iconic place in this beautiful setting.

Operating as a cattle ranch for 147 years, the 7,100-acre property includes 9 miles of wildlife corridor, encompassing 5,400 acres of blue oak savanna and woodlands and 1,700 acres of vernal pools and grasslands. The property, adjacent to the Merced River and Lake McSwain Public Recreation Area, includes more than 3 miles of Merced riverbank, 31 miles of streams, and 42 acres of riparian habitat.

The Merced River corridor, which includes the Hornitos Ranch, faces development pressure from expanding populations and housing, particularly from the expansion of the University of California, Merced. Tree orchards are also replacing rangeland and natural lands in the San Joaquin Valley and Sierra Nevada Foothills, fragmenting the landscape.

Sierra Foothills Conservancy (SFC) is pursuing opportunities for conservation in



Melissa Odell, Sierra Foothill Conservancy

Winter on the Hornitos Ranch with Merced River in the distance

the area. Hornitos Ranch, an accumulation of 46 parcels acquired by the Gagliardo family during the 19th century, is now threatened by development company ownership, which has advanced plans for a 4,000-home community.

A local cattleman and his family—managers and stewards of Hornitos Ranch for over a decade—are partnering with SFC to acquire a conservation easement on the property. This will allow the family to purchase the ranch to keep it intact as a working landscape in perpetuity.

SFC, a member of California Oaks Coalition, works to permanently protect habitat, scenic values, clean water resources, and the area's historic land-based economy, from grasslands to the Sierra crest. The Hornitos conservation easement is SFC's largest acquisition to date and the centerpiece of the organization's Merced River Conservation Corridor Focus Area. SFC partners with willing landowners to strategically acquire conservation easements to connect 20,626

acres of public and private land within the focus area to protect diverse wildlife and plant species, including blue oak, valley oak, and interior live oak.

Hornitos is the largest contiguous ranch remaining in the focus area and one of the largest ranches in Mariposa County. The property is surrounded by other large ranches, which together support a rich and diverse suite of conservation values, with over 45 special-status species documented within the site's vicinity. This property has an 822-foot elevational gradient that benefits plant and animal species, offering climate resiliency and critical transition-zone habitat that is integral to regional, state, and federal conservation plans.

Hornitos Ranch is within the U.S. Fish and Wildlife Service (USFWS) Southern Sierra Foothill Vernal Pool Region, with 146.6 acres of USFWS-designated critical habitat for vernal pool species. Further, the ranch's

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California Oaks Coalition

California Oaks Coalition brings together 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 Watershed Institute
Butte Environmental Council
California Invasive Plant Council (Cal-IPC)
Californians for Western Wilderness (CNPS)
CNPS San Diego Restoration Committee
CNPS Sanhedrin Chapter
California Water Impact Network (C-WIN)
California Wilderness Coalition (CalWild)
Californians for Western Wilderness (Cal/Wild)
Carpe Diem West
Center for Biological Diversity
Chimineas Ranch Foundation
Clover Valley Foundation
Dumbarton Oaks Park Conservancy
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 the Richmond Hills
Friends of Spenceville
Hills for Everyone
Los Padres ForestWatch
Lower Kings River Association
Napa County Water, Forest and Oak Woodland Protection Committee
Northern California Regional Land Trust
Planning and Conservation League
Redlands Conservancy
Resource Conservation District of Santa Monica Mountains
Rural Communities United
Sacramento Tree Foundation
Santa Clarita Organization for Planning and the Environment (SCOPE)
Shasta Environmental Alliance
Sierra Club Placer County
Sierra Foothill Conservancy
Tejon Ranch Conservancy
Tuleyome
University of California Los Angeles Botanical Garden

The four areas of support being developed for the coalition are:

- 1) Research and advocacy updates (available at californiaoaks.org).
- 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.

Please contact Oaks Network Manager Angela Moskow, amoskow@californiaoaks.org, (510)763-0282 for more information.

Innovative policy protects oak habitats in Santa Clara Valley

Staff of Santa Clara Valley Open Space Authority

The Santa Clara Valley Open Space Authority (Authority) has protected 25,000 acres of native California oaks and associated habitats across Santa Clara County over the last quarter century via a combination of acquisition, conservation easements, urban grantmaking, and volunteer engagement. The Authority is known in the South Bay as a leader in forming creative and innovative partnerships to conserve land and water.

The Authority is working to advance the concept of nature as green infrastructure in land use planning, helping planners and decision makers understand that preserving open space is one of the smartest investments we can make to ensure a sustainable and resilient region. Nature provides important ecological, economic, and community benefits called "ecosystem services" including flood protection, greenhouse gas reduction, food production, resilience to climate change, and the enhanced health and safety of human and natural communities. Native oak habitats are important examples of natural infrastructure.

Coyote Valley in southern San Jose is a threatened landscape that offers multiple conservation benefits. It is the last large-scale undeveloped assemblage of Santa Clara Valley habitat, including oak woodlands. The Authority partnered with the Peninsula Open Space Trust and a multidisciplinary team to develop the Coyote Valley Landscape Linkage (CVLL) Report. The CVLL team researched the historic ecology of the region and conducted analyses to determine how to protect and restore a critical wildlife corridor for current and future populations of wide-ranging mam-

mals, such as mountain lions. CVLL calls for large-scale restoration of critical habitat to serve as the key linkage for wildlife. Included in this vision are a complex ecologic mosaic of oak savanna and oak woodland communities, as well as riparian corridors, wildlife-friendly agriculture, wet meadows, and freshwater wetlands.

These efforts were recently rewarded when San Jose voters passed Measure T, the Disaster Preparedness, Public Safety, and Infrastructure Bond Measure, which authorized \$650 million in general obligation bonds, including up to \$50 million for land acquisition for natural flood and water quality protection, primarily in Coyote Valley. The inclusion of funding designated for nature-based solutions to flooding in a larger urban infrastructure bond measure was precedent setting in California.

The Authority is also among the first of county agencies to sponsor the use of a new conservation tool called a Regional Conservation Investment Strategy. This planning and implementation mechanism supports voluntary conservation and enhancement actions within the Authority's jurisdiction, including Coyote Valley. It will help protect focal species and their sensitive habitats, such as oak savanna, using Mitigation Credit Agreements. For example, the Authority can facilitate agreements between transportation agencies and the California Department of Fish and Wildlife to direct mitigation for impacts to high priority lands, and will play a key role in implementing the land protection or restoration activities resulting from such agreements.

For more info, go to openspaceauthority.org/coyotevalley.



Oaks in Coyote Valley Open Space Preserve

Derek Neumann

RESOURCES

NATURE AND HUMAN HEALTH:

The Healing Power of Trees (Bulletin #71), from the Arbor Day Foundation, summarizes studies exploring linkages between trees and associated green spaces in hospital recovery and workplace and learning environments. 8 pp; \$3. shop.arborday.org/product.aspx?zpid=2402

Healthy Parks Healthy People US, from the National Park Service, promotes parks as a health protection strategy. The website includes materials for educators and health care providers, studies about the connection between health and natural settings, and information on federal programs that encourage spending time in nature. www.nps.gov/planyourvisit/healthy-events.htm

UPCOMING EVENTS:

Southwestern Tribal Climate Change Summit. Hosted by Pala Band of Mission Indians, La Jolla Band of Luiseno Indians, Institute for Tribal Environmental Professionals, and Climate Science Alliance, August 13-16, Idyllwild Arts Academy, Idyllwild, CA. The event includes a Youth Tribal Summit for students (ages 16–25) to connect with scientists, managers, and artists. climatesciencealliance.org/tribal-summit

Prescribed Fire on Private Lands Workshop. Hosted by University of California Forest Research and Outreach, May 17-18, Blodgett Forest Research Station, Georgetown, CA. ucanr.edu/sites/forestry/Wildfire/Prescribed_fire/Rx_workshop/

Chronicling California's heritage trees

Photographer and author William Guion is about to embark on a project to chronicle California's ancient oaks. The project is inspired by Guion's most recent book, *Quercus Louisiana*, a visual and narrative introduction to Louisiana's ancient oaks. Guion's southern project builds on the 1934 article, "I Saw in Louisiana a Live Oak Growing," which raised awareness of that state's ancient oaks.

To learn more, or to alert Mr. Guion about ancient California oaks, please visit: www.QuercusLouisiana.com.

Settlement improves Amador County land-use planning

by Katherine Evatt

Foothill Conservancy Board President

In October 2016, Amador County adopted a new general plan over the vocal objections of the Foothill Conservancy, wildlife advocates, and concerned citizens. The next month, the Conservancy, a Jackson, California-based nonprofit advocacy organization and California Oaks Coalition member, filed a California Environmental Quality Act (CEQA) lawsuit challenging the plan.

Under state law, the parties to a CEQA lawsuit must have a settlement meeting. Often those meetings are fairly perfunctory, but in this case, Amador County and the Conservancy agreed to ongoing discussions. The parties negotiated through most of 2017 and settled the case in spring 2018.

The settlement addresses the Conservancy's key concerns about the general plan. Its provisions will better protect the county's agricultural lands, scenic beauty, community character, and wildlife. It also established an accountability system to track key planning benchmarks.

In August 2018, the Amador County Board of Supervisors adopted county code amendments required by the settlement. The amendments:

- Better protect new homes from wildland fire when land is developed in high and very high-risk wildland fire areas.
- Reduce the likelihood of agricultural lands converting to nonagricultural uses.
- Preserve wildlife, aquatic resources, and water quality.
- Require applicants for commercial projects of 5,000 square feet or more to analyze the economic impacts of their projects on the viability of existing businesses.

In addition, the code changes require the county to make information available to project applicants and real estate agents on the risks of wildland fire, available levels of fire and emergency response, and wildland fire prevention methods; and to provide that same information when property changes hands in high and very high fire-risk areas. That information is now posted on the county's website.

The code changes also include a comprehensive set of general plan performance measures and require regular



Black oaks in the Mokelumne River canyon, near Pine Grove.

"The settlement will help the citizens of Amador County hold their elected officials accountable for protecting our local environment and quality of life," Foothill Conservancy President Katherine Evatt

monitoring and periodic reports to the county board of supervisors. If identified trends are inconsistent with the general plan's stated goals, county staff will provide an analysis and recommendations to the board, which will then review them at a public hearing.

In addition, the settlement requires Amador County to develop ordinances by April 2020 to:

- Protect rural scenic quality along Amador County's roads by establishing standards for commercial, industrial, and institutional development, and guidelines for residential development.
- Establish commercial design standards for towns and existing communities to protect community character.
- Limit light pollution that harms views of dark night skies.

El Cerrito-based attorney Michael W. Graf and San Francisco-based planner Terrell "Terry" Watt played a critical role in helping the Foothill Conservancy reach this positive outcome.

For more information, go to www.foothillconservancy.org.

Katherine K. Evatt, 2017

Restoring the legacy of Awaswas forest management

by Sara French, Director of Programs and
Development, Amah Mutsun Land Trust

In October 2016, members of the Amah Mutsun Tribal Band gathered in a circle beneath ancient oak trees at San Vicente Redwoods, a mixed-use open space property in the Santa Cruz Mountains. Tribal members sang songs in their indigenous language, offered prayers as their ancestors would have, and then ignited a tiny bed of lichen and dried grass, which carried flames into the forest.



Amah Mutsun Native Stewards, who are also certified wildland fire fighters, use a hand drill to start a prescribed fire in the traditional way.

Fire crews, tribal members, and land managers carefully tended this low-intensity fire to manage the forest and reduce fuel loads. This mixed hardwood and conifer forest contains old, gigantic oaks and redwoods, but young Douglas-fir trees are growing tall and shading out the oaks. Prescribed burning is expected to reduce the young Douglas-firs without causing mortality to the large oaks, thus promoting a forest structure of giant trees and open understory, similar to what the forest most likely looked like during centuries of indigenous management with fire.

This project is on ancestral Awaswas land, and the Amah Mutsun are the descendants of the Mutsun and Awaswas

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California's primeval blue oak forest

*In a state famous for remarkable forests, the blue oak woodlands must be included among the most exceptional. Blue oak woodlands are a mosaic of forest and savanna on the foothills of the Coast Ranges and Sierra Nevada, encircling the Central Valley of California. These beautiful woodlands are one of the largest ecosystems in California, but they are imperiled by agricultural development, suburbanization, and by the apparent decline in natural regeneration. Many of the remaining blue oak woodlands were never systematically logged and still contain canopy-dominant individuals that are 150 to over 600 years old. Our extensive field research and tree-ring dating indicates that literally thousands of acres of old-growth blue oak (*Quercus douglasii*) survive on private and public land. In fact, the remaining blue oak woodlands may be one of the most extensive old-growth forest types left in California. These ancient woodlands contribute to watershed protection and preserve an important component of the eroding biodiversity of California. The annual growth rings of these exceptional old-age blue oak trees also provide a sensitive chronology of drought and wetness over California that has helped place the modern anthropogenic era of heavy water demand and climate change into the context of natural climate variability over the past 600 years.*

— Professor David William Stahle, University of Arkansas, Ancient Blue Oak Woodlands of California website (blueoak.uark.edu).

The window that blue oaks provide into California's hydrological history offers a roadmap for stewardship as the climate changes. The annual growth rings of blue oaks record the history of California's rainfall, because the trees are an integral part of the watershed. Oak litter, duff, downed logs, understory, and root systems stabilize and enrich soil, regulate run-off, prevent erosion, cool riparian corridors, and access groundwater and soil moisture. It is estimated that California's oak woodlands protect the quality of greater than two-thirds of California's drinking water supply.¹ Keeping our old-growth oak forests standing is essential to achieving a secure water future.

The history of California's oaks begins before the Quaternary ice ages (the most recent 2.588 million years of the Earth's history.)² In proceedings of the 7th California oak symposium, Scott Mensing described the establishment of low-elevation oak woodlands:

The late Pleistocene was dominated by juniper and/or incense cedar, sagebrush, and pine with very little oak, suggesting an open landscape with a cooler, drier climate than today. Beginning about 10,000 years ago oak began to increase, reaching a maximum between 8,000 to 6,000 years ago, then slowly declining while pine and fir increased. Oaks

remained a minor component in the montane forests of the Sierra Nevada until the late Holocene, when evidence suggests that burning by native Californians once again favored an increase in oak woodlands at the expense of conifers.³

The persistence of California's old-growth oak ecosystems through prior climate shifts offers a degree of certainty during uncertain times. In addition to their importance to watersheds, oak ecosystem services include the maintenance of biodiversity and carbon sequestration. Davis et al. describe oaks as a "foundation species," using Ellison et al.'s definition of such a species as "...one that 'controls population and community dynamics and modulates ecosystem processes,' whose loss 'acutely and chronically impacts fluxes of energy and nutrients, hydrology, food webs, and biodiversity.'"⁴

Blue oak ecosystems sequester an estimated 18,783,312 metric tons of above and below ground carbon in live and dead trees—and this does not include litter, duff, downed logs, or soil-born carbon. In total, California oak ecosystems are estimated to sequester 675 million metric tons of carbon stored.⁵ Soil organic carbon is positively correlated with woody plant cover, and can be quickly degraded and lost upon the removal of oaks.⁶

Lastly, old-growth oak forests offer insights into the use of fire again as a

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Blue oak — from previous page

management tool. Don Hankins, PhD, of the Department of Geography and Planning, California State University, Chico, observes: “As society grapples with the devastating impacts of wildfires and the loss of biological diversity, many Indigenous people see traditional fire use as a key to mitigation of devastating losses while retaining traditional livelihoods associated with burning.”⁷

¹ O’Geen AT, Dahlgren RA, Swarowsky A, et al. Research connects soil hydrology and stream water chemistry in California oak woodlands. *Cal Ag* 62(2): April-June 2010.

² Communication via email with Prof. David William Stahle, University of Arkansas, March 18, 2019.

³ Mensing S. 2015. The paleohistory of California oaks. In: Standiford RB, Purcell KL (tech. coords). *Proc. 7th California oak symposium: Managing oak woodlands in a dynamic world*. Gen Tech Rep PSWGTR- 251. Berkeley, CA: USDA Forest Service, Pacific Southwest Research Station:35-47.

⁴ Davis, FW, DD Baldocchi, and CM Taylor. 2016. “Oak Woodlands,” chap. 25 in *Ecosystems of California*. Editors: H Mooney and E Zavaleta. University of California Press.

⁵ Gaman T. 2008. *Oaks 2040: Carbon Resources in California Oak Woodlands*. Oakland, CA: California Oaks Foundation.

⁶ Roche LM, Chang JF, Six J, O’Geen AT, Tate KW. 2015. Soil organic carbon stability across a Mediterranean oak agroecosystem. *Ibid*: Standiford RB, Purcell KL (tech. coords). p 227.

⁷ Hankins DL. 2015. Restoring indigenous prescribed fires to California oak woodlands. *Ibid*: Standiford RB, Purcell KL (tech. coords). p 123–9.

Awawas — from previous page

speaking peoples. They are working to restore their traditional ecological knowledge and reclaim stewardship of their ancestral territory. In addition to offering ceremony and starting the fire in the traditional way, the Amah Mutsun, through the Amah Mutsun Land Trust (a member of California Oaks Coalition), conducted pre and post-burn monitoring, tracking the effects of the fire on tree mortality, fuel loads, and herbaceous vegetation. This study is ongoing and impacts of the prescribed burning will be evaluated after the remaining plots are burned.

For more info, go to:
www.amahmutsunlandtrust.org.

Oak woodlands on PG&E watershed lands protected in perpetuity

by John McCamman, Board of Directors,
Stewardship Council

Conservation of over 140,000 acres of Pacific Gas and Electric (PG&E) watershed lands in Northern and Central California will be ensured in perpetuity through the 2003 settlement agreement following PG&E’s 2001 bankruptcy filing. These lands include some of California’s most beautiful and resource-rich landscapes, including about 52,000 forested acres of blue oak woodland, blue oak and foothill pine, montane hardwood and conifer, Sierran mixed conifer, lodgepole pine, and Douglas-fir. The watershed lands support hydropower generation and are largely concentrated along significant Sierra Nevada rivers and reservoirs that stretch from the Kern river near Bakersfield to the Pit and McCloud rivers north of Redding, and additionally include the Eel river in the Coast Range.

The agreement created the Pacific Forest and Watershed Lands Stewardship Council (Stewardship Council) to develop and implement a Land Conservation Plan to protect the beneficial public values of these properties for outdoor recreation, sustainable forestry, agriculture, habitat protection, open space preservation, and protection of historic and cultural resources.

Through this historic initiative, conservation easements will be placed on all of the properties, and local land trusts will hold the easements to ensure that the conservation values are protected. The Stewardship Council provides endowments to each conservation easement holder to fund monitoring, stewardship, and legal defense, as well as the enforcement of the conservation easements in perpetuity. Additionally, PG&E will donate fee title to approximately 40,000 acres of the watershed lands to public agencies and Native American entities.

The Stewardship Council has selected qualified parties to receive donations of fee title to large swaths of PG&E’s forested lands, including the U.S. Forest Service, California Department of Forestry and Fire Protection (CAL FIRE), and University of California Center for Forestry.

For example, CAL FIRE will receive 2,246 acres at the Cow Creek Planning Unit within the Cow-Battle Creek Watershed in Shasta County. The site’s forest resources include black oak and ponderosa pine woodland, blue oak and foothill pine woodland, riparian woodland scrub, and chaparral communities.



Oak woodlands will be donated to CAL FIRE at Cow Creek Planning Unit in Shasta County.

The planning unit will provide a low-elevation, northern Sierran forest and woodland vegetation research and demonstration site. CAL FIRE’s proposed land management activities will focus on sustainable forestry, research, and range management practices.

The Stewardship Council plans to complete its work by the end of 2021, and is working to ensure that PG&E continues to fulfill the 2003 settlement agreement throughout the current bankruptcy proceedings.

Go to: www.stewardshipcouncil.org for more information about the Stewardship Council’s conservation efforts in 22 counties.

Bruce Forman's nature education career



Bruce pauses at Silver Lake to reflect on retirement as he hikes in northern Sierra.

Bruce Forman was one of the original hires in 1989 for the California Department of Fish and Wildlife's (CDFW, formerly Department of Fish and Game) newly established Wildlands Program. His recent retirement after 30 years was the last departure of a dedicated group of interpreters who were recruited to deliver educational and recreational programming to a broad constituent base.

"Bruce Forman has been one of the major figures to shape the landscape of environmental literacy in the greater Sacramento region," said Laura Drath, a fish and wildlife interpreter at the Nimbus Fish Hatchery. "His impact on colleagues, educators, and students will resonate for decades to come."

Bruce developed a toolbox of programs to serve different audiences with information about the state's natural world. These include guided public wildlife viewing tours and wildlife festivals, popular with every age group. Nature Bowl, which Bruce led for 33-years, is a program that now serves third through sixth grade students from over 100 schools in the Sacramento Valley and foothills. He also developed trails, interpretive brochures, educational videos, and visitor center exhibits.

Bruce focused on developing partnerships, sponsorships, and grants in support of these programs. California Wildlife Foundation's (CWF) support and partnership enabled Bruce to catalyze outstanding events such as the American River Salmon Festival and the Lodi Crane Festival. Bruce produced a crane-viewing shelter at Woodbridge Ecological Preserve and coordinated eight well-attended "Coot Scoot" runs/walks at Gray Lodge Wildlife Area. He produced three educational videos—on salmon conservation, the effects of pollution on wildlife, and water conservation—which were distributed statewide. He also developed outdoor kinesthetic and thematic exhibits for young children, such as the Fishy Playscape at Nimbus Hatchery in Rancho Cordova.

Bruce's legacy also includes planning, carried out in partnership with CWF, for North Table Mountain Ecological Reserve in Butte County. He developed interpretive opportunities for visitors to experience the Northern Basalt Flow vernal pools and other features of this unique landscape. As a testament to his continuing impact, Wildlife Conservation Board and CDFW recently committed approximately \$500,000 for public access improvements, including the beginning stages of a 1.2-mile trail at the reserve.

Bruce's public outreach and science-based interpretive work set a high standard for educators. He was recognized during his tenure at CDFW with the Gold Award for Superior Accomplishment. His knowledge, passion, initiative, ability to work with others, and determination to make nature exciting for all inspired a diverse audience to support conservation efforts throughout the state.

Addressing invasive species threats in California

Invasive species threaten California ecosystems

The University of California, Riverside, Center for Invasive Species Research (cistr.ucr.edu) summarizes some of the environmental impacts of ecosystems altered by invasive species:

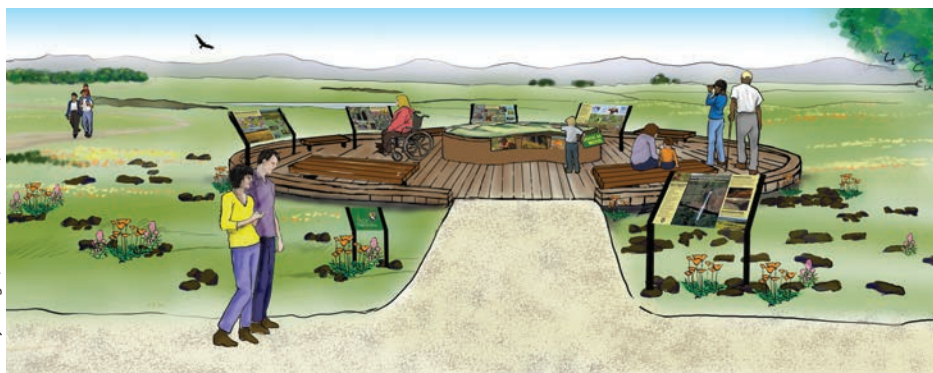
Environmental problems caused by invasive species can be the extinction of native animals (e.g., the brown tree snake in Guam has caused the extinction of native bird species). Invasive weeds are often responsible for the drastic modification of native ecosystems. For example, invasive weeds can choke out native plants thereby removing food and shelter for native animals. Invasive plants can cause wildfires to occur more often and burn more intensely. Water tables can be lowered by invasive trees that have deep rooting systems, and some plants can alter soil chemistry making it unsuitable for native trees, shrubs, and herbs.

California's rich and varied wilderness areas are threatened by a large number of invasive weeds which include thistles, giant cane, salt cedar trees, seaweeds, algae, floating and submerged freshwater weeds, and non-native mustards.

Invasive Spartina Control and Revegetation Project

The San Francisco Estuary Invasive Spartina Project is one of many ongoing multiparty efforts to address the threat of invasive species on natural ecosystems in California. California Wildlife Foundation (CWF) has worked for more than a decade with California State Coastal Conservancy and numerous local agencies and private contractors to eliminate highly invasive spartina and replant native vegetation in the baylands and lower creek channels of San Francisco Bay. Control efforts conducted between 2005 and 2018 reduced estuarywide infestations by 96.5 percent, from 805 to 36 net acres. The project also

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Conceptual rendition of first phase of interpretive trail at North Table Mountain Ecological Reserve

Invasive Species — *cont. from prior page*
created high-tide refuge islands to benefit habitat for Ridgway's Rail (*Rallus obsoletus obsoletus*) and increase its resilience to rising sea levels.

The project is funded by the Coastal Conservancy, including regranted state, federal and local agency monies.

Increasing protection from invasive plants

California Oaks Coalition member California Invasive Plant Council (Cal-IPC, calipc.org) is a leader in the effort to address the threats posed by invasive plants. Cal-IPC was a proponent of AB 2470 (Grayson) in 2018, which codifies the state's interagency Invasive Species Council. The Council secured \$2 million in one-time funding for local weed management projects. CWF also supported this legislation. The state's draft budget for the 2019-20 fiscal year includes \$3 million for the Weed Management Area (WMA) program's prevention, detection, and management activities. Cal-IPC and CWF are again supporting the budget item, which is part of implementing the state's Biodiversity Initiative.

More info: cal-ipc.org/WMAfunding.

International Oak Society Conference

Oak experts and enthusiasts from around the world gather every three years to share ideas and information at the International Oak Society (IOS) conference. The University of California, Davis Arboretum and Public Garden hosted the most recent conference in late 2018. The sessions, posters, and workshops covered a broad spectrum of topics organized around the theme "Adapting to Climate Change—Oak Landscapes of the Future." Tours and special events highlighted the diversity of oaks from California and around the world, while encouraging collaboration, networking, and greater oak appreciation. California Wildlife Foundation/California Oaks participated in the conference, presenting on how members of California Oaks Coalition are using California's climate change legislation to keep oaks standing. The next conference will likely be held in Taiwan. Visit www.internationaloaksociety.org to learn more about IOS.

South Bay Salt Pond Restoration Project updates

The South Bay Salt Pond Restoration Project is a multiagency effort to restore 15,100 acres of former salt evaporation ponds in south San Francisco Bay over a 50-year period. U.S. Fish and Wildlife Service (USFWS) manages the Alviso and Ravenswood ponds, and California Department of Fish and Wildlife manages the Eden Landing Ponds. The project's extensive science and adaptive management program supports the management actions of these agencies.

Update 1: Phase 2 Science Program

California Wildlife Foundation (CWF) is administering funds and contracts for the Phase 2 Science Program of the restoration project. Specific activities include:

- South Bay waterbird surveys and assessments, conducted by U.S. Geological Survey (USGS) and San Francisco Bay Bird Observatory;
- Bathymetric surveys of Guadalupe and Alviso sloughs by USGS;
- Habitat evolution mapping using high-resolution satellite imagery by Brian Fulfroost & Associates;
- A climate change assessment report, prepared by Point Blue Conservation Science; and

- Two regional science integration workshops convened by Point Blue.

"The management team looks forward to implementation of these monitoring and applied research studies because they will provide important information to help us assess progress toward the project's restoration goals," said Laura Cholodenko, project manager with California State Coastal Conservancy.

Update 2: Soil deliveries critical to restoration effort

Pacific States Environmental Contractors, Inc., CWF's contractor for the Alviso and Ravenswood ponds, has already delivered about 70,000 cubic yards of clean, tested soil to Ravenswood Ponds at the Don Edwards San Francisco Bay National Wildlife Refuge; with 300,000 cubic yards to be ultimately delivered at no cost to USFWS. The soil will be used to maintain levees for flood protection, restore habitat for fish and wildlife, and improve recreational access for visitors to the Ravenswood complex, located south of Bedwell Bayfront Park in Menlo Park. The initial 300,000 cubic yards of soil deliveries are expected to be completed by fall 2020.



Looking north into the Ravenswood complex, where imported soil is being delivered for levee maintenance, habitat enhancements, and improved public access.

Pacific States Environmental Contractors, Inc.

Protecting Hornitos Ranch — from front page

multiple ponds and rolling hills provide ideal breeding and upland habitat for California tiger salamander (*Ambystoma californiense*), a federally threatened and state-threatened species.

The ranch is within two California Department of Fish and Wildlife (CDFW) Conceptual Area Protection Plans, and it has received the California Rangeland Conservation Coalition's Critical to Conserve designation. It protects vital water resources of the Lake McSwain Public Recreation Area and the Merced River watershed, thereby advancing the State Wildlife Action Plan and California Water Action Plan. Its protection also advances recovery actions for anadromous

fish habitat, as identified in state and federal recovery plans for Central Valley Chinook salmon (*Oncorhynchus tshawytscha*) and steelhead (*Oncorhynchus mykiss*).

SFC funding partners for the Hornitos easement include CDFW, California Wildlife Foundation's Vesta and California Oaks funds, the Department of Conservation, and the Wildlife Conservation Board.

SFC honors the natural and cultural heritage of this region by protecting these resources and ensuring that present and future generations will continue to experience and enjoy the land in this region, now and forever. For more information, please visit sierrafoothill.org.

Adopting a land reparations ethic at Elder Creek Oak Sanctuary

by Brien Brennan

My wife, Marie, and I recently purchased 160 acres of foothill land in Tehama County, about 5 miles west, as the crow flies, from our home at Elder Creek Oak Sanctuary. This foothill land, while still retaining a powerfully wild and mythic nature, has been horribly scarred by illegal pot-growing and bulldozing. Had we not stepped in, the next owners very likely would have done more of the same, or perhaps used the land for off-roading or hunting. Our ownership prevents further water extraction, biocide applications, land clearing, road building, noisy polluting machines, and hunting on the land.

In total, 89,000 acres of Tehama County's blue oak woodlands were destroyed in just two decades—the 1950s and 1960s—and there is still inadequate governmental defense of oak woodlands.

Marie and I have adopted a land reparations ethic. Restoring the land to prior fecundity is impossible, but it is never too late to try to make amends. We cage seedlings wherever we find them, and build deer and sheep deterrents with fallen branches and sticks for saplings. We have also sprouted acorns and planted those in favorable locations with some success.

Elder Creek Oak Sanctuary, a member of California Oaks Coalition, is located in southwestern Tehama County, near the confluence of the three main forks of Elder Creek in the lower foothills of the Inner North Coast Range.

Ninety percent of the sanctuary's 233

acres are characterized by steep slopes of blue oak woodland. Generally speaking, the oak communities are densely spaced on the northern and eastern slopes, moderate on the western slopes and sparse to nonexistent on the southern slopes.

The vast majority of the trees are of an age that corresponds with the last major statewide pulse of blue oak recruitment in the second half of the 1800s. Most are under 16 inches in diameter, but dozens of canopy-dominant trees exceed this size. These ancient trees are anchor points for me and Marie as we walk the land.

The recently-purchased land is mostly north slope in a steep canyon—a climate refuge! In addition to the nearly three-quarters-mile-long creek, there are vast stretches of intact, mossy ground. There are also over 18 acres of old, contorted, stunted canyon live oaks, California's oak species with the largest geographic range, spanning from central coastal Oregon through California and Arizona, and including spots in Baja California, Nevada, and the northwest corner of the state of Chihuahua, México—a testament to their knack for finding nooks and crannies in the broader landscape in which to sink their roots.

We are motivated by our love for these trees, and for those at the sanctuary, to secure protections through ownership, so that we can leave the land to future caretakers who will continue to revere the oaks of this place. To that end, we plan to establish permanent protection for these lands.

Visit eldercreek.org to learn more.

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 summary 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 email California Oaks for information about oak issues: amoskow@californiaoaks.org.
- 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 our green infrastructure.

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Latin names are used for species with designated state or federal conservation status.

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