

# Mountain Echo

THE NEWSLETTER OF SEMPERVIRENS FUND | FALL 2022



## Milestone Year for Conservation

**FROM THE VIRTUAL DESK OF SARA BARTH:**

A year ago—in October 2021—we were emerging from historic work to remove a century-old and significantly defunct dam from Mill Creek, a tributary within the San Vicente Creek watershed. The culmination of a decade of effort, we were overwhelmed by the magnitude of the success, and had already begun to imagine what else we might do to improve conditions within the watershed.

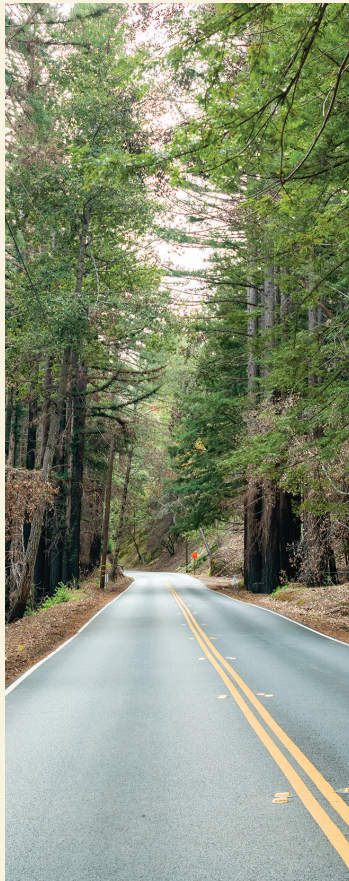
It is a testament to this community's passion for protecting and caring for redwoods that we are always seeking to set our sights on the next decade of work, and the next, and the next. A year ago, as we looked ahead to this year—2022—we realized this might well be a year like none other, and it has not disappointed.

2022 has been a milestone year for conservation, public parks, and stewardship in the Santa Cruz mountains. With your passionate commitment and support, we have protected critical redwood forests, improved the health and resiliency of forest ecosystems, supported Indigenous cultural and scientific research, and helped Big Basin recover and reopen to the public.

I invite you to follow along the timeline that weaves its way through this special extended newsletter to reflect on a landmark year for redwoods and for our community's commitment to the habitats of this amazing and rich region.



# MILESTONE YEAR FOR CONSERVATION



**January**

## PROTECTING THE GATEWAY TO BIG BASIN

Once clear-cut and later heaped with debris, the Gateway to Big Basin's 153 acres of second-growth forest is also the scenic setting leading into Big Basin Redwoods State Park.

[sempervirens.org/gateway](https://sempervirens.org/gateway)



**February**

## TREE PLANTING AT SAN VICENTE

In January, we and our partners planted 23,000 redwoods and 900 Douglas fir trees across 4,000 acres of San Vicente Redwoods.

[sempervirens.org/san-vicente-redwoods](https://sempervirens.org/san-vicente-redwoods)

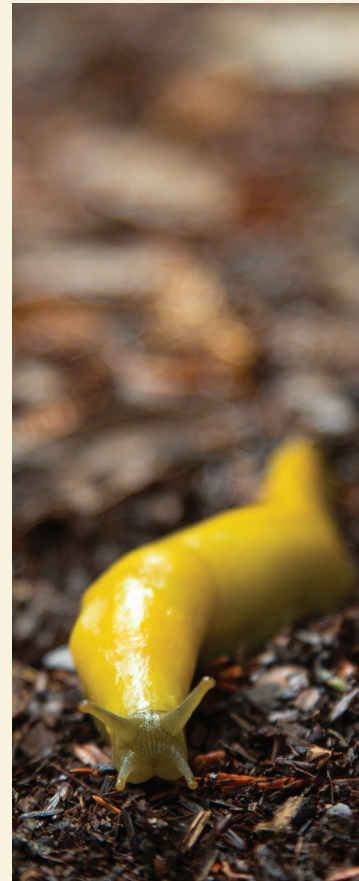


**April**

## HUG-A-TREE CHALLENGE

Thank you to everyone who joined us on Earth Day 2022 to set the GUINNESS WORLD RECORDS® title for the most photos of people hugging trees uploaded to Instagram in one hour!

[sempervirens.org/hug-a-tree](https://sempervirens.org/hug-a-tree)



**July**

## BACK TO BIG BASIN

Less than 2 years after the CZU wildfire, and after a dynamic community outreach effort—Reimagining Big Basin—California's oldest state park reopened to the public.

[sempervirens.org/big-basin](https://sempervirens.org/big-basin)





## Summer

### REDWOODS NOW, FOR ALL, FOREVER

Our amazing community helped Sempervirens Fund raise and match \$250,000 of \$14 million to protect more than 1,000 acres of redwoods and care for more than 11,000 acres in the Santa Cruz mountains.

[sempervirens.org/  
redwoods-now](https://sempervirens.org/redwoods-now)



## December

### SAN VICENTE REDWOODS OPENS

At the end of October 2022, San Vicente Redwoods will open to the public for the first time in over 120 years of private ownership and 10 years of conservation partnership.

[sempervirens.org/  
san-vicente-  
redwoods](https://sempervirens.org/san-vicente-redwoods)



## Coming Soon!

### CAMP JONES GULCH

We are partnering with The Y of San Francisco to preserve the 928-acre property at Camp Jones Gulch in La Honda, California, including 39 acres of old-growth redwood forests.

[sempervirens.org/  
camp-jones-gulch](https://sempervirens.org/camp-jones-gulch)



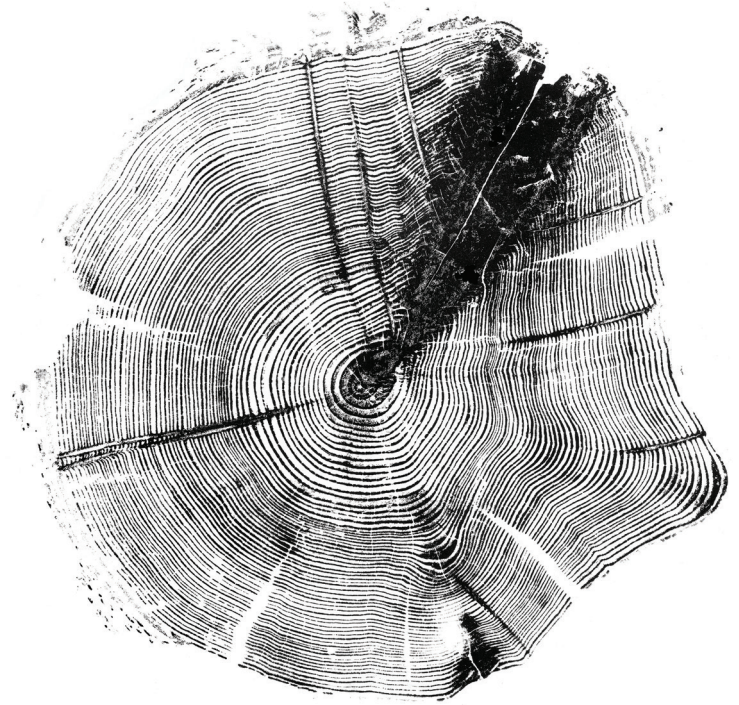
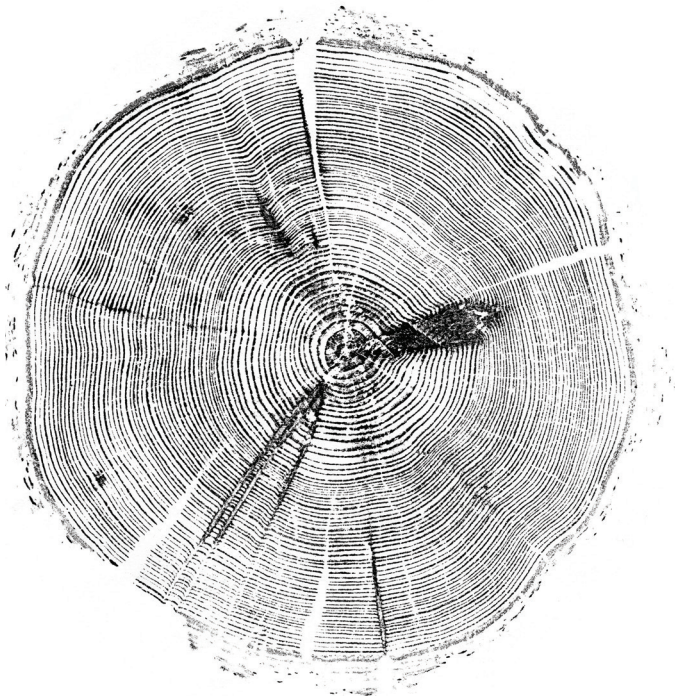
## Coming Soon!

### COTONI-COAST DAIRIES TO OPEN

After years of tumultuous conservation efforts and a campaign to designate the land as a national monument, Cotoni-Coast Dairies will open to the public later this year.

[sempervirens.org/  
cotoni-coast-dairies](https://sempervirens.org/cotoni-coast-dairies)





## Tree Rings and Climate Signals

We believe that the intensifying effects of climate change require a more thorough and urgent response to ensure the future of redwoods in the Santa Cruz mountains.

In the second part of a series about redwoods and climate, Julia Busiek takes a close look at climate signals and how they help scientists sharpen our understanding of how the forests might respond to the changes to come.

### Tree Rings, Drought, and Adaptation

Researchers are mapping coast redwood tree rings throughout their range to answer: In any given forest, how long does it take a *Sequoia sempervirens* tree to grow to a certain size, and how much biomass can it produce annually at that size?

They are cracking the codes and have already begun quantifying changes in redwoods' performance characteristics that are linked to an already-changing climate. What is driving tree morphology? Water.

Climate scientists call redwoods in the heart of their range "complacent," compared to those that

grow on the margins. The more resources—light, water, nutrients, CO<sub>2</sub>—the tree has access to, the more muted its response will be to short-term climate anomalies. Our region—the Santa Cruz mountains—is the sweet spot between complacency and water stress.

"If we see increasing drought going forward with increasing temperatures, it doesn't matter how much CO<sub>2</sub> they have. Without ample water, they won't be able to sustain the same growth rates," says Anthony Ambrose, a redwood ecologist with the forest research nonprofit the Marmot Society.

"Our challenge now is to balance the best available science with action," says Laura McLendon, Sempervirens Fund's director of land conservation. But the important thing is to act fast and do it at a scale that counters the climate changes that are already underway.

Read all of Part 2:

[sempervirens.org/redwoods-and-climate](https://sempervirens.org/redwoods-and-climate)

Above: Coast Redwood Round Prints collected from the Gateway to Big Basin. 66 year-old and 67 year-old trees.



# Freedom to Make Mud Pies

Together with their daughter, Archana Venugopal and Sriram Subramanian moved from Dallas to Mountain View, California, to be closer to family and friends, and for something else very important to their family: trails, parks, and nature.

"Before our daughter was born, we would travel to get to parks we wanted to see," said Sriram. "We have an almost five-year-old and now proximity matters and gives us the flexibility."

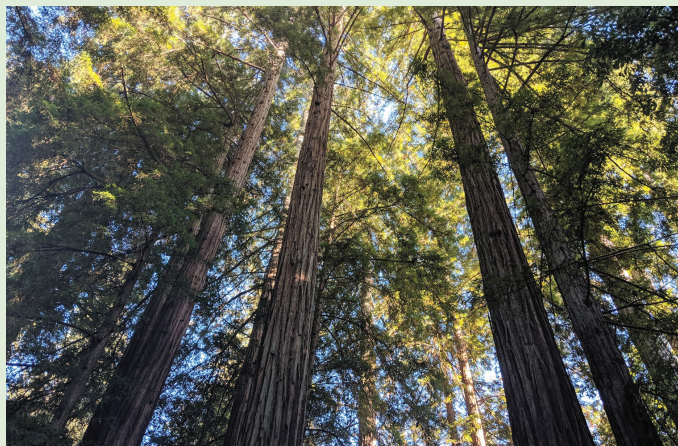
"We've been camping and backpacking for the last eight years and are just now introducing it to our daughter," said Archana. "The joy she gets from it is way more special. Kids fundamentally love the outdoors, the freedom to do what they want, to touch and see plants and nature. It is very rewarding."

Sriram and Archana spent a lot of time in Big Basin Redwoods State Park and learned about Sempervirens Fund as an organization responsible for bringing about an experience that mattered to them.

"We've camped at Big Basin and done Skyline-to-Sea-Trail to Waddell Beach," said Sriram. "After the CZU wildfire, we got to know Sempervirens Fund more and appreciated they have been working a long time in the background to improve the situation. That resonates with me."



*Slate Creek Campground, Portola Redwoods State Park*



*Blooms Creek Campground, Big Basin Redwoods State Park*

"We camped at Big Basin one week before the fire with friends and family," Archana remembered. "The wildfire was really a freak incident, and it was very weird to process. There is a sense of detachment with wildfires, but this one had a personal connection."

"We wanted to be of some use to the community and during the pandemic we wanted to do more with education, food, shelter, and land conservation and access is important to us and we wanted to help out," added Archana. She and Sriram are donors to Sempervirens Fund.

They've begun taking their daughter on longer journeys, exploring backcountry sites in the Santa Cruz mountains like those at Castle Rock and Portola Redwoods State Parks. "She's able to walk farther, and it's more fun than walking along the street," said Archana. "Picking up stones and sticks and having fun. Complete freedom to make mud pies."

"The fire reminded us of the need for balance in what we do; we want our daughter to know that it's important to respect nature," added Archana. "And any way we can teach that respect is important. Going to parks is one piece of it. Fundamentally respecting what you've been granted is important."

Join Archana and Sriram in supporting Sempervirens Fund: [sempervirens.org/donate](https://sempervirens.org/donate)



# Redwoods, Fungi, and History



*Marasmiellus* sp. found at Big Basin Redwoods State Park

In a new feature, mycologist and forest pathologist Dr. Patricia Kaishian looks both at the fundamental need to care for fungal networks to support thriving redwoods, as well as how neglecting fungi is a systemic problem for conservation.

Our community understands that a healthy redwood forest means more than towering green trees. There is a rich biodiversity that needs our help for forests to thrive, but we may forget how essential fungi are for redwood forest health. As a group, fungi are no more immune to the dangers

of habitat destruction and climate change than any other group of organisms.

Like all terrestrial forests, redwood forests are supported by expansive networks of fungi. All around the world, in soils and organic tissues (logs, leaves, decaying animals, etc.), there are fungi living mostly invisibly. It is estimated that in a single thimble of soil, there are 400 meters of fungal cells in the form of *mycelium*.

In the redwood forests and surrounding habitats, there are hundreds of documented species of macro fungi (fungi that form fruiting bodies visible without a microscope). These species range from the bright and conspicuous soil-dwelling *Leptonia carnea*, to the modest and oft-overlooked wood-decaying *Annulohypoxylon thouarsianum*.

By forming embedded, intercellular bonds that transcend species, fungi exemplify collaboration and interdependence. While they may not evoke descriptors like majestic or glorious from most people, without the vital labor of fungi, redwood forests as we know them would not exist.

Read Dr. Kaishian's entire story here:

[sempervirens.org/redwoods-and-fungi](https://sempervirens.org/redwoods-and-fungi)



*Leptonia* sp. found at San Vicente Redwoods



# Wonders of Redwoods

There is endless wonder to explore in redwood forests. Like you, we are fascinated by redwoods and all the plants and animals that thrive when redwoods are happy. Over the last year we've explored many aspects of the biodiversity of forests in the Santa Cruz mountains and how to enjoy and care for them. Here are our favorites:

## Have you considered birding or birdwatching?



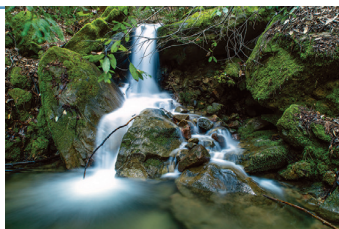
We spoke to international expert birding guide Alvaro Jaramillo, who shares his expertise with an introduction to birds and how to get started birding in the Santa Cruz mountains: [sempervirens.org/birding](https://sempervirens.org/birding)

## Seeking accessible trails?



We spoke with Bob Coomber—renowned hiker “4 Wheel Bob”—to discuss his experiences with accessibility and how he has overcome challenges to explore the outdoors far beyond where the paved trail ends: [sempervirens.org/accessible-trails](https://sempervirens.org/accessible-trails)

## Have you considered forest bathing?



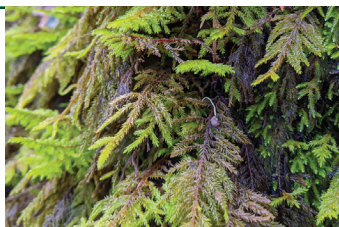
Forest bathing immerses you in nature and benefits our physical and mental wellness. Enjoy virtual forest bathing with Dr. Suzanne Bartlett Hackenmiller, AllTrails' lead medical director, for the ultimate break in your day: [sempervirens.org/forest-bathing](https://sempervirens.org/forest-bathing)

## Want to learn how science helps us protect redwoods?



Science guides our work, helping us determine the best lands to protect and restore and to steward lands in our care. Read about 8 ways science helps us protect redwoods: [sempervirens.org/science-and-redwoods](https://sempervirens.org/science-and-redwoods)

## Have you ever taken a journey through a redwood?



Journey through a coast redwood tree and see some of the coolest things happening in each of its stories. Read on for our Top 10 Facts about magnificent redwoods: [sempervirens.org/redwood-facts](https://sempervirens.org/redwood-facts)

## How does climate change affect us?



Scott Ordway, an award-winning composer, was moved to explore this after the devastation the CZU fire had on the forests of his childhood in the Santa Cruz mountains: [sempervirens.org/end-of-rain](https://sempervirens.org/end-of-rain)





## HOW DO YOU PROTECT REDWOODS AND HONOR SOMEONE SPECIAL?

Dedicate a tree at: [sempervirens.org/honor](https://sempervirens.org/honor)



**Sempervirens**  
Fund

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