THE Foothill Advocate

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SIERRA·FOOTHILL · CONSERVANCY ·





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Together, we celebrate thirty years of powerful conservation work in the foothills, and our momentum continues to build! SFC has committed to expanding and deepening our programs over the years, increasing the pace and scale of conservation, and responding to the changing needs of our region throughout each decade. Because of your commitment, SFC has successfully conserved over 69,000 acres of natural lands for future generations. Thank you for your commitment and please enjoy this update of SFC's recent accomplishments and important research hosted on SFC lands – all made possible by your support!



BRIDGET FITHIAN
Executive Director

Ekarnas Hemman Homestead of the Oaks Conservation Easement

O'NEALS CALIFORNIA -Sierra Foothill Conservancy (SFC) is thrilled to announce the completion of the Ekarnas Hemman Homestead of the Oaks Conservation Easement in Madera County. **This 1,063-acre property is the newest addition to SFC's portfolio of conserved lands, bringing our total protected acreage to 69,214 acres.** This conservation easement was made possible through the generous donation of the partnering landowner, Paul Sidenblad, with project development supported by competitive grant awards from Sierra Nevada Conservancy and California Council of Land Trusts.

Located southeast of Coarsegold in SFC's Highway 41 Focus Area, the property is directly adjacent to SFC's Millar Conservation Easement and a neighboring conservation easement held by California Rangeland Trust. Protecting this property expands a vital corridor of 5,150 acres of conserved lands, supporting watershed health, wildlife movement, working rangelands, and scenic open space on Road 200 for residents and visitors connecting to Hwy 41.

The property protects significant ecological and cultural resources. Along Fine Gold Creek, multiple bedrock mortars demonstrate the property's deep cultural heritage. Additional historic resources on the property include rock walls, the Walker Cemetery, and a spur of the Minarets and Western Railroad, which operated from 1921 to 1933.

Ekarnas Hemman contains diverse and high-value foothill habitat and water resources. Rolling annual grassland, Blue oak woodland, rare Valley Foothill and Montane hardwood riparian habitat, along with fresh emergent wetlands. These communities support an exceptional diversity of oaks, ranging from 300-year-old valley oaks along the Fine Gold Creek corridor to the live oak and blue oak stands that occupy the mid-slope and upper-slope riparian zones. The property also includes 1.2 miles of Fine Gold Creek, 0.2 miles of North Fork of Fine Gold Creek, 3.4 miles of tributary creeks and streams, seasonal wetlands, springs, seasonal ponds, and other important water resources within the Upper San Joaquin Watershed.

These newly protected habitats support a wide range of native plant and wildlife species including the Western pond turtle, Western spadefoot, American badger, Foothill yellow-legged frog, Valley elderberry longhorn beetle, Mariposa pussypaws, and Orange lupine. The property also contains suitable habitat for the California tiger salamander.

By conserving this land, Ekarnas Hemman permanently protects more than 1,000 acres of grazed rangeland, riparian areas, oak woodlands, and foothill open space from future development and land use conversion.

Conservation of this landscape supports a sustainable and productive cattle grazing operation. Sustainable grazing supports the land's natural carbon sequestration and storage, protects water supply and water quality, promotes biodiversity, aids in wildfire fuels reduction, and sustains valuable pollinator habitat. The integrity of the grazing operation is also bolstered by the presence of other conserved rangeland adjacent to the protected property.

SFC is deeply grateful to our partnering landowner for their generous donation of the Ekarnas Hemman Conservation Easement. The landowner's vision to conserve the ranch's natural resources, preserve its historic and cultural significance, cultivate educational and research opportunities on the property, and ensure its protection for future generations is in alignment with SFC's mission and long-term vision.

If you or someone you know is interested in completing a conservation easement, please contact us. Conservation easement projects are complex real estate transactions that require time and resources to complete. Starting early is often advantageous, especially for landowners working within tax planning timelines or other important deadlines.

SFC'S LAND CONSERVATION TEAM
CALL 209-742-5556 OR EMAIL SFC@SIERRAFOOTHILL.ORG

"I first encountered Sierra Foothill Conservancy at their Fine Gold Open Preserve Day shortly after I purchased the first of my five parcels in 2013. I was immediately impressed with SFC staff, their extensive knowledge and deep love for the land. Once I had closed on the last of the parcels, it was an easy decision to conserve them with SFC. As expected, everyone involved in the conservation process was friendly, professional, and knowledgeable about the process. It has been a pleasure to work with them throughout. If I should be fortunate enough to obtain more contiguous parcels, I will not hesitate to ask SFC to help conserve them."

– **PAUL SIDENBLAD,** *Landowner*



Protecting scenic viewsheds and open space



Spring water flow in Fine Gold Creek



Henness Ridge Southern Sierra Miwuk Rematriation Project

YOSEMITE WEST, CALIFORNIA - Sierra Foothill Conservancy (SFC) is honored to announce our second partnership project with the Southern Sierra Miwuk Nation (SSMN) - the 896.5-acre Henness Ridge rematriation, which returns land-back to the SSMN. **By partnering with the SSMN to support their purchase and permanent protection of the unique habitat, ecological features, and significant cultural resources of the Henness Ridge property, the land will return to its first stewards for traditional land management and support the collective healing and sustainability of their communities into the future.** SFC's first land-back partnership with SSMN was the Big Rock rematriation facilitated by SFC in early fall of 2024.

The Henness Ridge project is located in Yosemite West in eastern Mariposa County, connecting to both Yosemite National Park and Sierra National Forest. The property features some of California's most important habitat and cultural resources including critical watershed, diverse forestland, significant biodiversity, multiple springs, and an ancient trail network from the Central Valley to Yosemite Valley. Henness Ridge lies within SSMN ancestral territory, and the return of Tribal stewardship to this land is deeply meaningful to the Miwuk people who were inhabiting Yosemite Valley as recently as the 1970's. **Restoring access to the Tribe's homelands facilitates healing of reciprocal relations and intergenerational remembering of Traditional Ecological Knowledge (TEK).**



SSMN Chairwoman Sandra Chapman and Council Secretary Tara Fouch-Moore on Henness Ridge in Summer 2024

Originally envisioned as an expansion of Yosemite National Park, the Pacific Forest Trust (PFT) purchased the land 20 years ago, but transfer efforts were not supported by Congress at the time. Since then, the land has been on the market with an uncertain future. In 2023 SSMN requested SFC's assistance in navigating the acquisition process and identifying funding opportunities to conserve this land and return it to Tribal stewardship. The next year, SSMN was successfully awarded competitive grant funding through California Natural Resource Agency's (CNRA) Tribal Nature-Based Solution Grant Program to purchase the land from PFT. **By facilitating the project, and conserving the property through SSMN's purchase, SFC ensures it remains forever protected for wildlife and stewarded as a native gathering site for cultural uses.** SSMN will now own the land outright for ceremonial activities, tending, gathering and caretaking for the abundant plants and wildlife present on the property, and training for their forest-based workforce development programming. SFC will continue to work with SSMN on the project's long term management plan, identifying opportunities to help implement the Tribe's vision, and obtaining additional grant funds to support land stewardship.

The project supports California's initiative for land trusts, like SFC, to work with Tribes to return ancestral lands while also serving the state's goal to conserve 30% of California's lands by 2030. Success of the Henness Ridge project strengthens regional conservation by connecting key protected lands and laying the groundwork for future initiatives. By healing watersheds, enhancing climate resilience, and expanding cultural access, the project delivers benefits that go beyond tribal boundaries and create enduring protections for people, wildlife, and landscapes across the region. **As SFC continues to expand our conservation and stewardship model to promote greater collaboration with our Tribal partners as a critical element of a holistic approach to tending our conserved lands, these collaborative efforts are returning the stewardship of first peoples and their thousands of years of knowledge of the land while reinstating indigenous values and Traditional knowledge into the protection, planning, restoration, and stewardship of the land.**

SFC would like to thank the Southern Sierra Miwuk Nation, California Natural Resource Agency, and all our supporters for their role in this historic accomplishment and for sharing in the vision to return this land to the care of its first stewards. The project returns ancestral homelands to the stewardship and full ownership of SSMN and is **an excellent example of how land trusts, landowners, Tribes, and state agencies can partner together to realize shared visions to conserve the legacy of our natural heritage.**

"Sierra Foothill Conservancy (SFC) is deeply honored to have assisted Southern Sierra Miwuk in the return of Henness Ridge to the Tribe's stewardship. This land project is part of SFC and SSMN's initiative to return first stewards to the land through land acquisitions and collaborative ecological restoration projects. Henness Ridge builds upon SFC and SSMN's work on The Mariposa Creek Parkway, Stookey Preserve Restoration and Big Rock" Eyeyaku" ancestral land return project, totaling over 994 acres."

– BRIDGET FITHIAN, *SFC Executive Director*



"SFC has consistently proven to be a trusted partner of the SSMN. Their commitment to support and collaborate on Tribal goals has led to the success of multiple land stewardship and land back projects throughout our homelands. Our Tribe is under-resourced and has limited experience in real estate transactions, so SFC's technical assistance has been crucial in navigating these systems and making the Henness Ridge dream a reality."

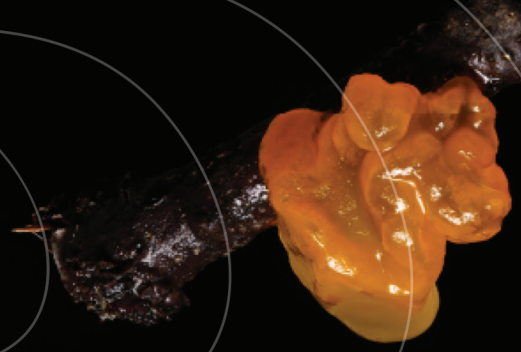
– TARA FOUCH-MOORE, *SSMN Council Secretary & Director of Landscape Stewardship*

SFC Executive Director Bridget Fithian, SSMN Tribal Chairwoman Sandra Chapman and Tribal Secretary Tara Fouch-Moore on signing day at Inter-County Title Company in Mariposa

Figure 1



A) An urchin gall on a blue oak leaf and the same gall removed from the leaf. B) Saucer galls on a blue oak leaf and an individual saucer gall. These galls represent distinct, insect-induced structures that create localized microhabitats within oak leaves.



Dacrymyces chrysospermus



Lonopezia sp.



Marasmius candidus





Representative examples of fungal diversity documented in the local DNA database. These images illustrate the wide range of forms, colors, and lineages captured through systematic collecting across the Sierra Nevada foothills and nearby montane habitats.

Photography by Chris Bivins

Fungal Ecology in the Sierra Nevada Foothills

BY CHRISTOPHER P. BIVINS

For the last five years, my research has focused on fungal ecology in the Sierra Nevada foothills. I designed a series of interconnected projects that follow fungi through their interactions with plants, insects, and mammals, gradually leading to truffles as a focal system. Across all of this work, a central theme has been understanding fungi not as isolated organisms, but as **dynamic communities in forest ecosystems that interact with plants, animals, bacteria, and landscape history.**

Much of this work grew naturally out of long-term, repeated field observations. Spending multiple seasons working in oak woodlands led from questions about fungi living inside leaves, to noticing unusual structures such as insect galls, and eventually to recognizing how strongly truffles shape forest life through their interactions with animals that find, eat, and spread them. As the scope of the work expanded, it became clear that answering these questions required better tools for identifying fungi and linking DNA data to species that can be identified consistently across studies. This need ultimately led to the creation of a large, regionally focused fungal DNA database and a carefully curated collection of truffles spanning many habitats and stages of development.

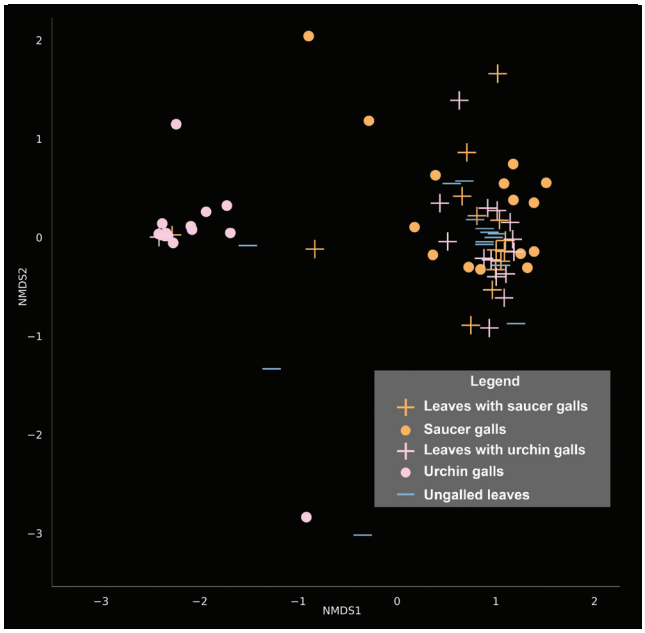
This work also would not have been possible without Sierra Foothill Conservancy. The Conservancy granted me permission to collect fungi from several of their preserves, including McKenzie Table Mountain, Stookey, Fine Gold Creek, and Stockton Creek. In addition to supporting my research, the Conservancy provided opportunities for me to lead mycology hikes for their members and the broader public. These experiences expanded my reach as a scientist and helped me develop as an educator, reinforcing the connection between research, conservation, and public engagement.

What follows is a summary of one major project and the most interesting results to emerge.

GALL PROJECT (Recently published in the journal *Fungal Ecology*!)

Another major component of my PhD focused on insect galls, which are unusual plant structures formed when insects manipulate plant growth to create a specialized habitat for their developing larvae. From the outside, galls can look like small bumps or growths on leaves or stems, but biologically they are highly controlled environments, built by the plant in response to specific insect species. Because galls are formed from plant tissue but are induced by insects, they create a unique natural experiment. Each gall represents a distinct, insect-defined microhabitat embedded within a leaf, allowing the impact galling insects have on fungal communities in surrounding leaf tissue to be examined. This makes galls an unusually powerful system for asking how fungi respond to fine-scale differences in habitat structure.

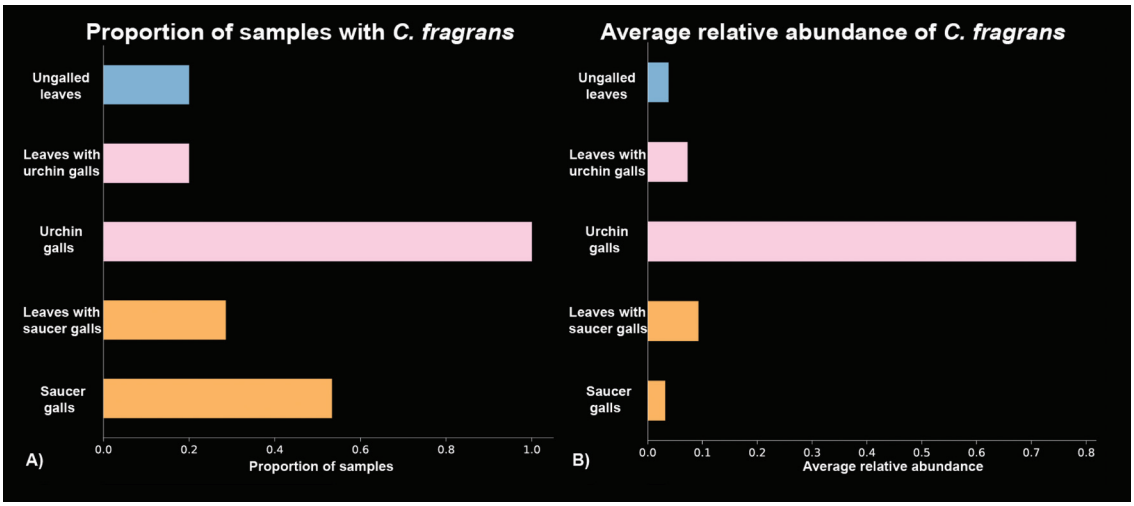
Figure 2



To address this, I returned to Panorama Park and focused on two common gall types on blue oak leaves: Urchin galls and Saucer galls, both induced by Cynipid wasps (Figure 1). Using DNA sequencing, I compared fungal communities from ungalled leaves, leaves bearing galls, and the galls themselves.

To visualize these patterns, I again used statistical tools that compare entire fungal communities. In the resulting plots, each point represents the fungal community from one sample, and points that are closer together indicate more similar fungal communities (Figure 2). In these plots, ungalled leaves and galled leaves cluster closely together, indicating that the surrounding leaf community remains largely stable. The galls, however, form separate clusters away from leaf tissue, showing that galls harbor their own fungal communities

Figure 3



rather than simply reflecting what is already in the leaf. Importantly, urchin galls and saucer galls separate from each other as well, meaning that different gall types create different fungal habitats.

The key result is that gall formation does not substantially alter the fungal community in the surrounding leaf tissue. The strong separation happens elsewhere: the gall tissues themselves host distinct fungal communities that diverge from leaf tissue, and that divergence depends on gall type.

To help interpret these patterns, it is useful to think of each gall as a specialized room within a house. Although all galls are built from oak tissue, each insect species constructs a gall with a unique internal environment, including differences in tissue structure, chemistry, and nutrient availability. The fungal communities reflect these differences, responding to the specific conditions created by each insect. Importantly, the presence of galls did not disrupt the fungal communities in the surrounding leaf tissue. The fungi inside galls were largely compartmentalized, meaning that gall formation created new fungal habitats without displacing or altering the existing endophyte community in the rest of the leaf.

This finding suggests that insect galls add to fungal diversity within oak leaves rather than homogenizing or destabilizing it.

A second major finding is that Urchin galls are a particularly selective environment. They contain markedly fewer fungal species overall than leaves or saucer galls, and they are dominated by a single fungus, *Cephaloascus fragrans*. Two simple measurements make this pattern clear: **the proportion of samples in which this fungus is detected and its relative abundance within those samples** (Figure 3). The proportion of samples can be read as how widespread a fungus is across many galls or leaves, while relative abundance indicates how dominant it is within any one sample.

Cephaloascus fragrans is rare in leaves and in saucer galls, appearing in only a small fraction of samples, but it occurs in every Urchin gall and often dominates the fungal community within them. Saucer galls, in contrast, retain substantially more overlap with leaf-associated communities and do not show this same extreme single-fungus dominance pattern.

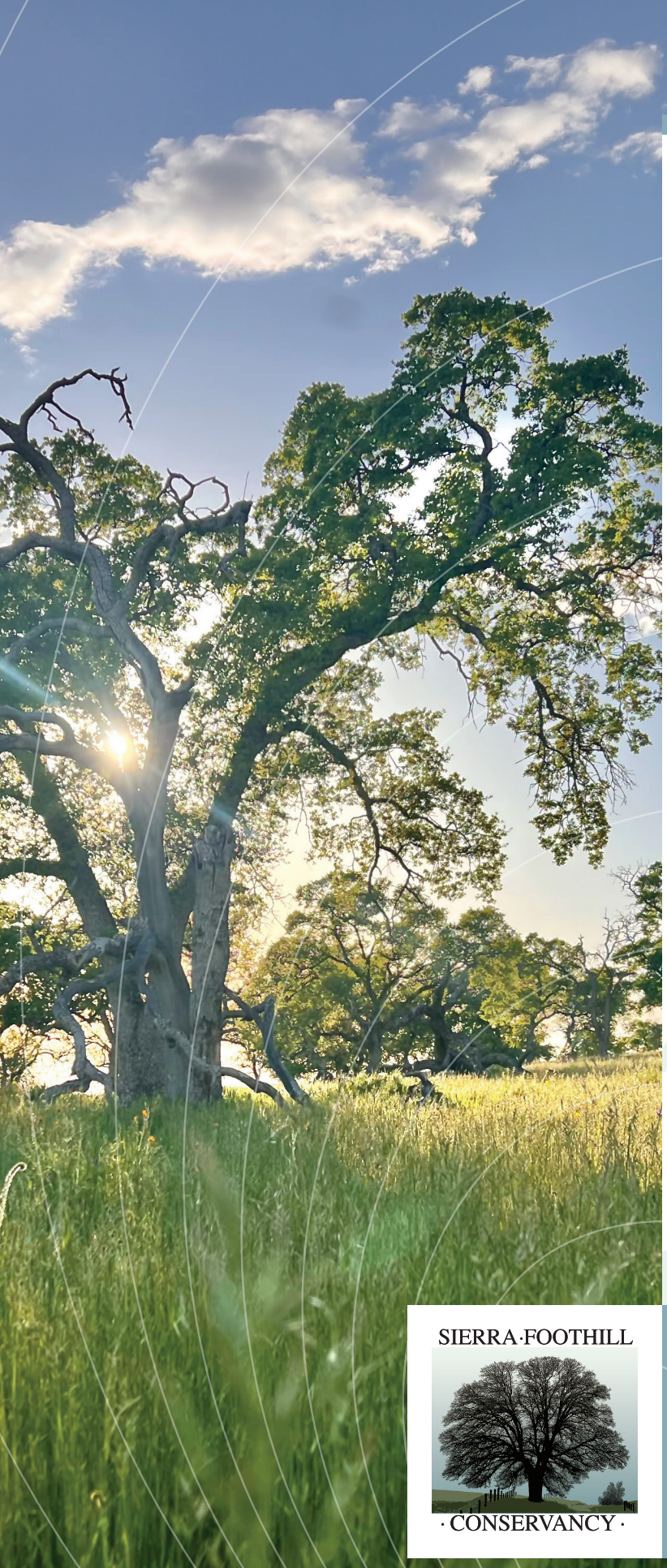
Taken together, these results show that gall-forming insects create new, highly specific fungal habitats inside leaves without disrupting the surrounding endophyte community. Some gall types, like Urchin galls, act as strong ecological filters that favor particular fungi very strongly, while others, like Saucer galls, remain closer to the background leaf community. This work was recently published in the journal *Fungal Ecology* and represents my first peer-reviewed scientific publication!

This project builds directly on the oak endophyte work by demonstrating that even within a single leaf, multiple independent fungal communities can coexist, each shaped by different biological forces. It highlights how interactions among plants, insects, and fungi operate at fine spatial scales and contribute to the hidden complexity of forest ecosystems.

At the same time, these projects repeatedly drew my attention to fungi that lie largely outside the leaf environment altogether, particularly truffles, whose life histories are tightly linked to animals rather than to leaves. This realization motivated a shift in focus toward mammals as fungal dispersers, and toward truffles as systems in which plant–fungus–animal interactions are central rather than peripheral.

To join Chris on one of SFC's upcoming Mycology Hikes

PLEASE VISIT SIERRAFOOTHILL.ORG



30 Years of Protecting Local Lands

Join us in celebrating Sierra Foothill Conservancy's 30th Anniversary and the many supporters, volunteers, landowners, and partners helping to conserve this region. With your help, we can make the next 30 years even more impactful.

Kick Off SFC's Year-End Campaign!
Help us reach our $180,000 goal to save natural lands for future generations.

30TH

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$50

Maintain native plant populations, from the oak savannah to mixed conifer forest



$100

Protect wildlife habitat to keep common species common and protect endangered species



$500

Support forest restoration, Tribal partnerships, and Traditional Ecological Knowledge as a tool for tending the forest and woodlands



$1,000

Protect working rangelands to serve as safe spaces for special status species



$5,000

Increase access to open space for underserved youth



$10,000

Establish connected corridors of conserved lands from the vernal pool grasslands to the Sierra crest

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Get involved in local land protection, join Sierra Foothill Conservancy!

MEMBERSHIP

- ☐ Individual/Family $50

MEMBER CIRCLES

- ☐ Foothill Friend $100
- ☐ Benefactor $250
- ☐ Lupine Circle $500
- ☐ California Poppy Circle $1,000
- ☐ California Buckeye Circle $2,500
- ☐ Executive Director's Circle $5,000
- ☐ Blue Oak Circle $10,000

As an SFC member you will receive:

- The Foothill Advocate newsletter
- Discounts on Guided Hikes and Classes
- Invitations to member only events

2024-2026 Impact Report

1,210 acres	**Wander N Ranch**
896 acres	**Henness Ridge** *Partnership Protection*
571 acres	**Ben Hur Ranch**
0.55 acres	**Mariposa Creek Parkway Trail Easement** *Connecting 1.11 miles of publicly accessible trails!*
1,063 acres	**Ekarnas Hemman Homestead of the Oaks**

Habitat for 8 special status species saved.

- Great Grey owl
- Bald and Golden eagles
- Western pond turtles
- Burrowing owl
- California Tiger Salamander
- Vernal Pool Fairy Shrimp
- Tricolored blackbird

69,214 TOTAL ACRES PROTECTED

6.3 Miles of Creeks, Streams, and Rivers

316 Acres of Mixed Pine Forests

1,311 Acres of Oak Woodland

3 New Funding Partners

421 Acres of Grassland

Together we can protect 2,000 additional acres in the coming year.

30TH ANNIVERSARY

SFC