



**SURPRISING  
DISCOVERIES**  
YOUR GIFTS SUPPORT  
HISTORIC RESEARCH  
THAT YIELDS HOPE





**Our Mission:** Save the Redwoods  
League protects and restores redwood forests and connects people with their peace and beauty so these wonders of the natural world flourish.

## FEATURES

- 05 Study**  
Historic Redwood  
Research Yields Hope
- 08 Community**  
Meet Your New League Leader
- 09 Conservation**  
You Can Heal a Wonder  
Known Worldwide
- 12 Research**  
Fire Helps Giants  
Take Hold
- 13 5 Ways You Can Help  
Protect Redwoods**
- 14 Onto the Trail**

**Cover:** Researchers study ancient giants as part of the League's Redwoods and Climate Change Initiative. Your support made their amazing discoveries possible. *Learn more on page 5.*

**This page:** You can help remove the pavement from this former lumber mill site to return it to the roaming elk herds and surrounding ancient forests of Redwood National and State Parks. *Learn more on page 9.*

*The Bulletin newsletter is published for friends of Save the Redwoods League.*



Dear Save the Redwoods League Friends,

As you may know, I joined the League last fall as your new President and CEO. It's such an honor to be part of this pioneering organization.

I bring to this work the firm belief that the redwoods are the cure for whatever ails you. Whether it's poor physical or emotional health, an increasing detachment from the natural world or a rapidly changing climate, the redwoods are the gateway to a stronger land ethic and a healthier community.

In this edition of the *Bulletin*, I invite you to learn about the discoveries you made possible through our Redwoods and Climate Change Initiative. Now we know it is critical to protect redwood forests because they store so much carbon. We must protect them and restore younger forests so they too can be part of the climate-change solution. It's energizing to realize that as we continue to protect the remaining old growth, we can speed the growth of future generations' old forests and work to reclaim what we have lost. Meanwhile, we are connecting people to our redwood parks to inspire the next generation of nature lovers who will care for these forests.

On page 8, you may read more about my background and how we can create a vision for conserving our extraordinary redwood forests as we near the League's 100th anniversary in 2018.

I look forward to working with you. Thank you for your generous support of the redwood forest.

Sam Hodder President and CEO

"Save the Redwoods League" is a registered service mark of Save the Redwoods League. If you have questions about *Bulletin* content, please call our membership department at (415) 820-5800, email [membership@SaveTheRedwoods.org](mailto:membership@SaveTheRedwoods.org), or send us a note in the attached envelope.



A high-angle photograph of a massive, ancient tree trunk with deeply textured, reddish-brown bark. A person wearing a blue jacket, a white hard hat, and a safety harness is standing on a horizontal branch of the tree, providing a sense of scale. The background is a dense forest of green trees.

# Study

“We’ve learned so much about our ancient forests in our study’s first four years. Now we must study the younger forests to help them become part of the solution.”

— Ken Fisher, RCCI Co-Chair  
and Lead Supporter





# SURPRISING DISCOVERIES

Your gifts support historic redwoods research that yields hope during rapid climate change

In 2009, Save the Redwoods League knew of the profound consequences of unprecedented levels of carbon dioxide in our atmosphere: Greenland losing 100 billion tons of land ice every year. Arctic Sea ice shrinking 11 percent each decade. The global temperature rising 1.5 degrees Fahrenheit since 1880.

Because of these conditions, **the League was afraid for the redwood forests**, even though these tree species had survived nearly 200 million years — since the time of dinosaurs. We realized that Earth’s ancient giants could face a massive threat from climate changing at a rate the species had not experienced in their long history.

**“We want to understand the fate of our redwood forests given these massive climatic changes,”** said Emily Burns, League Director of Science. “We want to

An Initiative researcher studies a coast redwood in Montgomery Woods State Natural Reserve. League scientists found that ancient redwoods are healthy now, but we need your help to study the forests’ health as environmental conditions continue to change.





**Top image:** A researcher of the League’s Redwoods and Climate Change Initiative takes a core sample of a giant sequoia in Mountain Home Demonstration State Forest. **Bottom image:** Core samples from this plot and 15 others show redwoods in many ancient forests have grown faster in the last century than they ever have, and they help mitigate climate change by storing more carbon above ground than any other forests.

understand what’s going to happen to these forests and the plants and animals we care about.”

Knowing how redwood forests respond to climate change is critical to protecting them in a changing environment, **so the League launched our most ambitious research project yet: the Redwoods and Climate Change Initiative (RCCI)**. With leading researchers from Humboldt State University, the University of California, Berkeley, and other organizations, we began collecting data in 16 old-growth coast redwood and giant sequoia forests to learn how the climate today is impacting the growth and survival of the tallest trees on Earth. So far, the results are surprisingly hopeful.

Last summer, the League presented the RCCI’s initial findings. **Your \$3 million in support has enabled us to make amazing discoveries** that mark a huge leap forward in our understanding of redwood forests.

## Among the Discoveries

**Growth surge:** RCCI research showed that changing environmental conditions have triggered a growth surge in ancient coast redwood and giant sequoia forests. **Some of these trees have grown more since the 1970s than they ever have.**

Burns said we cannot pinpoint the surge’s cause. “Our hypotheses are that the warming climate is extending the growing season. Giant sequoias have more days of the year that they’re not freezing,” she said. “In the coast range, one idea is that because there is less fog, the trees have more access to sunlight. More carbon dioxide in the air could be a contributing factor. We need to study the possible causes further.”

**Insight into past climatic conditions:** Using samples of the trees’ cores taken from hundreds of feet up, researchers established a tree-ring record throughout the coast redwood range dating back to the year 328 CE and in the giant sequoia range dating back to 474 CE. This most comprehensive tree-ring record for these species allows us to see how climate events such as droughts, fire and flooding have affected redwoods’ growth.

Within tree rings, researchers found chemical signals that reveal what climate factors influence wood production in redwoods. They found that warm and dry conditions cause redwoods to conserve water, which limits photosynthesis (the process by which a green plant turns water and carbon dioxide into food when the plant is exposed to light). Ultimately, these conditions limit growth.

**Carbon storage: Ancient redwood forests store at least three times more carbon above ground than any other forests.**

“We were surprised by the redwoods’ growth rate and carbon storage,” Burns said. “Now we know it has never been more important to protect redwood forests because **they are part of the climate change solution** — they pull so much carbon dioxide out of the air. We need to protect them and restore younger forests so they also can be carbon-sequestering champions.”

## What’s Next

**More chemical analyses of the tree rings** are in progress to learn more about how redwoods grew over the last millennia and how the climate changed. We also must continue to **monitor the plots annually to detect further changes**. And although the RCCI has revealed that ancient redwood forests are doing well, we don’t know how younger forests and associated plants and wildlife are responding to rapid climate change, Burns said. **Researchers will study younger forests and trees** on the edges of the species’ ranges.

“The past really provides critical insights that we can use to make predictions, but **continued observations are going to be crucial** for identifying and addressing what happens under climate change,” said RCCI Co-Chair Jerry Franklin, PhD, Professor of Ecosystem Analysis at the University of Washington, known as the “Father of New Forestry.”

**The more we know about the redwoods, the better we can look after them.** We look forward to learning and sharing much more with you through the important work of the RCCI program.

*You can learn about other RCCI discoveries and read research abstracts at [rci.SaveTheRedwoods.org](http://rci.SaveTheRedwoods.org).*

## You’re Part of the Solution

Your generous support is vital to continue critical work like the Redwoods and Climate Change Initiative. Please donate today through our secure webpage, [SaveTheRedwoods.org/RedwoodLandFund](http://SaveTheRedwoods.org/RedwoodLandFund), call (888) 836-0005, or use the attached envelope. Thank you.

## HOW RCCI FINDINGS COULD HELP US PROTECT REDWOODS

We could ...

**Protect** cooler and moister habitats so the trees will have a place to grow if their current range becomes too warm or dry

**Guide** economic incentives for sustainable logging practices

**Develop** more sophisticated water and buffer management

**Inspire** new public policy

## Volunteer to Help Redwoods State Parks

Volunteer for California State Parks as a docent, caretaker or patroller, or choose from many other roles. Call (916) 653-9069 or email [vipp@parks.ca.gov](mailto:vipp@parks.ca.gov), and leave your name and address to receive applications and information about each of the parks.

# Community

## Meet Your New League Leader

Just before starting his job last September as your new President and CEO of Save the Redwoods League, Sam Hodder sought inspiration for his work among redwoods.

“At Big Basin Redwoods State Park, I expected the towering trees to stir me the most. But the source of my motivation was just 4 feet tall and making a happy racket,” Hodder said. “Kids on a school hike were having an unforgettable experience. Introduced to these ancient, graceful trees, I wondered how many would forever carry a new respect for the world and a sense of responsibility for special places.”

Energized by these thoughts, Hodder was ready to lead the League into our next century.

“This organization has been protecting and restoring old-growth redwood forests for 95 years,” he said. “But beyond forest protection, **our work is about connecting people to those forests, multiplying forever the moments of joy** that I saw in those kids’ faces.”

Hodder is a **20-year veteran of The Trust for Public Land** who led complex conservation programs in places ranging from the wilderness to the inner city. He was most recently the Trust for Public Land’s California State Director.

Under his leadership, the League will continue its legacy of protecting and restoring redwood forests, while deepening our work to connect people with these magical places.

From his first job building trails for the Appalachian Mountain Club, Hodder understood the importance of nature in peoples’ lives and was driven by the simple belief that the more time people spend outside in places of beauty, the better the world will be.

**“All of the benefits of being in the outdoors are amplified in the redwoods,”** Hodder said. “There is a sense of calm and perspective — a serenity that prepares us for the world — that comes from spending time in a redwood forest.”



Sam Hodder brings 20 years of experience in conservation to his role as new President and CEO of Save the Redwoods League.

“Restoring and caring for the redwood forest and connecting more people to these magical places will be crucial over our next 100 years.”

— Sam Hodder, New President and CEO  
of Save the Redwoods League



# Conservation

You Can Heal  
a Wonder  
Known  
Worldwide

“Here we can tie together two sections of old-growth forest by restoring the middle. This project gives us the chance to bring land and people back together.”

— Jeff Denny  
National Park Service Ranger



In California’s rugged northwestern corner lies the southern gateway into **Redwood National and State Parks (RNSP)**, home to **45 percent of the world’s magnificent old-growth redwood forest and the tallest trees in the world**. Here you’ll find mighty **Roosevelt elks, black bears, mountain lions** and imperiled **spotted owls** and **marbled murrelets**.

You and other dedicated Save the Redwoods League members have been protecting these treasures **since 1923**. But our work is not done.

With your gifts, the League has purchased the 125-acre site of a former redwood lumber mill separating the **two largest and most beautiful RNSP old-growth redwood groves**.

We have been waiting for decades to

- **remove** pavement where the Orick mill once stood
- **restore meadows** and wetlands to provide critical elk pastures
- **reconnect** the surrounding ancient redwood groves
- **restore** Prairie and Redwood **creeks** to benefit imperiled coho salmon
- **work** with the community to create a welcoming gateway to these parks

We need your help to restore the Orick mill site and places like it to benefit the Roosevelt elk (pictured) and surrounding ancient redwood forest. *The site is at location 1 on the map on page 11.*



With your support, the League will

- develop and implement a **management plan**
- **restore the site**
- and **engage the community** in showcasing the natural and historical values of the area

## You're Keeping an Ancient Forest Within Reach

In 2011, you helped us purchase and protect **Noyo River Redwoods**, a magical ancient forest you can see only by the historic **Skunk Train**. Recently **you came to the rescue again**. Your gifts helped to **repair a collapsed railroad tunnel** that shut down the train's famous Redwood Route last April. **Full train service** — from Willits to Northspur and from Fort Bragg to Northspur — was **restored** last summer.

Because of your support, the League and Mendocino Railway, which owns the Skunk Train, reached an **innovative agreement that will lead to ongoing protection of redwoods** along the Redwood Route. The deal also enabled tunnel repairs to begin immediately.

The Skunk Train brings about **45,000 visitors a year** through the spectacular Noyo River Valley, which includes the amazing 426-acre Noyo River Redwoods.

The League's \$300,000 funding commitment buys the League the option to **protect some of the most threatened redwoods** along the 40-mile-long railroad, and to use the corridor for access to the Noyo River Redwoods.

## You Returned a Bridge to the Redwoods

Three hours north of San Francisco is Standish-Hickey State Recreation Area, known as the **Gateway to Tall Trees Country**. It's your first chance along Highway 101 to walk and sleep



Your gifts helped to repair a collapsed railroad tunnel that shut down the Skunk Train's famous Redwood Route to the Noyo River Redwoods, which you protected. Smiles have returned to riders' faces, as in this 2011 image.

among giant redwoods and swim in the clear, blue Eel River. In 1922, generous gifts from League members like you created this haven.

Last summer, thanks to your gifts, the League granted California State Parks the funds needed to reinstall a seasonal bridge across the Eel River, **restoring access to 61 stunning campsites**. The bridge also allows access to the **Standish Tree**, a giant estimated to be 1,200 years old; miles of forest trails; and a path to a **sparkling swimming hole**.

Your generous donations were doubled by matching funds from a California Assembly bill, granting Standish-Hickey \$100,000 for much-needed repairs and **upgrades to the park water system**.



## The Impact of Your Support



Your gifts are helping to protect and improve the public's enjoyment of redwood forestland in these locations and many others.

### THIS PROTECTED LAND SAFEGUARDS ...



CLEAN WATER



WILDLIFE



RECREATION



SCENERY

### YOU CAN SAVE THE WONDER OF THESE FORESTLANDS

Your help is crucial for protecting and restoring redwood forests and connecting current and future generations to these magical places so they will be inspired to protect them. Please donate through our secure website at [SaveTheRedwoods.org/RedwoodLandFund](https://www.savetheredwoods.org/RedwoodLandFund). Alternatively, you may use the attached envelope. Thank you for your thoughtful gifts.



#### Redwoods State Parks IMPROVEMENTS UNDERWAY

- A MILL CREEK
- B GRIZZLY CREEK
- C STANDISH-HICKEY\*
- D HENDY WOODS
- E PORTOLA

#### Other projects that NEED YOUR HELP

- 1 ORICK MILL\*
- 2 FOUR CORNERS
- 3 SHADY DELL
- 4 NOYO RIVER REDWOODS\*
- 5 PETERS CREEK, BOULDER CREEK
- 6 CEMEX REDWOODS

\*Described in the Conservation section of this newsletter. Learn more about these projects and others at [SaveTheRedwoods.org](https://www.savetheredwoods.org).



# Research

## Fire Helps Giants Take Hold



**This page:** Your gifts supported research showing that fire-created gaps in the canopy like this one help young giant sequoias survive. **Opposite page:** You can experience the winter wonderland of Sequoia National Park, which provides free snowshoes for guided walks.

**Giant sequoias** can live for thousands of years, but sometimes they have difficulty getting started. Unlike coast redwoods, giant sequoias rarely sprout from their bases. **Their future lies in their tiny seeds, which need bare soil to grow and the right combination of sun and moisture to survive.**

**Historically, fires have provided the openings that produce these conditions.** But only four wildfires hit sequoia groves in California's Sierra Nevada mountains between 1959 and 2013 (including last year's immense Rim Fire). People can walk for miles here and find only a few scattered young trees in unburned areas.

Part of the solution is probably to let more wildfires burn, under the right conditions. But little data has backed that hunch. With partial funding from your gifts, in 2010, a US Forest

Service team compared sequoia regeneration on burned and unburned areas, as well as on land where "retention harvest" took place a quarter century ago. The latter involved removing all trees except the largest sequoias and cleaning up the slash (debris) with a prescribed burn.

Examining four groves in the southern Sierra, the researchers found that **giant sequoias were successfully regenerating after moderate- and high-severity wildfires.** Those intense fires gave the biggest boost, but retention harvest was beneficial, too, if followed by burning the slash. **"Good regeneration was strongly associated with canopy gaps,"** said Marc D. Meyer, the Forest Service ecologist who led the study.

Your gifts support studies including this one, which help us understand how to best care for redwood forests.





## 5 Ways You Can Help Protect Redwoods

### DONATE

to Save the Redwoods League.

### PLAN

a gift in your will or trust for Save the Redwoods League.

### TALK

to your friends about the League's work.

### VISIT

the redwood forest with your friends and family.

### EXPLORE

volunteer opportunities in redwood parks.

To learn more, visit [SaveTheRedwoods.org](http://SaveTheRedwoods.org), or call us at (888) 836-0005.

#### THE MANY WAYS TO GIVE TO THE REDWOODS

Your gifts of any amount support the work of Save the Redwoods League to protect the forests for current and future generations! For more information or to donate, visit our secure site, [SaveTheRedwoods.org/give](http://SaveTheRedwoods.org/give), or call us at (888) 836-0005.

**Gift Membership to the League**, \$25. Your recipient will receive the League *Bulletin* and invitations to members-only events.

**Plant a Seedling**, \$75. Have a seedling planted in a California redwoods park in honor of an individual or organization or in memory of a loved one.

**Create a Legacy Gift.** Name the League in your will or trust.

**Dedicate an Honor Tree**, \$1,000–\$15,000. Select and dedicate a redwood in one of our honor groves.

**Dedicate a Grove** in honor or memory of a loved one: \$25,000–\$1 million. Mark important occasions such as births, weddings and anniversaries with these unique, timeless and tangible gifts.





## Onto the Trail

*Lady Bird Johnson Grove  
Redwood National Park*

The Johnson grove is one of the two largest and most magnificent groves of Redwood National and State Parks. The paved site of a former Orick redwood lumber mill separates these groves. You can help restore the site and return it to nature. *Learn more on page 9.*









# Save The Redwoods

L E A G U E®

114 Sansome St, Suite 1200  
San Francisco, CA 94104

phone (888) 836-0005

main (415) 362-2352

fax (415) 362-7017

info@SaveTheRedwoods.org

SaveTheRedwoods.org

NONPROFIT ORG.  
U.S. POSTAGE  
**PAID**  
CONCORD, CA  
SAVE THE REDWOODS

## CONNECT WITH US

f Facebook.com/SaveTheRedwoodsLeague

t Twitter.com/SaveTheRedwoods

•• Flickr.com/groups/SaveTheRedwoodsLeague

YouTube.com/SaveTheRedwoods



Save the Redwoods League printed this publication with soy inks on chlorine-free, 30 percent postconsumer recycled paper.

If you must print this electronic version, please help conserve our forests by reusing paper or choosing recycled, chlorine-free paper made from postconsumer waste.



## New on SaveTheRedwoods.org

- Get the free *Family Guide to the Giant Sequoias* at [SaveTheRedwoods.org/GSGuide](http://SaveTheRedwoods.org/GSGuide) and *Family Guide to the Coast Redwoods* at [SaveTheRedwoods.org/GuideCR](http://SaveTheRedwoods.org/GuideCR). These guides are available as PDFs (electronic files) only. They are not available in print.
- See our photo contest winners and send free ecards at [SaveTheRedwoods.org/contestEcards](http://SaveTheRedwoods.org/contestEcards)

