

AMERICAN

WINTER/SPRING 2024

FORESTS



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EVERGREEN STATE



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Our forests are essential to our health, our environment and our quality of life. With our forests under increasing threat, the individuals who are willing to step up to protect and restore our forests are true heroes.

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A new era of leadership

BY JAD DALEY

AMERICAN FORESTS is launching into a new era of national and global leadership that reflects our proud 148-year history. I am writing as I fly back from the COP28 climate talks in Dubai, where we leveraged America's leadership on Tree Equity and climate-resilient reforestation to spark a global movement in both areas.

We worked to help secure billions of dollars for this work in the Bipartisan Infrastructure Law and Inflation Reduction Act. And since last summer, American Forests has signed major new agreements to help implement those funds in partnership with agencies across the federal government. These include our \$50 million Tree Equity Catalyst Initiative and Fund and an agreement with the National Park Service to restore

the federally listed whitebark pine in 10 iconic national parks.

We are shifting from movement building to mobilization. All of American Forests' skills and capacities can assist these federal efforts, from multi-partner facilitation and community engagement to forest science, project management and workforce development.

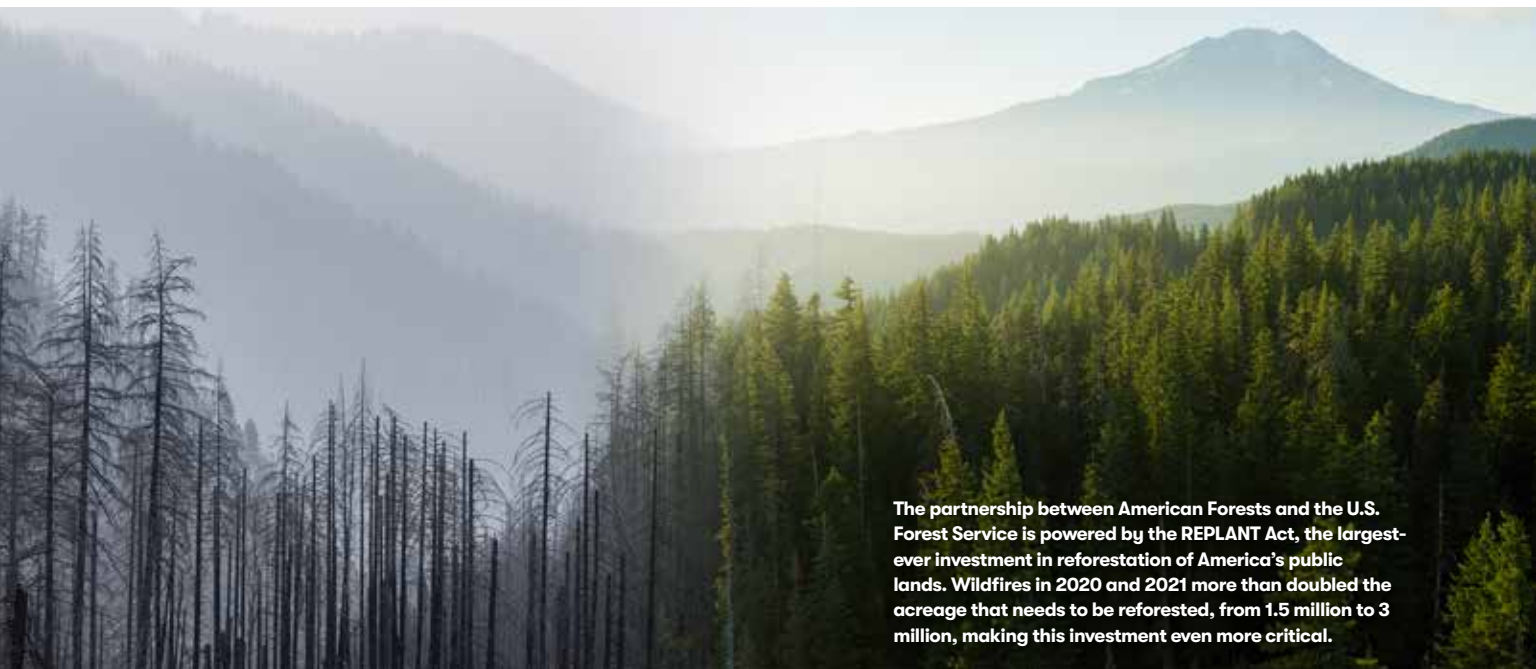


Among our new initiatives, one stands out for its unprecedented scope: our Keystone Agreement with the U.S. Forest Service to co-lead implementation of the REPLANT Act for climate-resilient reforestation across America's national forests. In this co-leadership role, we will pursue three key activities: facilitating a process with each Forest Service region to assess and prioritize reforestation and develop a 10-year

action plan; collaborating on climate-resilient reforestation plans customized for each region; and leading the effort to build out the reforestation supply chain to provide the people and inputs needed for each step of the process, including seeds and seedlings.

This new partnership will be powered by funding from the REPLANT Act, legislation that American Forests conceived and worked into law through the Infrastructure Investment and Jobs Act so the Forest Service would have funding that matches the scale of the climate-fueled reforestation crisis on our national forests. The REPLANT Act provides the Forest Service with unfettered access to a permanent Reforestation Trust Fund that can provide as much as a ten-fold increase over prior funding levels.

I'm proud that American Forests has been preparing for this by developing globally leading approaches to climate-resilient reforestation and figuring out how to scale them up. Climate-resilient reforestation requires selecting the right tree species with the



The partnership between American Forests and the U.S. Forest Service is powered by the REPLANT Act, the largest-ever investment in reforestation of America's public lands. Wildfires in 2020 and 2021 more than doubled the acreage that needs to be reforested, from 1.5 million to 3 million, making this investment even more critical.



The Keystone Agreement between American Forests and the Forest Service will help address a backlog of more than 4 million damaged acres through reforestation on our national forests over the next five years.

right genetic composition and planting them in the right ways on each site to match our new climate reality. You can think of this as "pre-storing" forests for the future instead of "restoring" them for our climatic past.

We've been particularly successful in deploying this new approach to climate-resilient reforestation on national forests and other federal lands in California, where the Forest Service, Bureau of Land Management, CAL-FIRE, American Forests, Salesforce and other partners have come together to develop climate-resilient reforestation plans for severely damaged areas such as the Camp Fire burn scar.

These plans identify microsites of natural resilience and prescribe a climate-adapted mixture of tree species. To enhance the resilience of these trees, we grow seedlings from seed sourced from trees that show natural resilience to disease, pests, and hotter, drier climate conditions. We strategically design the density, grouping and spacing of trees on these sites to facilitate "good fire," including prescribed fire, while reducing the chance of catastrophic burns that leave behind only dead trees and devastated soils.

To build a complete reforestation supply chain, we must attend to sometimes-overlooked details such as collecting enough seed and growing enough seedlings to match the specifications in our science-based plans. This will be powered by innovations like our California Cone Corps that is training

and deploying young people to help fill a yawning gap in seed supplies, and our new nursery partnerships across the American West with private landowners, tribes and others.

We can't do this big job alone, and part of our service leadership role is to create opportunities for states, tribes, NGOs and community-based organizations to help. American Forests' corporate partners such as The Coca-Cola Foundation, AES and Clif Bar will be supercharging their support through our new REPLANT initiative, designed to support all aspects of our role under the Keystone Agreement. The U.S. Chapter of It.org led by American Forests will act as an "Implementation Hub" that helps all of our partners find their place.

We urgently need climate-resilient national forests to sustain the vital benefits they provide — carbon sequestration, clean drinking water, wildlife habitat, recreation and much more. Climate-resilient reforestation at this scale has implications even beyond the U.S. Every country on Earth urgently needs to figure this out. With our national forests out front, America and American Forests are ready to show the way. Thanks as always for your generous support that helps us make it happen. 🌱

Jad A. Daley III

For more news and updates from Jad, follow him on X (formerly Twitter) @JadDaley



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INNOVATION

Restoration science in action

Direct seeding whitebark pine in three national parks

BY LIANE O'NEILL

IN AN OPEN MEADOW on the side of Mount Washburn in Yellowstone National Park, Samantha Higgins, a biological science technician with the National Park Service, crouches next to a 9-by-9-inch PVC pipe frame. Using a small knife tool called a hori-hori, she scratches into the ground about 2 inches to create an opening. She deposits two brown seeds — each the size of a small kernel of corn — and pinches the soil together before moving to the next site.



Above: Elizabeth Pansing, director of forest and restoration science with American Forests, and Samantha Higgins, biological science technician with the National Park Service, directly plant seeds in Yellowstone National Park within an area marked by a 9-by-9-inch PVC pipe frame.
Left: A technician digs into the ground using a hori-hori tool, preparing to drop in two whitebark pine seeds. The technique mimics the way a Clark's nutcracker might create a seed cache using its beak.

BELOW, BOTH PHOTOS: JACOB W. FRANK / NATIONAL PARK SERVICE



Dead trees stand among recovering meadows at a direct-seeding site in Yellowstone National Park.

In this way, Higgins imitates the Clark's nutcracker, an ashy grey bird with a penchant for plucking whitebark pine seeds from their tightly wound cones and depositing them into caches around the landscape. While the nutcracker may intend to return for its high-calorie snack, the caches are so scattered and numerous that many seeds are forgotten. Some of these stragglers germinate — spawning a new generation of whitebark pine trees. In nature, it is only through the Clark's nutcracker's seed distribution that whitebark pine reproduces.

Old whitebark pine and meadows surround Higgins and her cache. The standing dead snags tell the stories of a mix of disturbances the park has experienced over the decades: wildfires,

mountain pine beetles and white pine blister rust. The latter is an invasive fungus that slowly throttles whitebark pine and has become its greatest threat in recent years. These stressors have contributed to the decline of whitebark pine across its range. In December 2022, it was registered as threatened under the Endangered Species Act.

Beyond the trees are the rolling hills of Yellowstone, where healthy and regenerating forests of spruce and fir overlook spectacular vistas. Chipmunks and squirrels scurry across logs and debris. Bison occasionally wander through the clearing. And Clark's nutcrackers are everywhere, harvesting whitebark pine and conducting their fall ritual of creating seed caches in preparation for winter.

"Everything is alive this time of the year. It is a very lively ecosystem," says Elizabeth Pansing, director of forest and restoration science for American Forests.

It's an area Pansing knows well. She conducted much of her doctoral field work around Mount Washburn. But her interest in the present activities really stems from her master's research on direct seeding.

Whereas typical planting methods rely on 2-year-old seedlings that have been grown in a nursery, direct seeding is a restoration method that involves planting whitebark pine seeds directly into the ground.

In 2012 through 2018, Pansing conducted a large trial of direct seeding

under the guidance of her advisor, Diana Tomback, through the University of Colorado, Denver. The initial results suggested this method may offer a potential alternative to planting whitebark pine seedlings in remote areas.

TESTING DIRECT SEEDING ON A NATIONAL PARK SCALE

Hillary Robison, deputy chief for the Yellowstone Center for Resources with Yellowstone National Park, became interested in Pansing's direct-seeding work after the two spoke on a panel in early 2023.

White pine blister rust has been particularly damaging for the surrounding Greater Yellowstone Ecosystem, which includes Yellowstone and Grand Teton National Parks. There, 20 years of monitoring have found 34% of mature whitebark pine are infected with blister rust. Recent restoration efforts have focused on replanting whitebark using seedlings grown from seeds sourced from parent trees with demonstrated genetic resistance to white pine blister rust. Robison saw the potential to build on Pansing's research and test the effectiveness of direct seeding disease-resistant seeds in remote areas of the park.

"The research by Dr. Pansing and Dr. Tomback shows that direct seeding works," Robison says. "So, we wanted to take that to the next level and see if it works at scale."



A Clark's nutcracker holds a whitebark pine seed in its beak. As whitebark pine trees in core restoration areas mature and develop cones, the nutcracker will aid recovery by extracting the seeds and dispersing them across the landscape.

BOTTOM: KEITH ROPER; TOP: ELIZABETH PANSING / AMERICAN FORESTS

Whitebark pine habitat is notoriously difficult to access, with stands often growing in rocky high-elevation areas. According to Laura Jones, branch chief of vegetation management with Grand Teton National Park, direct seeding can make it easier to access these remote locations by eliminating the need for transporting large, bulky quantities of seedlings.

“Hiking in takes people and energy,” Jones says. “When we start to talk about bringing in seedlings, you’re bringing in the weight of the seedlings and the soil, so getting them to their destination isn’t as easy. The tools to get them in are heavier, because you need to dig bigger holes for seedlings. You start looking at needing helicopters to get your gear up there.”

In comparison, on a recent site visit near Amphitheater Lake, Jones and technicians carried 2 pounds of seed — exactly 7,132 seeds — 3 miles into the back country, a 3,000-foot elevation gain.

“It potentially opens up massive tracts of land that would otherwise not be considered for reforestation or planting,” Pansing says.

There are other benefits to direct seeding too, including the ability to harvest and plant seeds quickly. Pansing says seeds from cones collected in the fall can be processed and planted by the following summer, as



Pansing and Rebecca Harris with the National Park Service conduct direct seeding trials in Grand Teton National Park.

opposed to waiting for seedlings to grow in a nursery first. Additionally, Jones points out that the digging involved in direct seeding creates less environmental disturbance compared to planting seedlings.

“Planting a seed 1 inch into the ground is kind of a minimalist approach in a way,” Jones says. “That has appeal for human resources, financial resources and other values you have in the park and in the wilderness.”

Jones is one of many land managers from national parks across the Ameri-

can West who Robison recently led to create a five-year master agreement funded by the 2022 Inflation Reduction Act. The agreement enables the parks to work with American Forests on a variety of whitebark pine restoration projects, including seed collection, genetic testing and planting.

“We decided this was an innovation we wanted to try. Having an opportunity like this is really a windfall for parks,” Robison says.

For Yellowstone, Grand Teton and Glacier National Parks, the focus for now is direct seeding. This year, direct seeding trials began in Yellowstone and Grand Teton, where technicians planted more than 2,600 caches total. Seeding is expected to occur in Glacier in the next year.

AN EXPERIMENT IN RESTORATION

Direct seeding won’t replace seedling planting, but Pansing hopes it will become a complimentary tool for reforestation.

“The potential benefit of this is giant, if it works,” Pansing says. “We’re in the first stage where we’re trying to assess its efficacy and whether it’s another tool to put into the whitebark pine restoration toolkit.”



Pansing and Laura Jones, branch chief of vegetation management with Grand Teton National Park, measure the slope angle of a seeded site. The data will help the researchers understand if slope may impact the outcomes of direct seeding.

For now, the method is still experimental.

Planting site selection is determined by the National Whitebark Pine Restoration Plan, a science-informed strategy recently developed to guide restoration of whitebark pine across the United States portion of its range. The plan identifies core areas where conservation and restoration should take place, with the expectation that as restored populations mature and bear cones, Clark’s nutcrackers will aid further recovery by dispersing seeds beyond the core areas.

The technicians use maps showing randomly selected locations to plant caches, to which they navigate using GPS.

“In order to make this inferentially sound, we need to randomly select locations in this core area,” Pansing says.

Pansing and the team are also comparing the outcomes of direct seeding in different conditions to better understand what types of sites are optimal for a seed to germinate and survive. Some of the seeds are planted next to stumps, rocks or trees — microsites that offer protection from the wind and other elements. Other seeds are planted in open areas.

Some of the planting locations are marked so the researchers can later

return and monitor any growth.

Eight-inch nail spikes driven into the ground on either side of the PVC pipe frame mark where the seeds have been deposited. Those nails remain, and the location is marked using GPS. Year after year, the researchers can return to the site and fit the PVC frame over the nails to monitor any development that has occurred.

Success may not be immediately observable. Whitebark pine is known for delayed germination. Seeds can stay dormant in the ground for as long as 9 years. Once a seed germinates, it will

emerge an inch or two tall, with a small stem and vibrant coloring ranging from purple to green. Seven to nine fledgling needles will curl up into a bowl shape, from which the growth will emerge.

By gathering data during annual monitoring visits, Pansing, Robison and Jones will hone in on best practices for direct seeding.

“It will take some additional trial and error to understand better,” Jones says.

“This happens across ecological restoration and it’s why monitoring is so important.”

Pansing already made note of one change she’ll make to the methodology after observing Clark’s nutcrackers, squirrels and chipmunks actively moving around the landscape in pursuit of seeds.

“The potential benefit of this is giant, if it works. We’re in the first stage where we’re trying to assess its efficacy and whether it’s another tool to put into the whitebark pine restoration toolkit.”

— ELIZABETH PANSING, DIRECTOR OF FOREST AND RESTORATION SCIENCE AT AMERICAN FORESTS

“There are more small animals pilfering and caching ripe whitebark pine seeds this time of the year in preparation for winter,” Pansing says. “In future years, if we do the direct seeding earlier in the season, I suspect we’ll see less of our cached seed stolen by animals.” 🌱

Liane O’Neill writes from Portland, Ore., and serves as American Forests’ senior brand manager for Resilient Forests.

THIS AND FACING PAGE: C.-J. ADAMS / NATIONAL PARK SERVICE



Hillary Robison, deputy chief of Yellowstone Center for Resources, points out verbenone pouches attached to mature whitebark pine trees. Pheromones in the pouches help ward off destructive mountain pine beetles by tricking them into believing the tree is already occupied.

PLACE-BASED PARTNERSHIPS

Rio Reforestation: Cultivating a future for Texas thornforests

BY LIANE O'NEILL

IT'S MORNING in the Texas Rio Grande Valley. Large pickup trucks wind through wisps of fog that cling to the ground and scatter the rising sun, illuminating an empty field in gold. Furrows of freshly tilled soil extend rich and brown across 12 acres of former agricultural land. By the end of the day, this ground will hold a nascent forest.

The 29th annual Rio Reforestation, a community planting event, has drawn more than 700 volunteers to this location. In the next four hours, they will plant 12,000 seedlings representing 32 different species. The effort is sorely needed. Less than 10% of the subtropical thornforests that once blanketed the Rio Grande Valley re-

main. Swaths of these woodlands were cleared decades ago for agriculture, and creeping urbanization, climate change and changes to the hydrology of the Rio Grande River continue to slowly eat away at this ecosystem, stressing the remaining forest.

"Thornforests serve both community and ecosystem resilience," says Jon Dale, director of Texas and Mexico with American Forests. "We have over 500 bird species and 1,200 plant species here in the region. At the end of the day, so much of that biodiversity is dependent on just this ecosystem."

Cars and buses begin to arrive as staff with the U.S. Fish and Wildlife Service, American Forests and other

partners finish setting up. School children tumble out, along with small families, community volunteer groups, college students from the University of Texas Rio Grande Valley and local Girl Scout troops. They claim shovels and watch a demonstration on how to plant before walking far into the field where rows of colorful crates hold seedlings waiting to be planted. Holes are dug, the seedlings are lifted and placed, and gloved hands gently fill in the soil.

Adjacent to the site, a mature Tamaulipan thornforest sways in the distance. Seven years ago, the land looked much like its neighboring



A truck bed full of shovels is stationed near the check-in table. Volunteers hand out shovels to participants as they come streaming onto the field.

bare counterpart. But since the site was planted during the 2016 Rio Reforestation, orderly rows have grown into a chaotic thicket of species like Texas ebony, tenaza, Wright's acacia and snake eyes. Deer have moved onto the land, birds are nesting and butterflies tease nectar from flowering shrubs. It's the perfect habitat. The perfect thornforest.

BUILDING ECOSYSTEM AND COMMUNITY RESILIENCE

This year is a particularly remarkable one for Rio Reforestation. The event was put on hold for three years following the COVID-19 pandemic. And while smaller planting projects occurred in the surrounding area, none had the large regional draw and impact of Rio Reforestation, which the Fish and Wildlife Service and American Forests began planning once more in early 2023.

According to Dale, there was an urgency to bring back the event, which gives attendees the opportunity to interact with, support and learn about the native thornforests. Thornforests provide critical social, economic and environmental benefits to the region, such as mitigating flooding and supporting an abundance of wildlife that drive ecotourism from all over the world. Yet few locals have the opportunity to engage with it in their everyday lives because such little of this native ecosystem remains.

"It's so often in this community here that people don't have an active piece of the conservation of this habitat," Dale says. "By coming together as citizens and doing this community event, we're actually giving some of that back."

As community members come together to dig and plant, they learn about the importance of thornforests, an experience the organizers hope will help establish connections with the ecosystem and inspire advocacy.



Romeo Garcia, manager of the Santa Ana National Wildlife Refuge with the U.S. Fish and Wildlife Service, stops for a break. Garcia and Jad Daley, president and CEO of American Forests, announced a \$10 million contract agreement, under which American Forests will help ramp up conservation in the Valley over the next four years.



Volunteers work their way across 12 acres of former agricultural land to plant 12,000 seedlings over the course of four hours. To the right grows a thriving thornforest, which was planted during Rio Reforestation in 2016.

UNLESS OTHERWISE NOTED, ALL PHOTOS: JEREMY INGLES JR. / AMERICAN FORESTS



Marisa Oliva and her daughter, Julia, smile and pose during a break from planting. This was Julia's first time attending Rio Reforestation.

"Rio Reforestation has a really special meaning," says Romeo Garcia, manager of the Santa Ana National Wildlife Refuge with the Fish and Wildlife Service. "There are people who are bringing their grandkids who had the opportunity to plant trees during past community planting events back

in the early '80s. That means a lot. That means we're putting memories in people in the community, and they'll have the curiosity to come back and continue helping us on conservation efforts."

For volunteer Marisa Oliva, it's a chance to pass the lesson of conservation on to her daughter Julia.

"I wanted to bring my daughter for the first time to do what we could to help wildlife and restore habitat," she says. "We do a little bit of this in our own yard, too, because we like bringing wildlife back to our area."

Gisel Garza, who is currently a project manager for the Lower Rio Grande Valley with American Forests says Rio Reforestation helped guide her career path years ago when she attended the event as a biology major.

"In college, I knew I liked plants, and I wanted to be a scientist," she says. "Seeing professionals out there with the Fish and Wildlife Service made me think this was something I wanted to do. Participating this year in my current role meant a lot. It makes me happy to see young kids exposed to Rio Reforestation at an even earlier age. I wish I had been."

THINKING BIG IN TEXAS

Rio Reforestation is one of American Forests' largest community plantings, but the organization, which has partnered with the Fish and Wildlife Service on thornforest restoration since 1997, is on the precipice of its greatest impact in the region.

During the event, the partners announced American Forests has been

awarded a \$10 million contract from the Fish and Wildlife Service to lead conservation in the Valley over the next four years. In addition to reforesting 800 acres — more than 66 times what was achieved during Rio Reforestation — American Forests will also advance thornforest research and create opportunities for locals to access and learn about thornforests in schools and newly developed community forests.

The work, and Rio Reforestation, are part of a greater tidal wave of recent activity that seeks to rewrite the future for thornforests in the Rio Grande Valley through science-based conservation and community involve-

ment. In 2018, a coalition of state and federal agencies, universities, non-profits and community organizations came together to form the Thornforest Conservation Partnership, which collaborated with American Forests to produce the Thornforest Conservation Plan, a blueprint for ecosystem conservation that is serving as the foundation for activity under the historic new award.

"I feel really proud that we've been a catalyst for that coming together, that partnership," says Jad Daley, president and CEO of American Forests. "Yes, it's been about getting trees in the ground, but it's been

just as much about building that community collaboration so we can keep doing this again and again. We can get this done at a scale that can bring this whole Valley back to life with thornforests."

While Rio Reforestation may continue to evolve in shape and scope, one thing is for sure — the event will serve as an annual moment to pause and take in all of the progress for a community that continues to fight to preserve its thornforests. 🌱

Liane O'Neill writes from Portland, Ore., and serves as American Forests' senior brand manager for Resilient Forests.

Gisel Garza, project manager for the Lower Rio Grande Valley with American Forests, plants a seedling at her first Rio Reforestation event in 2019. At the time, she was a college student who was still exploring career pathways. The event helped her meet local land managers and leaders in thornforest conservation, inspiring her later work.



Volunteers crouch down near a crate full of seedlings. Each crate holds a mixed variety of species. In total, 32 different species are planted during Rio Reforestation 2023.

BOTTOM LEFT, COURTESY OF GISEL GARZA



Valérie DuFort-Roy and Sudepto Roy, with their daughter Amélie, make great efforts to keep their home in Del Mar, Calif., as eco-friendly as possible.

DONOR PROFILE

For California couple, trees are a “gift” and a motivation for change

TWO DECADES AGO, Sudepto Roy and his wife Valérie DuFort-Roy saw first-hand the importance and fragility of forests. In 2003, the Cedar Creek Fire ravaged parts of San Diego, where they lived at the time, destroying many structures in the area.

When Al Gore’s film “An Inconvenient Truth” hit theaters three years later, they immediately understood the

significance of the message. Soon after, they looked at their own carbon footprint from waste, energy use and international travel, and realized there was a lot they could do to become part of the solution.

“I was using lots of paper towels,” says Valérie. “We were landfill contributors and were using up trees with no shame. We were a case of people who got educated.”

One action they took was to begin donating to American Forests. They have been doing so since 2006, with Sudepto’s employer, Qualcomm, matching their gifts dollar-for-dollar.

Other changes have profoundly shifted their way of life. Their household is now in Del Mar, Calif., and paper-towel-free. They also produce almost zero trash, use solar electricity, drive electric vehicles, have energy- and water-saving appliances and fixtures, and recycle and reuse.

They are active locally on environmental issues, with Valérie serving a three-year term on the Sustainability Advisory Committee of the Del Mar

ALL PHOTOS: COURTESY OF THE ROY FAMILY



In February 2022, Sudepto traveled to visit his mother, Mamata Roy, in Vadodara, Gujarat state, India. The contrast between the city’s concrete jungle and the urban forest only 5 miles away emphasizes for Sudepto the importance of urban forests.

City Council. In the role, she helped pass a helium balloon ban in Del Mar as part of a larger regional effort.

Their feeling that forests are an important piece of this puzzle was reinforced in 2007 when the Witch Creek Fire forced them to evacuate their San Diego home. In 2008, they became certified by San Diego County to participate in a community emergency response team. They had noted American Forests’ tree replanting efforts in the state when they first donated and only became more dedicated to the organization in the wake of the second fire. They learned more about the importance of trees for climate mitigation and Tree Equity.

“It’s nature’s inbuilt carbon sequestration,” says Sudepto. “This is the gift nature has given us.”

As a member of the board of the Del Mar Foundation, which directs some funds towards urban tree planting, he used the Tree Equity Score to challenge his town to compete with local communities on tree cover.

He had seen first-hand the difference tree canopy can make for the livability of urban communities when he visited his mother in India after the COVID-19 pandemic eased. One day, he traveled 5 miles from her multi-story apartment building on the outskirts of a bustling city to an urban forest he remembered from his childhood.



The only viable option is to “turn our attention to those things we can do, and do those. Make one change at a time, and it becomes your way of life.”

— SUDEPTO ROY, AMERICAN FORESTS DONOR

“I saw peacocks, wild monkeys; it’s just magical,” he remembers. But what really struck him was the 10-degree Fahrenheit difference between his mother’s dwelling and this sylvan oasis. “I could feel the fresh air and temperature drop,” he says. “The solution is that simple: having trees and forests.”

For both Sudepto and Valérie, the question is personal, as they see the

burden environmental stress places on their 12-year-old daughter and her peers.

“How can we mess it up, wash our hands and just go?” asks Valérie. “We cannot.”

The only viable option, says Sudepto, is to “turn our attention to those things we can do, and do those. Make one change at a time, and it becomes your way of life.” 🌿

WASHINGTON OUTLOOK

Unprecedented funding for American Forests, America's forests

THE WORD “unprecedented” has cropped up in relation to forests all too often in recent years, usually in negative contexts such as heat or wildfires. But with the Inflation Reduction Act of 2022, the nation now has some unprecedented hope related to forest health, as the largest congressional investment in climate ever included \$1.5 billion for the USDA Forest Service’s Urban and Community Forestry Program.

American Forests has been building the Tree Equity movement for

years, not only by coining the term and advancing the national conversation, but also through relationship-building, convening stakeholders and providing technical assistance to local leaders who are building Tree Equity in their cities from the ground up.

In April 2023, USDA announced \$250 million in urban and community forestry grants to states and territories, and opened applications for \$1 billion more in funding for other entities like nonprofits. The rush

of applicants crashed the submission portal, and the Forest Service worked tirelessly to review project proposals. In September, American Forests was awarded a grant of \$50 million — the largest possible award under the program — for the Tree Equity Catalyst Initiative and Fund.

The Tree Equity Catalyst Initiative and Fund will issue grants to early-stage, innovative urban and community forestry projects and to entities with developed Tree Equity initiatives. American Forests is thrilled not only to receive funding to transform America’s communities but also to work alongside other grant recipients to transform America’s tree canopy and advance climate equity and Tree Equity.



The City of Phoenix received \$10 million for their Roots of Phoenix initiative to fund grants for neighborhood and school tree plantings, ultimately planting thousands of new trees in the hottest large city in the U.S.



(From L to R) American Forests Vice President of Urban Forests Policy Joel Pannell, Senator Cory Booker and American Forests President and CEO Jad Daley together in New Jersey. They were attending the event at which Under Secretary of Natural Resources and Environment Dr. Homer Wilkes announced \$250 million in urban and community forestry project funding for states and territories, and the open application period for \$1 billion in urban and community forestry projects.

LEFT: ZACH MCCOUE

TOP: JONATHAN ELIAS / PAIDEIA ACADEMIES; BOTTOM: RACHEL TERLEP / WASHINGTON DEPARTMENT OF NATURAL RESOURCES

That alone is reason to celebrate — but there’s more! Cities leading in Tree Equity, such as Phoenix, Detroit, Seattle and Providence, R.I., also received urban and community forestry funding. With more than \$1 billion awarded by the Forest Service, the Biden-Harris administration is investing in locally led Tree Equity projects to expand and support the health of America’s tree canopy, cool communities and save lives.

American Forests is proud to have partnered with these cities as they embraced formal Tree Equity programs years before the federal opportunity emerged. The success and momentum of early Tree Equity cities helped demonstrate to the government why this scale of funding was needed across the nation.

Although American Forests is assisting the Biden-Harris administration with implementation of this funding, further advocacy work is needed. The massive influx of funding the Urban and Community Forestry Program received is so far a one-time investment into a program that annually receives

about \$36 million a year — far from enough to maintain the critical work currently being implemented through these projects and support the ongoing work of state and territorial urban and community forestry offices.

In the meantime, the administration continues to pioneer a whole-of-government approach to urban and community forestry, with non-agriculture agencies embracing Tree Equity programs. In November, the Environmental Protection Agency announced an open application period for \$2 billion in environmental and climate justice projects in communities and neighborhoods, which will undoubtedly help to expand tree canopy in urban settings with an equity-centric lens.

American Forests will continue to enhance

partnerships with cities across the nation by helping them leverage these opportunities as they come. These locally led initiatives offer unprecedented and lasting support for America’s urban and community forests, centering those who call these neighborhoods home. 🌱



The City of Seattle received \$12.9 million in September to expand community-led urban forestry and workforce development, including job development for youth.



Left: On October 12, 2023, students close out the Upward Ground summit in Washington, D.C. by participating in a climate-themed improv game called “Kick ‘Em Out the Classroom.”

MOVEMENT BUILDING

Second Upward Ground summit gives students fresh perspectives on environmental careers

BENEATH Washington, D.C.’s golden autumn canopy, the second “Upward Ground: A Nature Equity Experience” unfolded with vibrant energy on October 12, 2023. This half-day summit curated by the U.S. Forest Service gave Ward 8 high school students a chance to learn about green jobs that address the climate crisis and environmental injustices. The event also introduced these young, passionate minds to community leaders and urban forestry professionals.

Upward Ground bridges the gap between aspiration and action, offering students from underserved communities exposure to the skills

necessary to shape a greener, more equitable future. This event continued the momentum established in the inaugural event held at Southern University in Baton Rouge, La., in April 2023.

Here, representatives from the executive leadership team share their experiences at the D.C. summit.

LILLIAN DINKINS
Throughout the planning process of Upward Ground, I was able to connect with other students and professionals. One of my most critical connections was



with another student pursuing her Ph.D. at the University of Florida. This connection was significant because it’s hard to find other women of color pursuing a Ph.D. at the University of Florida. On the day of the event, I was able to meet other organizations that could show me what future routes I could take for a job post-graduation.

Upward Ground has really made me solidify my career path. Being a young professional and surrounded by those who have been in this profession for years has inspired me to continue this path of my Ph.D. and focus on urban forests and communities, specifically communities of color. I could see first-hand how tools such as Tree Equity Score pinpoint neighborhoods in desperate need of tree cover. I learned the importance of virtual reality and how it can be used to see climate change impacts but, more importantly, how it can be used to plan communities for livable spaces.

ASHANTI ASH

Attending Upward Ground and being a part of the executive leadership team has greatly improved my outlook on my career and future. It was amazing to be surrounded by like-minded individuals



who also share my commitment to making green careers accessible for underserved and urban communities. I’m a senior at Howard University, and attending an event like this back in high school would have been so affirming to my goal of designing sustainable and affordable communities to combat the problems we face today.

Growing up in the rural south, most of my memories are shaped by being outside. Appreciating nature is not something that has ever been hard for me. Still, the Upward Ground experience has allowed me to explore career options that protect the places where those special memories were made! Speaking to professionals in the green industry has made me more confident in my abilities to explore the field and better navigate the relationship between architecture and sustainability.

ZAINAB ALI

As an executive leadership team member at Upward Ground, I had the privilege of playing a role in organizing, setting up and hosting this event. It was inspiring to witness young individuals discovering various career paths to



chase their environmental aspirations. Upward Ground has left a lasting impact on me in multiple ways. This event not only



Top: At American Forests’ booth, students etch their names on a tree disk as part of learning about green careers based on their career personality type. Bottom: Students observe a flood-mitigation demonstration performed by the Department of Energy and Environment.

ALL PHOTOS: JADA M. IMANI / AMERICAN FORESTS



inspired and motivated me as a Black woman in the climate field but also allowed me to actively contribute to exposing Black youth to the realm of green careers. Additionally, I had the privilege of networking with fellow members of the executive leadership team and numerous professionals from esteemed organizations.

The future of Upward Ground is promising. There is ample opportunity for this summit to expand its reach to engage broader audiences, encompassing emerging fields such as eco-technology and sustainable design, and even include a segment that incorporates elements of research and innovation to encourage students to explore environmental challenges and propose innovative solutions.

SHAUN BATES

With my major being psychology, I was studying the intersection of nature and therapy, and how one having exposure to the natural elements around them can actually heal specific mental struggles. Since being exposed to green careers, I see that it is more of a possibility than I realized and is in fact doable. I've been to plenty of summits similar to the format of Upward Ground, but to be more behind the scenes and see what goes into an event like that was a fresh perspective. Having to find creative and fun ways to engage the crowd you're targeting allowed me to think creatively and critically.

Other young people will benefit from Upward Ground because it brings awareness to topics that are otherwise not spoken about or considered in their daily lives. For example, we saw the kids engaging with wood carving using reclaimed wood and leaf species identification. Many received that information for the first time. I don't think it's ever insignificant to teach kids about their environment. 🌱



Top: Students dance to music played by DJ OneManJamz.
Bottom: A student pictures herself in a green career as part of Project Learning Tree's booth that explores representations of Black people in the field.



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ROOTED AMBITIONS

Nurturing trees and cultivating careers in New York City

BY ADRIENNE BERMINGHAM

ALL PHOTOS: ALEKSANDR WATSON / AMERICAN FORESTS

ELEVEN MILES FROM LAGUARDIA AIRPORT in Queens, N.Y., nestled between a car dealership and an auto shop and amid a crisscrossed matrix of highways, sits one of the entrances to Alley Pond Park. The park, 650-acres in its entirety, offers a natural oasis with glimpses into the geological history of New York as well as the city's future-focused conservation efforts. Its glacier-sculpted landscape features a diverse ecosystem with freshwater and saltwater wetlands, tidal flats, meadows and forests.

Interns at Greenbelt Native Plant Center experience every element of the nursery's work, including seed collection, propagation, mixing compost and transplanting saplings.



“From scouting and identifying, to bringing seeds back to the center, our interns got to see everything that we do. They learned what each seed needs for propagation, watched them grow and transplanted them.”

— MYISHA HUMPHREY, SUPERVISOR OF OPERATIONS AT GREENBELT NATIVE PLANT CENTER

Above: In an urban green space like Alley Pond Park in Queens, N.Y., it's important to monitor the health of native plants and presence of invasive species so that the ecosystem can thrive and benefit the surrounding community. **Below right:** Christina Gualtieri, an intern with Greenbelt Native Plant Center, is studying environmental science at Brooklyn College. While at Greenbelt, she conducted research on tree beds to assess the health of street trees in New York City.

The more than 27,000 people who live within a 10-minute walk of this park are mostly low-income and minority. The park also may bear a disproportionate share of negative environmental consequences due to its industrial surroundings and various policies. For these two reasons, the area has been designated by the New York State Department of Health as an environmental justice area, establishing an important baseline of social vulnerability for an area that the city uses to determine need and investment. On a mild autumn morning, staff and volunteers from American Forests, NYC Parks, the Natural Areas Conservancy and American Express came to the site to plant 400 native trees and shrubs to support the delicate ecosystem in overcoming the challenges of thriving in an urban environment.

Investing in the health and longevity of Alley Pond Park means investing in the health and longevity of the communities that surround it.



Trees in forested areas absorb dangerous air pollutants, including the carbon that threatens our climate; mitigate the effects of the Urban Heat Island; and are important for reestablishing insect, bird and wildlife habitat.

Among the volunteers planting in Alley Pond Park is Christina Gualtieri, an environmental science student entering Brooklyn College for the spring 2024 semester, who is a paid intern with the Natural Areas Conservancy. For the past year, Gualtieri has been interning at NYC Parks' Greenbelt Native Plant Center, along with others in the Natural Areas Conservancy's City University of New York internship program, assisting in ushering thousands of plants through their life cycle from seed collection to propagation to potting.

Today, she is chaperoning some of these plants to their permanent home, where they will serve the community by filtering air and reinvigorating wildlife habitat.

“I have hundreds of hours of volunteer experience working with people who restore native ecosystems, but Greenbelt Native Plant Center is an entity in and of itself,” Gualtieri explains. “We propagate plants on-site and strategically collect seeds to expand biodiversity and optimize genetics so that each is best suited to the climates and restoration projects that we’re putting them in.”

The Greenbelt Native Plant Center, part of NYC Parks, is a 13-acre greenhouse, nursery and seed bank complex on Staten Island, N.Y. The facility focuses on the cultivation and preservation of native plant species specifically adapted to the local ecosystems of New York City. The center supports habitat restoration projects across the city by providing native plants that are essential for



maintaining biodiversity, restoring natural habitats and supporting healthy ecosystems.

“From scouting and identifying, to bringing seeds back to the center, our interns got to see everything that we do,” says Myisha Humphrey, supervisor of operations for Greenbelt. “They learned what each seed needs for propagation, watched them grow and

transplanted them. They also supported landscape maintenance to make sure that there were no weeds competing for nutrients...it's all a part of keeping these plants healthy.”

Evidence-based habitat restoration — like that being championed by Greenbelt, NYC Parks and the Natural Areas Conservancy — is critical to natural areas across the city, including Alley Pond Park, to help ensure that the native ecosystem

Left: Myisha Humphrey, supervisor of operations at Greenbelt Native Plant Center, started with NYC Parks as a maintenance worker and participated in professional development and training to rise through the ranks to her current position. **Below:** Trees planted in Alley Pond Park serve the surrounding community by filtering and cooling the air.





can overcome high levels of threat to biodiversity. Investing in this natural area so that the communities around it can benefit from a healthy, sprawling green space is one way of working toward Tree Equity in the region.

The advancement of Tree Equity requires consideration of all components of creating a healthy urban forestry supply chain and providing support based on where cities are in their journey to achieving Tree Equity. That could be investing in nursery capacity to help drive down the high costs of urban trees, which can be more than \$500 a piece, or it could be building out career opportunity programs to guide students into tree-related jobs and fields. It could be identifying and growing climate-resilient tree species so that what is being planted has the best chance of withstanding a changing environment. Or, it could be all of the above, which is the case for this work in New York.

Much of the work happening along this pipeline in New York City is supported by American Express, including stipends for Gualtieri and two other year-long Natural Areas Conservancy interns at Greenbelt Native Plant Center. In their commitment to advancing climate solutions and backing low-carbon communities, American Express began partnering with American Forests in 2022, investing in the full, holistic approach to creating healthy urban forests with a goal of advancing Tree Equity in cities where their employees live and work. In addition to internships, American Express has supported the expansion of Greenbelt to help increase the availability of climate-resilient trees in the New York area. They've funded research and seed collection of disease-resistant tree species so that trees, like the ones planted in Alley Pond Park, will thrive for years to come.

As Gualtieri completes her internship and prepares for her first semester at Brooklyn College, she leaves behind a strong legacy at Greenbelt Native Plant Center and across New York City. In addition to her day-to-day work supporting Greenbelt operations, Gualtieri's capstone project was to conduct a native tree bed

Top left: With an eye toward the future, staff at Greenbelt collect seeds from local trees that exhibit desirable traits related to climate adaptation. The seedlings grown will then be planted to help New York's future urban forests. **Bottom left:** American Express not only invests in creating healthy urban forests, but it also provides opportunities for employees to participate in service like the planting in Alley Pond Park.



“One of my main goals is to connect different communities and ensure that more people have the opportunity to enjoy natural areas.”

— CHRISTINA GUALTIERI, INTERN AT GREENBELT NATIVE PLANT CENTER

trial. With the goal of gaining a better understanding of the region's native plants, and their survivability in urban environments, Gualtieri and her team monitored tree beds in small sidewalk openings in Queens and Brooklyn. Findings from this project will help urban foresters understand which diseases and pests target native plants in these unique, tiny ecosystems so that they can invest in trees and plants that have a better chance in the face of pollution like salting or lack of pollinators.

A New York native with a passion for her home, Gualtieri's future is bright. “One of my main goals is to connect different communities and ensure that more people have the opportunity to enjoy natural areas,” she shares. In Alley Pond Park, she and other volunteers did just that, planting carefully cultivated seeds of Tree Equity for thousands of New Yorkers. 🍀

Adrienne Bermingham writes from New York and serves as American Forests' senior manager of corporate partner communications.

Above: Gualtieri is a Super Steward with NYC Parks. These are special volunteers who receive access to training, advisement, funding and other opportunities to support the work of NYC Parks.

Freshwater, the beating heart of the Evergreen State

BY LEE POSTON

FEW MOUNTAINS IN THE UNITED STATES provoke as much awe as Mount Rainier. At 14,410 feet above sea level, it is the tallest mountain in the Pacific Northwest and dominates the Washington skylines of Tacoma and Seattle.

Many West Coast rivers originate from Mount Rainier and the Cascade Range, which stretches from southern British Columbia to Northern California. Those rivers provide drinking water to millions, shelter fish such as salmon and trout, power agriculture and industry, and nourish the rural forests and urban woodlands downstream.

Mount Rainier looms over the city of Tacoma, Wash. Its 25 glaciers provide drinking water and support forests, fish, marine life and industries.

KANAIAPUNE PHOTOGRAPHY



“Trees need water, and freshwater needs ample tree cover, so it’s this mutualistic relationship. I think for tree lovers, it’s kind of impressive the number of ways that trees determine water quality and quantity.”

— AUSTIN REMPEL, DIRECTOR OF FOREST RESTORATION AT AMERICAN FORESTS

The trees of these mountains return the favor in kind. They shade those rivers from high temperatures, slow runoff and filter it from pollutants and sediment, recharge groundwater, and return water to the atmosphere. In the higher elevations on Mount Rainier, trees such as mountain hemlock, subalpine firs and threatened whitebark pine accumulate snow and help regulate its spring melt to provide clean, reliable drinking water below.

“Trees need water, and freshwater needs ample tree cover, so it’s this mutualistic relationship,” says Austin Rempel, American Forests’ director of forest restoration. “I think for tree lovers, it’s kind of impressive the number of ways that trees determine water quality and quantity.”

It’s an ancient relationship that is now more relevant than ever. Freshwater represents just 2.5% of the available water on our planet, and much of that is locked away in ice or underground. It’s that tiny amount of water in rivers and lakes that we

harness to drink, irrigate crops, power industries and protect wildlife.

Yet climate change, over-extraction, industrial pollution, loss of wetlands and unsustainable dams are pushing our rivers to the breaking point. Severe droughts around the world are increasing, including in the U.S., where record low water levels are happening with alarming frequency. According to the journal *Earth’s Future*, nearly half of the 204 freshwater basins in the U.S. may be unable to meet monthly water demand by 2071.

Water scarcity has huge implications for agriculture, economies, human migration, infant mortality, sanitation and human health. The knock-on effects on biodiversity, from the Amazon to the Arctic, include loss of species diversity and damage to vital habitats.

Rempel argues that while the threats are serious, the symbiotic relationship between trees and rivers present big opportunities to restore and protect them both.

“Wherever we have these tight ecological relationships we also have the potential for positive feedback loops from restoration,” Rempel says. “If we do things to restore our forests, that will be good for rivers. If we do things to recreate a healthy water cycle, that will help our forests. Ultimately this cycle builds positive momentum.”

By traveling along one of Mount Rainier’s rivers, from its source to Puget Sound, we can better understand the connections between rivers and trees, and meet the scientists, conservationists and community organizers dedicated to protecting and restoring them.

OF SALMON AND SHADE

The 25 glaciers that grace Mount Rainier’s volcanic cone appear from above like a giant octopus, spreading their tentacles across 35 square miles and serving as the headwaters for five rivers, according to the U.S. Geological Survey. One of those rivers, the Puyallup, begins on the western slopes of Mount Rainier before meandering through the fertile western Washington landscape, crossing national forests, tribal land, towns and cities before emptying into Tacoma’s Commencement Bay, part of Puget Sound.

About halfway along its course is the 26-megawatt Electron Hydropower Project, which features a fish passage system for downstream migration of juvenile salmon and a 300-foot upstream fish ladder to help spawning salmon and steelhead trout.

Fish productivity in Washington State has been on the decline in recent decades, says Kyle Martens,

Below: The South Puyallup River originates from the Tahoma Glacier on Mount Rainier’s western slope and merges with the North Puyallup River before journeying north toward Tacoma.



Above: A spawning sockeye salmon in the Little Wenatchee River, nestled in the Cascades Range near Leavenworth, Wash. Using shade trees to keep water temperatures cool is key to salmon productivity in Washington.

a natural resource scientist and fish biologist with the Washington State Department of Natural Resources. That change is partially due to removal of instream wood, increased temperatures and a long history of overharvesting that still impacts the forests today. The overharvesting largely ended with widespread regulation changes in the 1980s and 1990s, including the Washington State Department of Natural Resources’ 1997 State Trust Lands Habitat Conservation Plan.

Martens is based in the Olympic Experimental State Forest on the western Olympic Peninsula, the largest of the U.S. Forest Service’s national network of experimental forests. He is the principal investigator on a 20,000-acre study of forest management in 16 state watersheds.

One new approach to forest management he is studying involves creating forest gaps next to streams at regular intervals, thinning and putting some of the trees from the gaps into the stream to increase wood essential for fish habitat. The gaps, hopefully small enough to prevent stream temperature increases, allow more light into other parts of the stream to increase productivity, as there is a fine balance between too much or too little shade. At the same time, Martens is increasing the structural diversity of the forest through the gaps and thinning, while leaving other areas to mimic conditions found in old-growth forests.

“When it comes to water temperatures for the smaller streams, at least, we’re actually seeing very good response under our current management



Left: The Electron Hydropower Project now includes fish passages to help salmon migrate, but has been the subject of controversy for pollution and the release of rubber particles that can harm salmon. The dam, pictured here in the early 1900s, is a run-of-the-river project, which diverts water along a 10-mile wooden flume to the turbines of the powerhouse. Right: Scientists with the Olympic Experimental State Forest conduct electrofishing research in a pool in Clearwater River to gather data on fish numbers and species types.



LEFT: NATIONAL PARK SERVICE; FACING PAGE: TOP: RYAN HAGERTY / U.S. FISH AND WILDLIFE SERVICE; BOTTOM LEFT: LIBRARY OF CONGRESS; BOTTOM RIGHT: COURTESY OF KYLE MARTENS



Left: Scientists with the Olympic Experimental State Forest conduct electrofishing research in a pool in Clearwater River to gather data on fish numbers and species types. Right: Jeffrey Thomas directs the Timber, Fish and Wildlife Program of the Puyallup Tribal Fisheries Department, and is a longtime, passionate advocate for tribal rights and culture.

practices,” he says. “These forests have grown to the point where that canopy is growing over and it’s putting shade onto the streams.”

Rempel agrees that lack of shade is a major concern for spawning salmon. “Very slight differences in temperature are make or break for salmon,” he says. “Just one degree can spell the difference between successful spawning and fish that are literally rotting in rivers just because it’s too hot.”

American Forests has a long track record of restoring riparian habitats to benefit salmon populations in Washington, beginning in 1999. In 2017, American Forests and the Alcoa Foundation teamed up with the Nooksack Salmon Enhancement Association and their community partners to plant more than 6,000 coniferous and deciduous trees across 10 acres of land in Whatcom County.

Martens and his team collect data every year to better understand forest management by snorkeling along rivers, counting fish, and collecting data on stream flow, wood density, and potential areas for restoration. In smaller streams they also use a backpack electric fisher that employs two electric poles to create a small current that draws fish without harming them. They have found that species such as Coho salmon can move from larger tributaries to smaller ones in search of cooler water.

“Following the record-breaking June 2021 heat wave, I actually saw increased densities in our smaller tributaries, but an absence of salmon in our larger tributaries,” Martens says. “So they’re probably feeling that heat and then moving to habitats that are more suitable for them.”

Climate change will continue to test the mettle of Washington’s salmon populations, but the hope is that by working with these



nature-based solutions, such as developing and maintaining a natural range of forest cover, their numbers will eventually rebound.

AN ETHIC OF STEWARDSHIP

As it courses through the foothills and suburbs outside Tacoma, the river enters the Puyallup Indian Reservation, where Jeffrey Thomas works. A Muckleshoot tribal elder and senior fisheries biologist, Thomas has directed the Timber, Fish and Wildlife Program of the Puyallup Tribal Fisheries Department for 35 years. The Puyallup Tribal Reservation is one of the most urbanized in America, although the Tribe’s historic lands extend to Mount Rainier.

He began working for the Tribe in 1989 to help them implement the Timber, Fish and Wildlife Agreement, which reshaped how forests, rivers and wildlife are managed in the state. In the early 1900s, Tacoma was often called the “Lumber Capital of the World” due to its numerous sawmills, the Port of Tacoma’s access to railroads and world markets, and a seemingly limitless supply of forests across the Pacific Northwest.

The Timber, Fish and Wildlife Agreement balances the continued growth of the timber industry with the promotion of diverse wildlife habitats; the protection of fisheries, and water quality and quantity; and the preservation of cultural and archeological spaces that ensure tribal access.

“I always say I’m a tribal fisheries biologist, and that means tribal first and fisheries second,” he says. “When you’re on the river and thinking about the river, forest corridor, cultural significance and amenities, those wild rivers are beautiful. They have been the source of tribal identities and wellbeing going back into time immemorial.”



Top: The Puyallup River and Mount Rainier help power the biodiversity and economy of this part of Washington State, and are central to the identity of the Puyallup Tribe of Indians. Bottom: The Port of Tacoma, seen here with Mount Rainier in the background, is one of the largest ports in the United States and helped make Tacoma the “Lumber Capital of the World” in the early 1900s.

LEFT: COURTESY OF KYLE MARTENS; RIGHT: COURTESY OF JEFFREY THOMAS

TOP: DAVID SEIBOLD / FLICKR; BOTTOM: OVERTACOMA



Clockwise from top left: The Washington Stormwater Center is researching the use of sap flux sensors that measure a tree's stormwater uptake, providing important information for urban foresters and conservationists. Dr. Ani Jayakaran, right, discusses the placement of sensors with Ben Leonard, a Ph.D. student at Washington State University. The coupled probe sensors are inserted into a tree to measure its stormwater uptake as part of research from Washington State University, Evergreen State College and the Washington Department of Natural Resources. Sap flux sensors are covered in protective mylar sheaths.

Lowell Wyse, the executive director of the Tacoma Tree Foundation, says Thomas sees the big picture of the watershed, constantly thinking about how the state manages land, tribal rights under the treaties, and state accountability to those treaty rights. As a partner with the Puyallup Tribe, Wyse relies on their deep wisdom and expertise in helping to protect Tacoma's environment.

"When I think about the work of culture change from natural resource extraction to a culture of stewardship, the Puyallup Tribe is a leader in that area," Wyse says. "We can learn from them and everything they bring to the subject of environmental ethics, and how we, as people living in a modern city, relate to the land and water that surround us."

FORESTS AND FLUX SENSORS

In Tacoma, there's a popular saying: "If it hits the ground, it hits the sound." As the Puyallup River continues from the mountain to the ocean,

its relationship with the trees around it remains as important to city dwellers as to the salmon at higher elevation.

Trees are essential for managing urban stormwater runoff. They filter pollutants, prevent erosion by capturing rain in their canopies and slow down runoff through infiltration in their roots. According to a Forest Service study, a typical medium-sized tree can intercept as much as 2,380 gallons of rainfall per year.

Mike Carey, the urban forest program manager for the city of Tacoma, says that about half of his program's funding comes from the city's stormwater utility because of the urban forest's ability to manage stormwater. He recently collaborated with a team comprising personnel from the Washington State University, Evergreen State College and the Washington State Department of Natural Resources to secure funding from the Washington Department of Ecology to

study the benefits of individual urban trees in mitigating stormwater runoff.

The research, led by Dr. Ani Jayakaran of Washington State University and Dr. Dylan Fischer of Evergreen State College, involves inserting coupled probes (one heated and the other as a control) called sap flux sensors into the tree xylem, the woody part of the tree that transports water. The probes measure the tree's stormwater uptake. The team also measures the amount of water being intercepted by a tree's canopy, which adds to the total stormwater managed by an individual tree in an urban landscape, which reduces the risk of flooding and pollutant transport to downstream areas.

The team has also developed a small-scale mobile sap flux sensor system to measure individual trees with low visibility and power requirements, allowing them to discreetly measure urban trees in busy areas.

TRAVEL TACOMA

Insight into the stormwater-management role of trees is valuable for landowners and helps guide tree conservation action by providing detailed data about their multiple benefits.

"That is very important research for us urban forestry folks who don't often have the huge, forested stands that we can think about as part of a neighborhood's stormwater budget," Carey says. "So, this research coming out of the Water Research Center could possibly translate to new regulations or being able to model trees as part of the complex of stormwater management best management practices on-site. It's just really cool stuff."

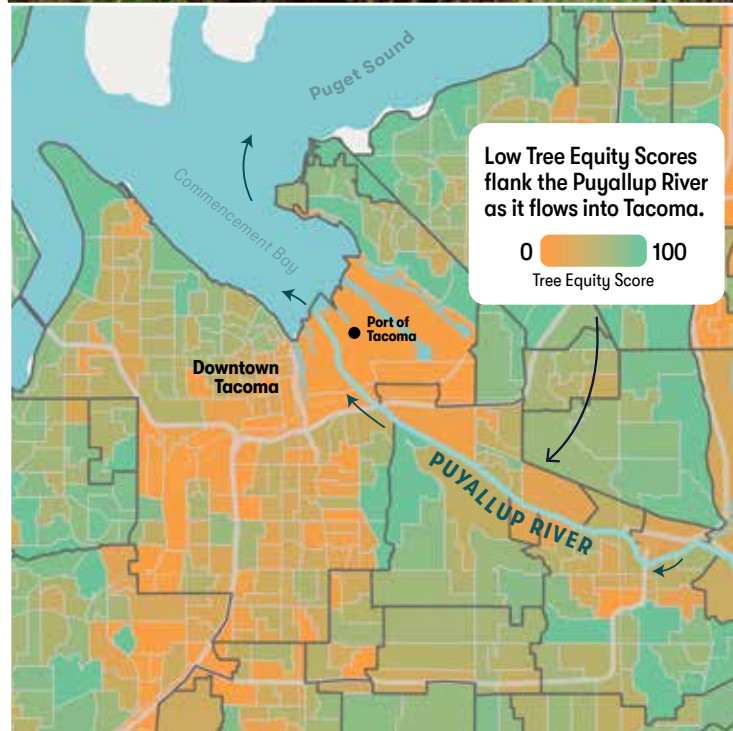
STREET TREES LOWER THE HEAT

Much of the Pacific Northwest received a wake-up call in 2021 when a heat dome raised average temperatures by 30 degrees Fahrenheit and resulted in more than 400 deaths. Tacoma registered a record high of 111 degrees.

Below: Tacoma, a city with 220,000 residents, has low tree canopy cover that ambitious tree-planting programs are improving using American Forests' Tree Equity Score as a guide.



THIS PAGE: JASON BERG



Clockwise from top: Volunteers and high school biology students plant trees at Mount Tahoma High School, a collaboration between American Forests, The Tacoma Tree Foundation and Weyerhaeuser. The school is located in South Tacoma, in a neighborhood with just 11% tree canopy coverage. Mike Carey, urban forest program manager for the city of Tacoma, uses American Forests' Tree Equity Score to help prioritize where to plant the trees that keep communities cool and filter stormwater flowing into Puget Sound. Tacoma has the lowest Tree Equity Score in the Puget Sound region, with a high need for increased urban tree planting, especially around water sources such as the Puyallup River.

RIGHT: JULIA GONZALEZ-WOLF / TACOMA TREE FOUNDATION. FACING PAGE, CLOCKWISE FROM TOP: HANNAH LETNICH / TACOMA TREE FOUNDATION; COURTESY OF MIKE CAREY, AMERICAN FORESTS

It was a stark reminder to Wyse of the importance of adequate tree cover, which cools cities and can save lives during extreme highs. It also made him reflect on the need for healthy flow from the Puyallup watershed to ensure the success of urban tree-planting projects that increase that cover.

“We need fresh clean water in order to keep young trees alive, and young trees are thirstier than older trees,” he says. “They require active watering for three to five years in our climate, so it’s really important that we have a good water supply in order to get new trees to establish.”

Tacoma has the lowest measured tree canopy cover among communities in the Puget Sound region. This translates into poor health indicators and low water quality, especially in east and south Tacoma, where there’s less tree coverage, worse air quality and lower life expectancy. Some neighborhoods there have life expectancies 7 or 8 years shorter than the county average. Wyse says the higher poverty rates and ethnic diversity in these areas translate into a focus on trees and water as environmental justice issues.

“As a community-based organization, we are trying to bring resources to the neighborhoods that have lacked resources in the past,” he says. “We use American Forests’ Tree Equity Score tool and other data from our government partners to understand where the trees are needed the most, and then work directly with residents to bring trees to those neighborhoods.” He adds that the Tree Equity Score also helps him justify grant funding.

Maisie Hughes, vice president for urban forestry at American Forests, emphasizes that the scientific, quantifiable nature of the Tree Equity Score makes it a powerful force for real change: “This is what we love about the influence and impact of Tree Equity Score for planning, policy and science. When cities use it in their urban forestry programs, the tool has a measurable impact on not only health, climate and employment, but also on sensitive water sources such as the Puyallup and Puget Sound.”

Carey is optimistic about Tacoma’s progress on stormwater management and tree canopy. For instance, the Department of Ecology is investigating the inclusion of a new stormwater management plan requirement for municipalities, who must be re-permitted every four years. The new requirement would ensure cities include a tree canopy analysis and suggested canopy cover percentages over fish-bearing streams, wetlands and other natural areas. He hopes the

“This is what we love about the influence and impact of Tree Equity Score for planning, policy and science. When cities use it in their urban forestry programs, the tool has a measurable impact on not only health, climate and employment, but also on sensitive water sources such as the Puyallup and Puget Sound.”

— MAISIE HUGHES, VICE PRESIDENT FOR URBAN FORESTRY AT AMERICAN FORESTS



increased awareness of the often-overlooked value of urban trees as a bulwark against major storms or tragedies such as the heat dome will continue spurring demands from the public for greater investment in tree planting.

TACOMA RISING

From most viewpoints around Tacoma, it’s almost impossible to miss towering Mount Rainier. Not only is it the most dominant landmark, but it also gave the city its name: Tacoma or Tahoma translates to “the mother of all waters” in the Puyallup language.

Although Tacoma’s water supply for tree planting and stormwater management comes from the Puyallup River, the city’s drinking water supply comes from the Green River further north. Human access to the watershed is tightly controlled close to Tacoma’s water intake,

Above: Lowell Wyse, left, executive director of the Tacoma Tree Foundation, says that “we need fresh, clean water to keep young trees alive, and they require active watering for three to five years. Young trees don’t just sprout and grow on their own in the urban context.”



and management is focused on avoiding contamination, such as requiring rigorous washing of timber harvesting equipment to prevent the introduction of invasive species.

This watershed also sees few forest fires because most are caused by humans and there is no public access this area, says Brian Williams, the regional silviculturist for state lands with the Washington State Department of Natural Resources. Williams oversees the implementation of the Habitat Conservation Plan, managing the land for watershed health, wildlife, natural preservation and timber.

“I can’t stress enough the importance of having healthy rivers and streams,” he says. “It’s absolutely critical. In our Habitat Conservation Plan, we’ve got different types of stream buffers for different orders of streams, geologists to help

us, and our wetland biologist as well, who helps us out on [timber] sales.”

The Puyallup watershed and its forests support a rich, diverse ecosystem including more than 1,000 plants and fungi, 14 fish species, and 65 mammals, including the endangered Cascade red fox and northern spotted owl. Protecting this ecosystem, from the mountain to the city, involves a diverse coalition of nonprofit organizations, landowners, scientists, community groups and government agencies.

In 2012, they joined together in the Puyallup Watershed Initiative around a common goal of protecting the health and environmental conditions of the watershed and its people. More recently, American Forests and the Washington State Department of Natural Resources formed the Washington State Tree Equity Collaborative

Below: Washington State Department of Natural Resources Regional Silviculturist Brian Williams looks out across the Green River watershed from a replanted timber harvest unit.



LEFT: KENNY OCKER / WASHINGTON DNR. FACING PAGE: AMERICAN FORESTS

Summit to Shore

WATER KEEPERS

They are one of our most powerful guardians of irreplaceable freshwater resources — from the mountain ridges to the cities to the shoreline. **They are our trees.**



STREET TREES LOWER THE HEAT

During a 2021 heat dome, Tacoma registered a record high temperature of 111°F. The city is using Tree Equity Score to prioritize trees and water as environmental justice issues.



NATURAL WATER FILTERS IN TACOMA'S TIDEFLATS

The Puyallup drains into Commencement Bay in Puget Sound through a major industrial port in downtown Tacoma, where the river becomes channelized. More city trees could help filter pollutants, prevent erosion and slow runoff.



PROTECTING AN ANCIENT WATER SOURCE

Twenty-five glaciers radiate from Mount Rainier's volcanic cone, covering 35 square miles and feeding the headwaters for five major rivers. High-elevation trees accumulate snow and help regulate spring melt to provide clean, reliable drinking water below.

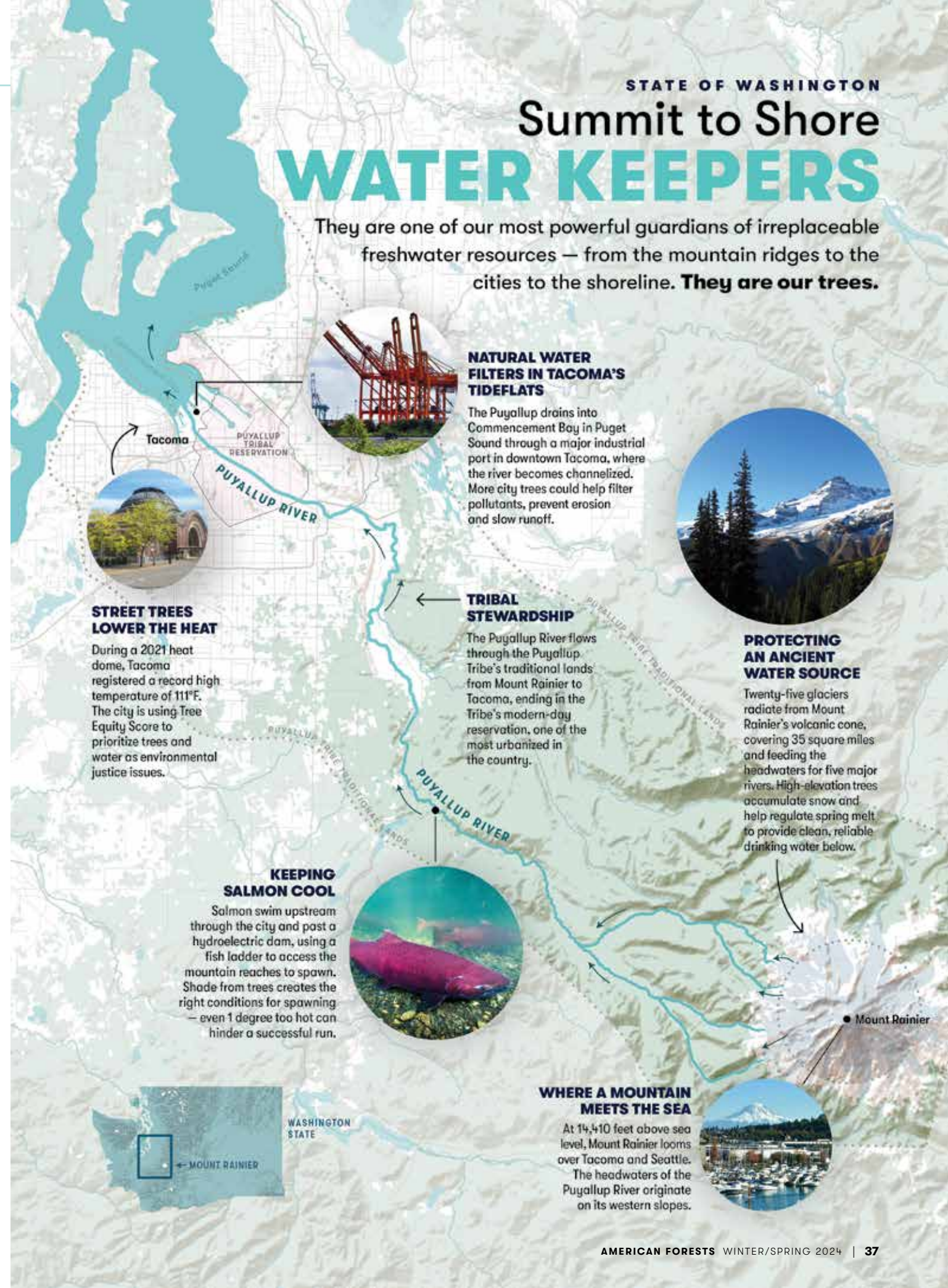


KEEPING SALMON COOL

Salmon swim upstream through the city and past a hydroelectric dam, using a fish ladder to access the mountain reaches to spawn. Shade from trees creates the right conditions for spawning — even 1 degree too hot can hinder a successful run.

WHERE A MOUNTAIN MEETS THE SEA

At 14,410 feet above sea level, Mount Rainier looms over Tacoma and Seattle. The headwaters of the Puyallup River originate on its western slopes.





Mount Rainier's ecosystem supports a rich diversity of mammals, amphibians, fish and trees, and is one of the world's best places to see wildflowers.

LEFT: NATIONAL PARK SERVICE; RIGHT: HANNAH LETINICH / TACOMA TREE FOUNDATION



“I have lived through a very significant transition in Tacoma. I’ve been able to sit here and view how policies can turn to action; how programs being implemented adequately can dramatically change our environment, if only we invest ourselves, our time and our energy in those things that we believe in.”

— MIKE CAREY, URBAN FOREST PROGRAM MANAGER FOR THE CITY OF TACOMA

to ensure that every state resident has access to trees and the benefits they provide. Tacoma Mayor Victoria Woodards was one of the first to sign on, representing America’s first statewide commitment to reach Tree Equity, which will bring benefits to the state’s waterways.

“It’s an enormous commitment for Washington State and hopefully will drive similar initiatives across the U.S. and around the world,” Hughes says. “We are excited to work alongside Washington Department of Natural Resources as they work with cities, towns, tribes, nonprofits and the private sector to get every urban census block to a Tree Equity Score of 75 or higher.”

With the state still reeling from the deadly heat dome, and data showing that 85% of urban neighborhoods have inadequate tree cover, Carey

believes the new collaborative is a game-changer for the state and will help continue the transformation that’s already underway in Tacoma. It’s a transformation that wouldn’t be possible without Mount Rainier, the Puyallup and Green River Watersheds, and the forests that protect them.

“I have lived through a very significant transition in Tacoma,” Carey says. “I’ve been able to sit here and view how policies can turn to action; how programs being implemented adequately can dramatically change our environment, if only we invest ourselves, our time and our energy in those things that we believe in.”

Lee Poston is a communications advisor who works with mission-driven organizations and writes from University Park, Md.

Above: (From L to R) American Forests President and CEO Jad Daley joined Eric Candela, director of local government relations with American Forests, and Wyse to help plant trees at Mount Tahoma High School in March of 2023. American Forests and the Washington Department of Natural Resources recently signed the Washington State Tree Equity Collaborative, the Nation’s first statewide partnership in the U.S. to achieve Tree Equity.



Tennessee seeds

Why the Volunteer State is going all in on seed collection

BY LEE POSTON

IT MAY BE CALLED the Volunteer State, but over the past few years, Tennessee has been faced with a growing shortage of folks stepping up to collect seeds for reforestation programs. That's a big deal, say the forest experts at the University of Tennessee's Tree Improvement Program, who are charged with improving the quality and productivity of the state's forestlands in the face of climate change and other threats.

The UT Tree Improvement Program, housed at the university's flagship campus in Knoxville, began in 1959 with a mission to provide locally adapted, genetically improved seeds to the state's nurseries for reforestation. Reforestation is necessary for wood production, wildlife habitat, outdoor recreation and benefits such as clean water and atmospheric quality. The seedlings are then transferred to land managers across the state, along with research and other information, to maintain and improve the state's rich diversity of tree species, conserve rare and declining species, and tackle non-native pests.

Erin Victorson, research specialist with the University of Tennessee's Tree Improvement Program, uses a specially designed acorn harvester called a Bag-A-Nut™ that significantly increases her efficiency when collecting acorns for research and growing seedlings.

UNLESS OTHERWISE NOTED, ALL PHOTOS: MITZY SOSA / AMERICAN FORESTS



Top: Victorson's job as research specialist with the Tree Improvement Program is equal parts talking to landowners, driving across the state, collecting acorns and analyzing data.

Bottom: The UT Tree Improvement Program began 65 years ago with a simple mission: to faithfully improve and protect the forest, a translation of the Latin in its seal.

That all starts with the individuals who collect the seeds, and the seeds themselves, all of which are in short supply.

Thankfully, the program has a plan. With support from American Forests, they hired 24-year-old research specialist Erin Victorson, an energetic data-cruncher who crisscrosses the state in search of white oak acorns, crab apples and other species. She is responsible for developing a network of wild trees that can serve as seed sources for both public and private reforestation efforts across the state, along with the people to collect and process them.

"I'm collecting seed for the state nursery so that they can go into forest enrichment programs and are available for Tennessee landowners," Victorson says.

THE QUIET CRISIS IN OUR FORESTS

American Forests has been at the forefront of addressing the seed shortage across the nation, beginning with a groundbreaking 2021 study revealing that meeting America's reforestation goals will require 3 billion seeds a year. To get even half-way there by 2040, we need to more than double seed production to a total of 34 billion seedlings.

In 2020, American Forests' Director of Forest Restoration Austin Rempel approached Tennessee forestry officials about their needs. Their top concern was the alarming lack of seed collectors to collect acorns and other seeds for the East Tennessee State Nursery in Delano, Tenn. In addition to professional seed collectors, Tennessee has programs encouraging volunteers to collect and donate seeds.

With the onset of the COVID-19 pandemic, "the guys who had been showing up on their doorstep with acorns for decades just disappeared," Rempel says. "Some got COVID, some left the seed collection industry for other jobs or retired. So suddenly, their supply of acorns and other seeds like hickory shut off pretty quickly."

As it happens, one of American Forests' lead corporate partners, Arconic Foundation, was interested in funding seed-collection projects in Tennessee. UT's Tree Improvement Program was enthusiastic and immediately hired Victorson.

"A lot of things got cut off during the pandemic," Victorson says. "And unfortunately, a lot of things didn't restart as a result of that. And once things stop, it's hard to get them started again, especially that kind of thing — seed collection."

ON THE ROAD AGAIN

Victorson spends her days focused on finding the most robust, healthy, seed-producing trees in the state, driving as much as 1,500 miles per month.

Once she locates them, she contacts landowners, and if needed, collects the seeds herself. For white oak, that means using a Bag-A-Nut™ that looks like a smaller version of a golf ball picker at a driving range. She then takes the acorns to UT for processing and then to the state nursery in Delano for growing into seedlings.

"Recently, the white oak regeneration rate has been a lot lower, and it's because of the shifting climate," she says. "It's been warmer and wetter, and white oak is really drought tolerant. So it's not regenerating at historical rates, and that's why we're focusing on it."

Prior to turning her attention to white oak, Victorson spent July through September of 2023 surveying for native crab apples. In addition to intensive data collection, she created an identification guide to help people determine the difference between crab apple species, with photos and detailed descriptions of their leaves, bark, fruit and flowers. Each tree she collects from will be professionally identified by a taxonomist.

PASSING THE TORCH

If Victorson is the Luke Skywalker of seeds, Scott Schlarbaum is her Yoda. The director of the Tree Improvement Program is not just her boss, but also her mentor. He's passing along his vast knowledge, connections and wisdom to help her do her job much quicker and more efficiently, Victorson says.

"Any questions I have, not just about the species, but about the business side of things and the communication part — about talking to people — is just as important as the knowledge of the species."

Schlarbaum joined UT in 1984 and is considered one of the country's leading forest geneticists, having researched and extensively written about forest genetics, forest health, and tree and plant cytogenetics. He's also testified multiple times before Congress on forest health and was a science advisor to the National Park Service on nonnative pests for five years.

"I actually got my dream job," Schlarbaum says. "I always wanted to be a university land grant school forest geneticist that ran a tree improvement program, and I was able to come here in 1984. It was just my 40th year!"

Schlarbaum and Victorson recently showed Mitzy Sosa, American Forests' manager of reforestation partnerships, what goes into collecting, bagging, processing and growing acorns and seedlings. At the state nursery, they showed



Top: Department of Agriculture's East Tennessee Seedling Nursery in Delano, Tenn., conducts research on tree health and grows seedlings for public and private reforestation, conservation and erosion control.

Bottom: Victorson empties the Bag-A-Nut™ acorn harvester. She analyzes data throughout the year to determine the time when acorns drop to the ground and are ripe for collecting.

TOP LEFT: AMI SHARP



Top left: (From L to R) Laura Dowdy with the East Tennessee Seedling Nursery, Director of the UT Tree Improvement Program Scott Schlarbaum, and Victorson at the state nursery. Top right: Healthy acorns after processing at the state nursery. Before the acorns are planted and become seedlings, staff will float them to remove the caps and stalks and weed out the bad ones before drying them on a screen and weighing them to determine their size. Bottom right: New Champion Tree Program National Director Jaq Payne kayaks to Tennessee's Champion Bald Cypress Tree.

Sosa 8-foot-tall white oak seedlings — the tallest they've ever grown. They also showed her how they submerge acorns in a water tank to remove their caps, sticks and leaves, and to identify the viable ones, which float while the others sink.

"I told Scott my favorite thing is to see the passion of everyone who works at the nursery, as well as the university, or even just going to see a property and how excited they are to be able to help," says Sosa, who oversees the partnership for American Forests. "I really do think that what Erin is doing is going to impact the supply there in Tennessee for a long time."

NEW BEGINNINGS FOR CHAMPIONS

Most white oak orchards in Tennessee are currently too young to produce acorns for reforestation, Victorson says. So, she is mostly gathering data on wild trees, such as when their acorns drop, their acorns' sizes, who owns them and how much prep work the ground requires before collection.

Large trees are often the biggest prize, and few get any bigger than one she found in Davidson County, which is home to Nashville. With a 22-foot circumference, the white oak sits outside a 103-year-old house that belongs to a country music star. The property manager let her collect from the tree and even invited her back next year.

She also has her eyes on several Champion Trees, including the Old Oak Tree at Tusculum University in East Tennessee's Greenville. Another one is in Dunlap, near Fall Creek Falls State Park. Both giants are not dropping acorns this year, but as soon as they do, Victorson says she'll be there.



BOTTOM RIGHT: KAYLA STUART

Champion Trees are the largest trees of a given species in the U.S., and for 83 years, American Forests has overseen the National Champion Tree Program and the National Register of Champion Trees.

Beginning in 2023, UT officially became the new home of the program, allowing access to

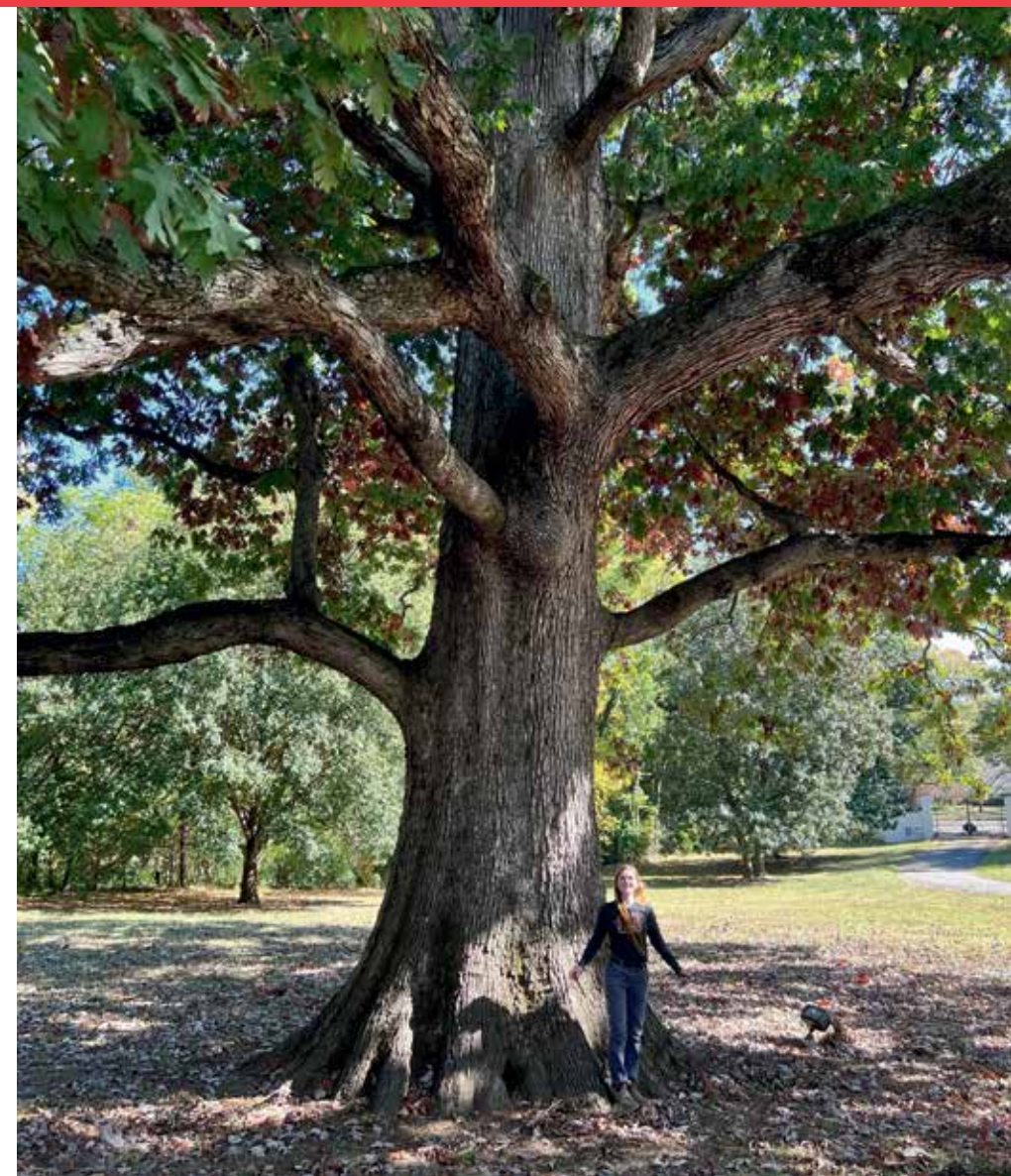
one of the most prestigious land grant research universities in the country. Building on years running the successful state program, the University's School of Natural Resources plans to advance the rich legacy of the National Champion Tree Program, while expanding the science and awareness of why these trees are so critical to biodiversity conservation.

"The three words I keep coming back to in terms of my vision for the future are education, information and conservation," says Jaq Payne, the new national director of the National Champion Tree Program. "It's all deeply connected. We are using the Champion Tree Program as a vehicle to educate the public about the importance of trees, gain more information about the physiology and how to best care for our largest trees, and then working toward the conservation of these large trees. Considering the outsized impact they have on our landscape and our wellbeing, it's all really important stuff."

Prior to taking the position as national director, Payne, who recently graduated with his Master's in Forestry from UT, was the Tennessee state director for the Champion Tree Program. He remembers with fondness the 2021 Tennessee Champion White Oak, which was determined by UT scientists to be over 400 years old. It was in the backyard of a house between a carport and a shed.


"It is stunning. It is gorgeous," Payne says excitedly. "For me, when I'm lying awake at 2 a.m. and my mind is spiraling, I always go back to mentally cataloging all of the life that this white oak has supported over four centuries."

Victorson is pursuing graduate school and has her eyes on an eventual doctorate. "I'm extremely passionate about this," she says. "I'll go sit on my computer late at night and be curious about a location or something. Then I'll go on iNaturalist, or I'll search through the databases that I use



for plant location, even at home. I'm invested!"

This is all music to Schlarbaum's ears. "When I came to the University of Tennessee, I don't think there was anybody more red-hot for research than me," he says. "But when I look back on my career, the things that bring a real smile to my face are the

people who have passed through this program and watching them basically mature, and you're intertwined with their lives." 

Lee Poston is a University of Tennessee, Knoxville alumnus who knows all the words to "Rocky Top" and writes about conservation issues from University Park, Md.

Above: Victorson collects acorns from the largest white oak in Davidson County, Tenn. She notes that large trees, especially Champion Trees, are usually the best candidates for collecting healthy acorns. Left: The trunk circumference of Davidson County, Tenn.'s largest white oak measures 22 feet. The tree sits outside the Nashville home of a country music star.

PHOTOS, THIS PAGE: COURTESY OF ERIN VICTORSON

The National Champion Tree Program

HONORING A RICH LEGACY AND A BRIGHT FUTURE

The National Champion Tree Program has a rich legacy at American Forests, with winners gracing our magazine pages in a variety of spotlights for generations. As we look back at the program highlights, we also look forward as it moves to a new home at one of the world's leading research land grant institutions, the University of Tennessee, Knoxville.

In 1940, the National Champion Tree Program was launched in American Forests magazine by noting: “Such a conservation activity, it is believed, will have incalculable benefits, not only in stimulating greater tree appreciation, but in establishing a nation-wide laboratory for tree and forestry studies by future generations.”

The National Register of Champion Trees currently lists 561 species, including notable Champions such as the planet's largest living organism, California's General Sherman Sequoia, a five-story-high saguaro in Arizona and a bald cypress that Indiana Jones would struggle to find deep in the swamps of Arkansas.

“We are excited that the University of Tennessee's School of Natural Resources will honor the storied legacy of the

National Champion Tree Program while bringing innovative new ideas and life to it,” says Ian Leahy, senior advisor for urban forestry with American Forests. “The program succeeds because a core group of passionate supporters have gone to incredible lengths to proudly seek, document and promote these magnificent trees across the land. We hope they will continue to embrace the program as it embarks on a new era embedded in the opportunities that a leading state Champion Tree program and academic research institution provide.”

The university plans to advance the science and understanding of large trees and share that information nationally and globally. This includes preserving their genetic material to discover how a tree becomes a Champion and forging new partnerships with scientists and supporters.

“There's a lot of questions that we have about the physiology and biology of our largest trees. We don't really know the upper limits of what these trees can do,” says Jaq Payne, the newly appointed director of the National Champion Tree Program. “So, I think there's a lot of room for research and collaboration there.”

How to engage with the National Champion Tree Program

The next National Register of Champion Trees is currently being updated and will be published in late 2024. Nominations for new Champion Trees will reopen to the public in the spring of 2025. Nomination forms will be available on the new website at www.nationalchampiontree.org, where tree-seekers can find the timeline for nominations, sign up for notifications and discover resources about the program. Follow the program on Instagram and Tiktok @nationalchampiontree, and on Facebook at National Champion Tree Program.



Right: Standing 275 feet tall, California's General Sherman Giant Sequoia is the world's largest tree by volume. It was the third named Champion Tree and is one of only three to have retained its Champion Tree status throughout the history of the program.



MARTY ALICATA / WIKIMEDIA COMMONS



Left: Clint Eastwood, actor, director and former mayor of Carmel, Calif., has a blue gum eucalyptus that was named “America's largest hardwood” in 2000 and was featured on the cover of American Forests Magazine. Right: Jaq Payne, the new Champion Tree Program national director, sees a bright future for the program focused on science, education and conservation.



UNLESS OTHERWISE NOTED, ALL PHOTOS: AMERICAN FORESTS



TARYN FERRO / AW. SNAP PHOTOGRAPHY



A TIMELINE OF CHAMPIONS:

1940

The nationwide hunt for the biggest trees in the United States launches with an appeal to the public to find and save the largest of a list of 100 tree species.

1945

The first list is published under the title “Report on American Big Trees” with over 200 trees listed as national Champions, including the General Sherman, Jardine Juniper and Queets Fir which are still National Champion Trees today.

1969

The “Social Register of Big Trees” is published with a special list of Champions growing in Hawai'i, which was the newest state in the Union at that time.

2004

The first time the National Register of Big Trees is available both in print and online.

2014

The 86-page “Measuring Guidelines Handbook” is published, a major step toward a more rigorous and consistent approach to Champion Tree measurements.

2015

The program's 75th anniversary reveals that Florida has the most Champion Trees of any state, with 133.

2024

The National Champion Tree Program enters a new era as it moves to the University of Tennessee, Knoxville's School of Natural Resources.

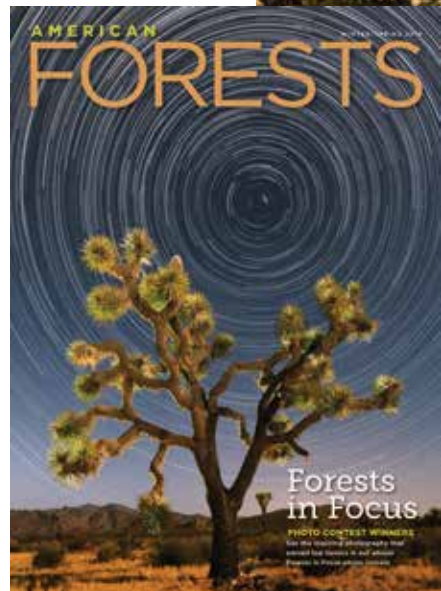
last look



FORESTS IN FOCUS

Annual photo contest open for submissions

Want to see your own photography grace the pages of *American Forests* magazine? Now is your opportunity! Submit your greatest photos to American Forests' 2024 Forests in Focus Photo Contest for the chance to see your work in the Summer 2024 issue. The contest is open for submissions through February 25, 2024. For more information and to submit your entry, visit americanforests.org/forests-in-focus.



Clockwise from top left: 2022 Grand Prize winner, "Lover of Light," by Rachel Feinberg; 2021 Grand Prize winner, "Kindred Spirit," by Dave Shaffer; 2023 Grand Prize winner, "A Lover's Gift," by Alyssa Hussey; 2019 Grand Prize winner, "Desert Canvas," by Everett Bloom.

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