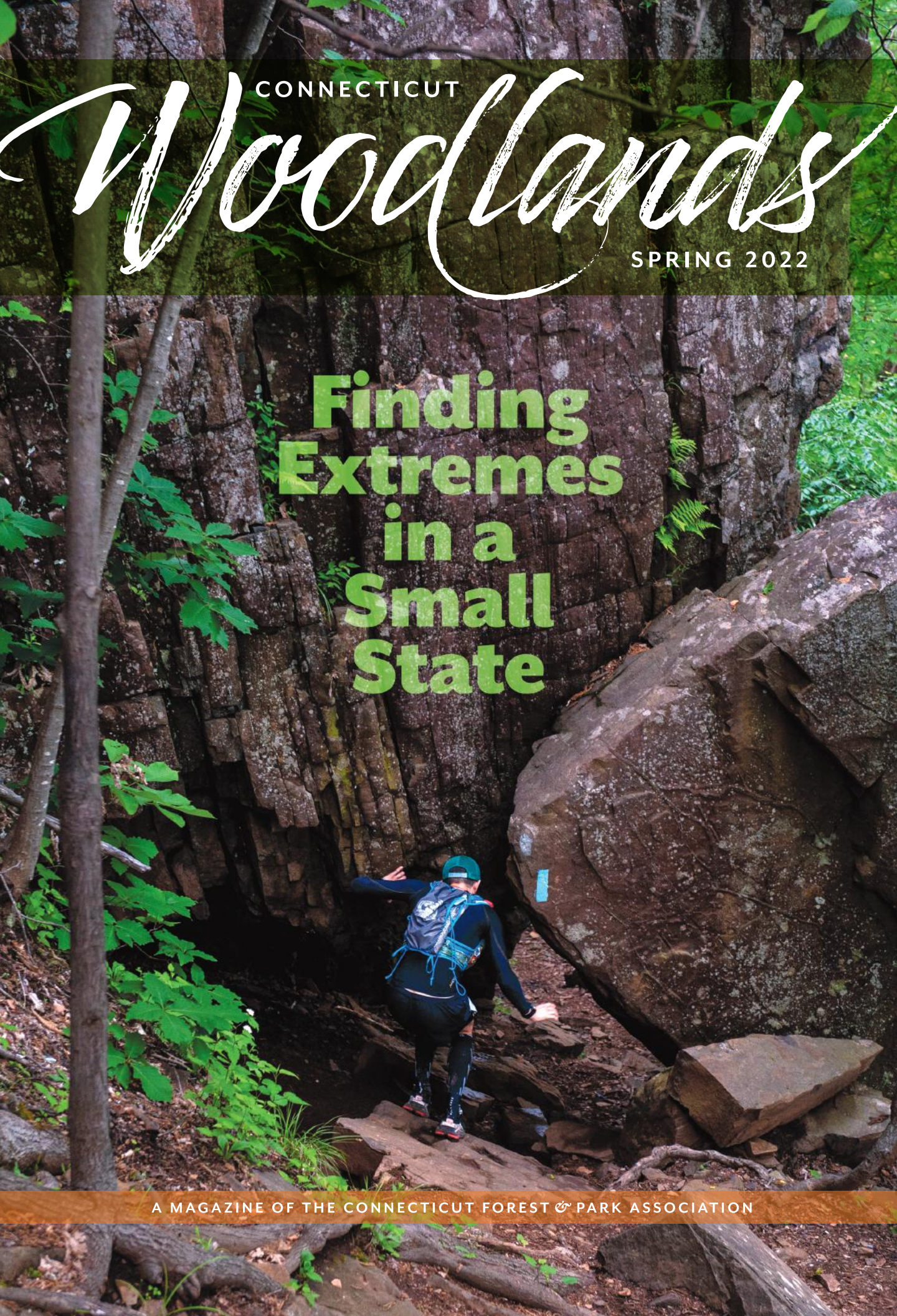
CONNECTICUT
# Woodlands
SPRING 2022



## Finding Extremes in a Small State

A MAGAZINE OF THE CONNECTICUT FOREST & PARK ASSOCIATION

**Land Acknowledgment Statement**

**CFPA acknowledges we are on the traditional lands of the Mashantucket Pequot Tribal Nation, the Mohegans, the Eastern Pequot, Schaghticoke, Golden Hill Paugussett, Nipmuc, and Niantic peoples. We pay our respect to the Indigenous people who are no longer here due to colonization, forced relocation, disease, and warfare. We thank them for stewarding this land throughout generations. We recognize the continued presence of Indigenous people on this territory who have survived attempted genocide, and who still hold ties to the land spiritually and culturally. We shall be good stewards of the land we all call Quinnentucket, Connecticut.**

## CONTRIBUTOR'S *Spotlight*

**Jake Koteen** was introduced to photography and the outdoors at an early age. His father, a pioneering white-water kayaker and studio photographer, taught him basic photography skills. Jake preferred hiking, backpacking, and running to whitewater, but his interest in photography grew. Now a professional photographer, outdoor enthusiast, and proud father of three young girls, Jake shot this issue's photo essay on trail ultrarunners in Connecticut. You can see more of his work at jakekoteen.com.

We caught up with Jake to learn more about how he's been able to combine his dual passions for photography and the outdoors.

# In This Issue

**Spring 2022 Volume 87/No. 2/ISSN #00106257**




**On the cover:** Ultrarunner Logan Gagne navigates Will Warren's Den near Rattlesnake Mountain on the Metacomet Trail. Photograph by Jake Koteen.

**How did you become a professional photographer?**

I went to school at the Brooks Institute of Photography in California for three years. I was into nature photography, but it's hard to get into that niche. I also wanted to get into travel photography, so I went off to some other countries on a shoestring. Lately I've been getting more into race photography. It's a mixture of shooting people and nature, which I really like.

**What is it like to shoot a trail race?**

Here in Connecticut, there's not a lot of grand views; there's little snippets of views here and there. We have so much rock and I'm just trying to work with what we have. I do think the technical nature of the trails is interesting, so often I'll find myself in technical areas. Trail running is harder than people think it is. I just try to make people look good and show off the terrain as best I can.

**It sounds like you're a serious runner.**

Yeah, I've been a little injured lately, but I've always been 100-mile curious; I'd gotten up to 100K. I've been running since middle school, and I ran cross country at Ithaca College for a year. Running clears my head, and my body just needs to move. It's not a sedentary body.

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## Editor's Note

"What do you want to be when you grow up?" For many children, it's a simple and familiar question, one that sparks the imagination, where a kid can envision a future filled with limitless possibilities. A doctor or a teacher, may be the reply, or perhaps a pilot, astronaut, or farmer. For our five-year-old, the answer has long been "a firefighter," although firefighting is often paired with baseball, construction, or snow plowing. As parents, we revel in Lukah's creative responses. You can be anything you want, we tell him, as long as it doesn't hurt anyone.

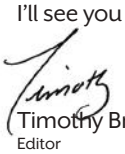
Implicit in the question is the notion that choice plays an equal if not greater role than chance in determining the trajectory of one's life. Of course, that's rarely, if ever, true. Ours is an unequal world, where the circumstances surrounding one's birth often foretell one's destiny regardless of ambition, passion, and drive. For many, just the simple act of imagining something other than what's right in front of them is a privilege they simply can't afford.

The great equalizer has always been free, accessible education for all. Education is not simply about gaining knowledge or learning new skills, it's about nurturing one's imagination, enabling someone to become whomever they want, and giving them the tools to achieve their dreams. Education is rooted in the belief that regardless of your background or identity, you have a vital role to play in shaping the future of the world.

Education is at the heart of CFPA's mission. Whether managing our forests more sustainably, protecting open space, saving endangered species, promoting healthy lifestyles, fighting climate change, or building a more inclusive environmental movement, education is key.

CFPA has partnered with Connecticut-based Earth Forward Group to develop environmental curriculum for the Liberian Institute for Girls, an exciting new project that has the potential to transform lives and to safeguard Liberia's remaining forest through the power of environmental education. And ultimately, to give these girls the freedom to decide who they want to be when they grow up.

I'll see you outside,



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## From the Statehouse

**By Eric Hammerling**

# Matching Connecticut's Big Goals with Big Investments

I have been involved in professional conservation policy work now for about 32 years, and over time I have seen a frustrating divide continue to grow (both nationally and in Connecticut) between visionary policy goals on one hand, and inadequate investments dedicated to meet them on the other.

In Connecticut, we have set some important aspirational goals associated with land conservation. In 1997, the General Assembly adopted the statutory goal that "Twenty-one percent of the State's land shall be held as open space land," and set a 2023 deadline for meeting that goal. Within that goal, 10 percent of Connecticut would be held as public lands such as state parks and forests, and 11 percent would be held as open space stewarded by land trusts, municipalities, and water companies. The General Assembly also authorized the state's open space grants program as the major investor of state resources to conserve state and non-state lands.

According to a 2020 annual report published by the Connecticut Council on Environmental Quality (CEQ), to date the state has acquired approximately 255,000 acres of state forests, parks, and other public lands over time—almost 80% of the goal for state lands (with roughly 65,000 acres left to meet the goal). Land trusts, municipalities, and water companies have collectively acquired around 250,000 acres over time—about 71% of the non-state lands open space goal (with roughly 100,000 acres left to meet the goal).

The law is very specific that we *shall* conserve 21% of Connecticut as open space, so doesn't that mean we have to do it? Why is it now commonly accepted that we are not going to meet our state's open space goal by the 2023 deadline? How long will it take to acquire the remaining 165,000 acres?

We have fallen short of the 21 percent goal as a state, of course, because resources for acquiring open space have not kept pace. Since 1998, the open space grants program at the Connecticut Department of Energy and Environmental Protection has awarded approximately $150 million in matching grants to almost 620 projects conserving over 40,000 acres. That seems like a lot of investment over time, but the investment level over 25 years averaging $5 million per year to protect 1,600 acres per year is unacceptably low. If we keep this same pace of investment going forward, it will take us another 100 years or more to acquire the remaining 165,000 acres required by law.

The existential threat of climate change gives us one final opportunity to narrow the gap between our ambitious goals and our underwhelming investments. The fact that forests, farmlands, and other natural and working lands are critical "natural climate solutions" which sequester and store carbon may provide the extra motivation to accelerate the pace of protecting these special places. Indeed, we may find that 21 percent conserved as open space is too little to provide the recreational, wildlife, public health, and many other benefits of the outdoors.

I hope we will leverage the urgency to take action on climate change to finally align our land conservation goals and resources. Our future literally depends upon it.

*Eric Hammerling has served as the Executive Director at the Connecticut Forest & Park Association since 2008.*

ON THE *Trail*

# Rerouting Trails through the Forest and Life

**By Tim Mack**

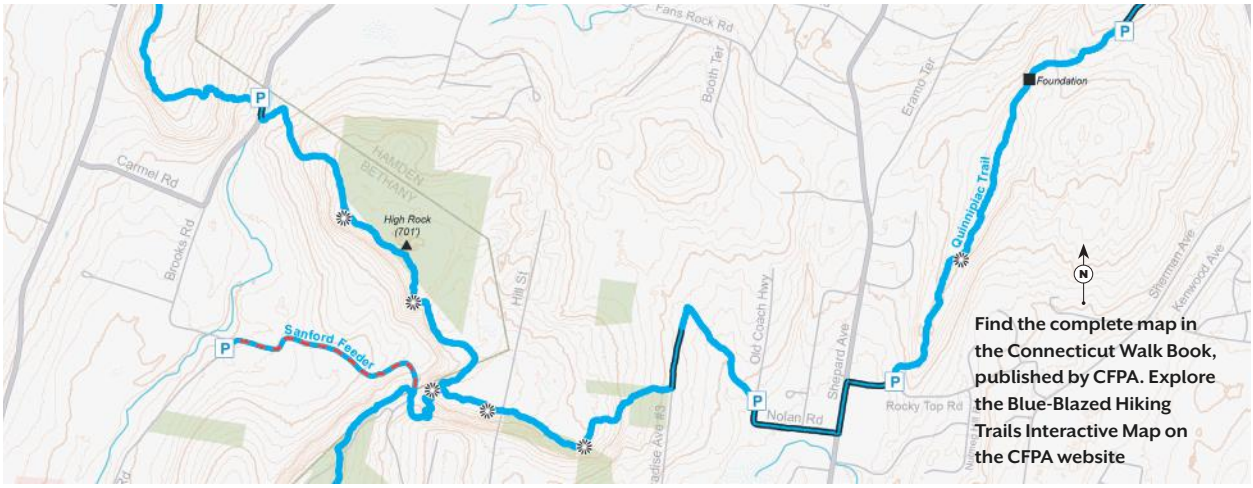
In the fall of 2008, my wife Roberta and I stood gazing out our kitchen window at the traprock ridge behind our house, admiring a resplendent sunset full of crimson and saffron hues that accentuated the crest of the ridge and the Blue-Blazed Quinnipiac Trail. We noticed some movement along the trail. In the shadows, we saw the silhouette of a skidder dragging a large red oak. Another tree followed. Then another. The trees were deposited onto a massive stack of logs destined for a mill. All told, the 18-acre property known as "Rocky Top" would lose more than 10 acres of mature forest along and below the Quinnipiac Trail.

We had wrongly assumed the Blue-Blazed Hiking Trail would forever protect the traprock ridge, but the trail was an easement through private property. The trail was relocated along a steep section of hillside adjacent to the new logging road and next to a section of mature forest spared by the clearcut. The clearcut resulted in a hillside of stumps, piles of undesirable logs, and considerable controversy in our town. But it was only the first step. The property owner of Rocky Top also wanted to remove 100 feet of traprock from the crest of the ridge to level the property to construct a "gentleman's farm"

We were sickened by the prospect of losing the ridge and helped organize a grassroots coalition that became known as the "Rocky Top Neighbors." We attended town meetings and led protests that garnered widespread media attention. The developer's application was ultimately denied. But less than a decade later, the Quinnipiac Trail and Rocky Top were threatened for a second time.

In 2017, a different developer submitted a proposal to flatten the ridge to build a 255-unit apartment complex. The Quinnipiac Trail was included in his plan. The trail would be rerouted up a new road and traverse a parking lot. A year-long battle ensued between us Rocky Top neighbors, the developer, and the Hamden Inland Wetlands Commission. Thankfully, that December, a Christmas miracle occurred, and the developer decided to donate all 18 acres to the Hamden Land Conservation Trust. Rocky Top is now protected in perpetuity.

The following year, Roberta and I became Trail Managers for 4.6 miles of the Quinnipiac Trail from Whitney Avenue in Hamden to Brooks Road in Bethany. This section includes the original Blue-Blazed Hiking Trail established in 1929 by the Rev. Edgar Heermance who had a summer home here. CFPA and the Town of Hamden dedicated the 1.2-mile portion from Rocky Top Road to Whitney Avenue as the "Edgar L. Heermance Section" in his honor. Like Heermance, we too have felt a spiritual connection to this place since we moved here nearly 30 years ago.




We adopted the trail from Elizabeth "Polly" Buckley who felt we were the right people for the job. Polly knew we were familiar with the area, and she bestowed as much trail knowledge as we could absorb, especially the importance of good blazes along the trail. I eventually completed sawyer training since our section is prone to blowdowns. During our first year as stewards, we rerouted the steep trail section up Rocky Top to a more comfortable ascent through the section of the spared mature forest.

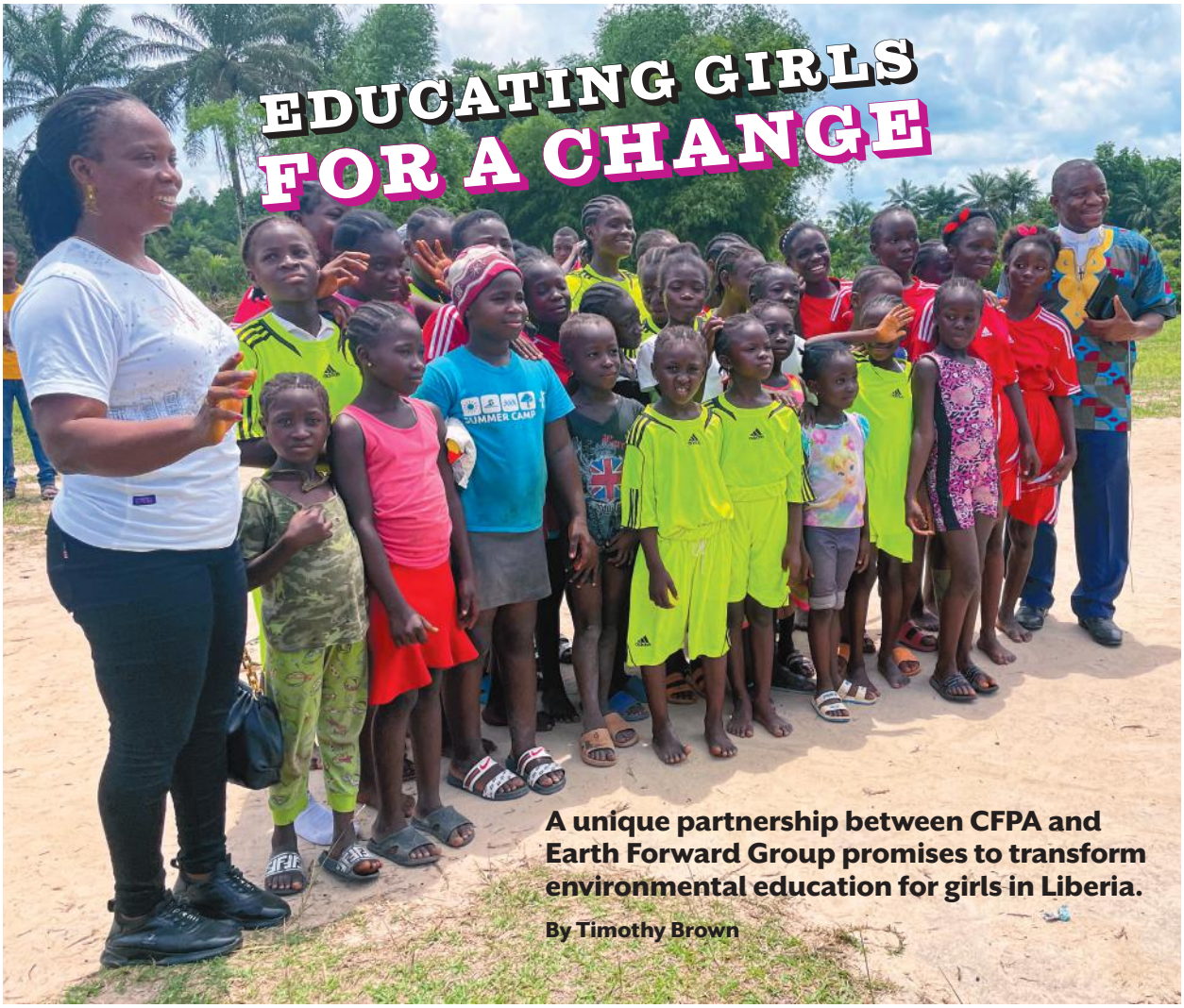
We completed the reroute with the help of the summer trail crew and Brennan Turner, then CFPA Trails Coordinator, as well as the beginning of a loop trail at the top of the ridge with multiple observation points. Later that summer, Rohan Kumar completed the loop trail for his Eagle Scout project. Standing upon the precipice, which has views of York Mountain and High Rock, I observed acres of young saplings below, each vying for light. Rocky Top was growing back. I now realize that clearcut logging, done responsibly, can result in a healthier forest.

In our second year as trail managers, the section of our trail from Old Coach to Paradise Road was in danger of a reroute. The new owner of the property wanted to build a house over the trail. Clare Cain, CFPA Trails Director, Roberta, and I met with the owner's representative and we successfully planned a reroute along the property edge by Shepard Brook, the perfect complement to the trail. Volunteers from Outdoor Afro of New Haven helped complete the reroute one Sunday morning, merging the new trail to the old trail where spring ephemerals bloom each year.

In our third year, we needed to reroute the section of trail from Brook's Road to High Rock that featured a popular overlook for hikers, especially during the pandemic when more hikers than ever have used the trails. There were also several large blowdowns that resulted in a blocked and very wet section of trail. Alex Bradley, CFPA Trails Program Field Coordinator, Wayne Fogg, coordinator of the CFPA "Rock Stars," Roberta, and I met to plan the reroute past the wet section and blowdowns. We also planned to circumvent a steep trail by blazing a manageable switchback ascent along a talus slope. These reroutes needed approval by the Regional Water Authority and help from the AmeriCorps NCCC crew, as well as much needed stonework assistance from the "Rock Stars," specialists in building stairs and retaining walls. We hope to complete the talus switchback reroute this spring.

Our activism to protect Rocky Top also rerouted the path of our lives. We know that nothing can be accomplished without the generous support of those who believe in a cause. And you may learn something along the way. A clearcut forest may result in new habitat for wildlife. The trail you hike upon may be rerouted, but hopefully will never be closed. The familiar path you follow may not always bring you to your desired outcome but may lead to better views and sunsets. In the end, a trail with good blazes, magnanimous landowners, and a sense of humor will lead you where you need to be at that precise moment in time. See you all on the trail!

*Tim is a retired respiratory therapist and Roberta is a retired middle school science teacher. They became Board Members of the Hamden Land Conservation Trust in 2018 and serve on the stewardship committee. Tim also became an Inland Wetlands Commissioner in Hamden in 2018 and is currently enrolled in CFPA's Master Woodland Manager program.*



# EDUCATING GIRLS FOR A CHANGE

**A unique partnership between CFPA and Earth Forward Group promises to transform environmental education for girls in Liberia.**

**By Timothy Brown**

**Beth Bernard, CFPA director of education, first felt a rush of excitement when she was invited to create an environmental curriculum for the Liberian Institute for Girls, or LIG, a new school for girls in Liberia. "My second thought was, Is this in my wheelhouse?" she said. "But the more I learned about Liberia, the needs of the children there, and their environmental needs, I thought, I just can't say no to this."**

Above: Wilhelmina Mulbah (left), LIG's in-country coordinator, poses with students during a site visit last year. Photo courtesy of Earth Forward Group.

The offer came from Diana McCarthy-Bercury, founder and principal of Earth Forward Group (EFG), an organization based in Woodbridge, Conn., that provides sustainability solutions for clients worldwide. Diana knew Beth through Project Learning Tree, an experiential, interdisciplinary environmental education program, and was convinced she was the right person for the job.

"The more I learned about LIG, the more I realized there are some direct ties to our mission at CFPA," Beth said. "We're working really hard to preserve forests in Connecticut, and we're very lucky to live in a state that is over 60 percent forested. Liberia's forests are in a place that ours were at the turn of the 20th century. If we're going to help combat climate change in Connecticut, we must also look outside our borders. Climate change is a borderless issue. We can take some of the lessons we've learned and share them."

It was James Kerkula who first dreamed of building a STEM (science, technology, engineering, and math) school for girls in Liberia's Todee district, some 45 minutes east of the capital, Monrovia. Orphaned in Liberia when he was six years old and educated by missionaries and Peace Corps volunteers, James trained to become a missionary before making his way to the U.S. where he earned a graduate degree at Eastern University. As executive director at Community Capital Advisors, James had led several community development projects, including starting a credit union and a charter school in

Philadelphia's North End. But wanted to do something to help people living in his homeland.

"When I was elementary school, we would walk from the village two-and-a-half hours to school," he said. "The situation for women in Liberia hasn't changed. The question is, What can we do?"

For EFG, it was important that the local community help to answer to that question. "We don't want to be these Americans from across the ocean telling them what they need," Diana said. "We want to make sure that it's designed by the people, for the people; by the students, for the students."

In 2021, EFG received a grant from the U.S. Embassy in Liberia to launch the Learning Lab, a mobile program to bring environmental lessons to students in villages in the Todee district—a rural area where it can be 20 miles to the nearest school—as they continue to raise funds to build the physical school. They hired Beth to develop the curriculum and train the teachers, and selected Mass Design Group (MDG), a Boston-based architecture firm that focuses on sustainable building, to design the school, which will be carbon positive and include a rain water system and agricultural gardens.

For Beth, developing an environmental curriculum for a place she'd never visited was both daunting and energizing. "In the U.S., there's set curriculum for science and environmental studies," she said. "But being able to start from where these people are and provide them a science curriculum, it's just super exciting and important." During an inspection of the 60-acre site where the school will be built, Mass Design Group collected seeds and other specimens for Beth so she could better tailor the curriculum to the region's endemic species. Sorna Sherif, academic dean at the Kakata Rural Teacher Training Institute (KRTTI), one of the three such institutes in Liberia and an LIG partner, recruited the trainee teachers and sent Beth a copy of Liberia's K-6 education standards. "There were some religious things in there that you wouldn't find in the States, outdated thinking about women and their bodies and how they should behave. Science wasn't prominent," she said.

Using Project Learning Tree as a framework, Beth developed a 24-week curriculum for the Learning Lab, and this past December, she taught 15 KRTTI trainee teachers. Despite the technical challenges of teaching on Zoom, the training was highly successful. At the end of the five-day course, trainee teachers received awards and certificates of completion at a special ceremony attended by representatives from the U.S. Embassy. Three teachers were selected to launch the Learning Lab program, which began in January with an introduction to basic ecological principles, such as how plants grow, and will eventually explore complex topics such as forest succession and climate change. LIG had hoped that 20 students would participate in the mobile program. By the third session, they had 270 students in attendance, far exceeding expectations and an early indication of the potential for this program to change lives. "Get to know your surroundings, connect with them, and then take action," Beth said. "(We're) making sure that the generation coming up has the knowledge to be environmental leaders."

Nestled along West Africa's Atlantic coast between Sierra Leone, Guinea, and Côte d'Ivoire, Liberia is a country approximately the size of Tennessee. It was founded in 1822 by the American Colonization Society (ACS), an organization whose members included slaveholders, politicians, and religious leaders concerned about the growing number of free Black people in the United States. Over the next quarter century, the ACS sponsored some 20,000 "settlers" to Liberia where they helped to establish laws and customs modeled after those of the U.S. In 1847, Liberia declared its independence, becoming the first African republic. Today, roughly five percent of its five million citizens are descended from these settlers. Liberia's deep ties to the U.S. have made it a beacon for people from throughout West Africa hoping to emigrate to America. But its complicated history has also created political and economic instability, making Liberia susceptible to violent coups and bloody civil wars, and its diverse natural environment vulnerable to resource extraction and exploitation from both domestic and foreign interests.


**"If we're going to help combat climate change in Connecticut, we must also look outside our borders."** Beth Bernard

Rich in biodiversity, the country boasts more than 40 percent of the region's remaining virgin rainforest and is home to over 2,200 plants and nearly 900 animals, including many

endemic and threatened species such as the western chimpanzee, pygmy hippopotamus, Diana monkey, forest elephant, and Jentink's duiker. Endangered birds such as the white-necked rockfowl, white-breasted guineafowl, and the Gola malimbe, a striking black forest weaver, are dependent on Liberia's lowland primary rainforest and old secondary growth for survival.

According to The Program on Forests, a multinational partnership based at the World Bank, 68 percent of Liberia is forested, the most of any West African nation. Forestry is the fourth largest sector of the Liberian economy and contributes 10 percent of the country's GDP. Of the nearly 40,000 full time workers in the forestry industry, 35 percent are women.

But Liberia's forests are under threat. Between 1990 and 2010, the country lost over 12 percent of its forests, much of it to fund the purchase of weapons during 14 years of civil war. And net forest depletion increased from one-half of one percent in 2005 to 32 percent just a decade later, primarily due to logging, mining, and agriculture. "Liberia could lose all of its remaining forests, or make a pivot and become a model for West Africa in terms of environmental sustainability," Beth said.

Despite the country's growing urban centers, over half the Liberian population still lives within two-and-a-half kilometers of forest. The World Bank warns that without urgent action, forests will become poverty-traps for those people whose livelihoods depend on them. A 2018 survey by the World Bank and Government of Liberia showed that households who live near forests earn 35 percent of their income from forest products, spending up to three hours a day collecting firewood or bushmeat, or making charcoal for subsistence or sale. These families have an annual income of just $783, far less than the national average of $2,440 a year. "The charcoal that we are dependent on for fuel, we don't just get it now," said Sorna. "You have to go far, far, far (to get it) because the trees are no longer around."

The survey also revealed low community participation in government-run forest management programs. Local chiefs tend to set rules about who can harvest forest products, and how much. Women typically have little influence in rural politics, which makes it challenging to garner support for an environmental school for girls.

"When I first went to meet with villagers, the weather was so bad," said Wilhelmina Mulbah, LIG's in-country coordinator, a mother of two who lives in Monrovia. "They realized if I was willing to walk all the way there in poor conditions, we were serious. They wanted to join LIG. Now they're all on board."

In addition to her work with LIG, Wilhelmina is also the president of the Rubber Planters Association. The daughter of a rubber farmer, she well understands why locals tend to view forests through a pragmatic lens. "If a tree doesn't produce fruit or rubber, it's considered worthless," she said. Beth's curriculum is designed to help shift this perspective by focusing on the inherent value of trees and forests. "It's important for the kids to start to grasp such a main concept so that they will help to protect our forests," said Wilhelmina.

LIG's mission to provide STEM education specifically for girls is unique in a country where most girls don't attend school past the third grade so they can help with the household or collect firewood. "Girls can't typically go to school for very long so they're very limited as to what they can do," Diana said. "We're trying to find ways that close the gap, and for families to see value in these girls going to school."

"In Liberia, there's a little bit of resistance to the focus on women and girls," echoes Arabella Comyn, who oversees operations for EFG in Liberia. "Last summer we did some stakeholder engagements where people said, 'You're doing this for girls; what are you going to do for boys?' It's complicated because we acknowledge that there's obviously some issues for boys. But our focus is on girls."

LIG has a requirement that at least half of the students in the program must be girls, but they're also responding to the needs of the community. At a recent meeting, one of the women elders asked if EFG would add some enrichment programs so she could learn how to read. "Yes, we can, and yes we will," Diana responded.

"LIG is going to be a school for girls, but that's not all we want to be," said Arabella. "We also want to be training adults and employ them. We also want to continue the Learning Lab after the school is going. The girls are front of things, and that's why we're here—for them—but we want to create something that can benefit the entire community."

For Beth, environmental education is all about empowering people to create positive change. "I hope that both the teachers, the students—and their families—can get the knowledge, the confidence, and the skills to become environmental leaders to take action in their communities, whether it's with their local government or their small town to improve the environment, to improve climate change, to make their situation better, to do things for themselves. And that all starts with the knowledge of how things work."

# Finding Extremes in a Small State

**Photos and words by Jake Koteen**

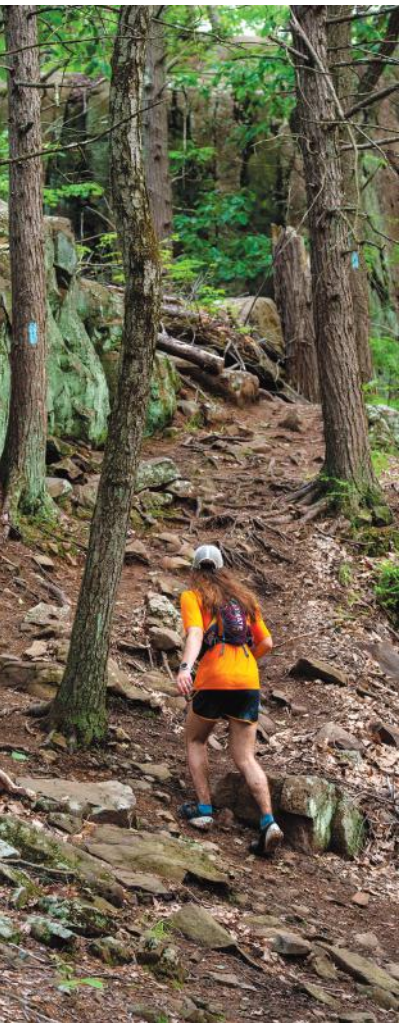
In the running world, the small subset of trail ultrarunners are a special group. Aside from their mental and physical fortitude, they are respectful, encouraging, and focus on community over competition. They are connected by a shared love for testing personal limits. And they find joy in helping each other achieve seemingly impossible goals. ➡

For local ultrarunners, there's no greater challenge than the 112-mile New England Trail, or NET. Starting in Suffield on the Massachusetts border, runners dodge roots and endless rocks as they navigate through Penwood State Park, past the historic Heublein Tower, along Ragged Mountain's ridgeline, and climb up Castle Craig. Further south, they ascend Tri-Mountain, Mount Higby, and Bluff Head before finally dipping their toes in the salty waters of Long Island Sound in Guilford. While the sheer elevation of our mountains can't compare with those out West, the total elevation gain and the combined difficulty of the Blue-Blazed Trails that comprise the NET—the Metacomet, the Mattabesett, and the Menunkatuck—make running the entire trail as difficult as anything you'd find in bigger states.

"With all the hiking I have done in the Adirondacks and the Whites, I didn't think it could get much rockier," said Benjamin Nalette. "Boy was I wrong. I truly underestimated the difficulty of the terrain and rock."

Last June, Art Byram, ultrarunner and host of the popular Cultra Trail Running Podcast, organized an elite group who raced the entire NET from end-to-end.

"While I struggled with the heat and humidity, I knew I would never quit," said Amy Hanlon. "I loved the struggle, and I loved the camaraderie. Even when all my body wanted to do was curl up into a ball on the ground and sleep, my heart wanted to get to the Long Island Sound. I did, and it was perfect."



# Discovering Our Path

By Rosie Craemer Shea

## "Geeeeeeeeeeemooooooooooooo."

These days, you may hear Jeremiah and me in the woods before you see us. Jer (aka: Jer Bear) loves to chant two-to-three syllable noise combinations and then wait for me to repeat them in a singsong way. He sometimes repeats sounds, but he can come up with a million different combinations without much thought at all. On a good day, Jer could be literally skipping as he goes, maybe stopping at trees to feel their bark or look up at the leaves blowing in the breeze. On a not so good day, he could be having an episode which might include self-injurious nose pressing, aggression, or yelling so loudly that I imagine that he has awakened all the creatures in the forest and all the people in the valley. Jer has what our family calls, BIG autism. He was diagnosed at age two-and-a-half and is now 25. Fortunately, the woods have always been our safe escape.

Jer Bear began hiking with me even before he was born and then continued to be my hiking companion as an infant. Many of his first steps were on a short trail at the West Hartford Reservoir. At age four we encouraged him to hike up to the first lookout on Talcott Mountain. He protested at first, but we felt this was the perfect way for him to practice balance and to learn to problem solve obstacles. When we reached the top, he smiled and tip-toed back and forth and waving his hands in excitement.

As Jer Bear grew, hiking the woodland trails became an important path for us, both literally and figuratively. It became a path to quality family time without the massive planning and strategic thinking—social stories, reinforcers, schedules, snacks, entrance and exit strategies, and behavior plans—that the other outings would entail. Hiking also became a path that strengthened friendships. Jer bonded with family friends and extended relatives and taught them lessons about patience and inclusiveness. Most important, hiking became a path of acceptance since we didn't have to worry about Jer's behaviors. If he wanted to wave his hands and dance around making his Jer Bear noises, there was no judgement. If he was having a hard time and lacked control, he was surrounded by loving people and forgiving trees.

**Hiking became a path of acceptance since we didn't have to worry about Jer's behaviors… if he was having a hard time and lacked control, he was surrounded by loving people and forgiving trees.**

During elementary school and into middle school, hiking became a path to socialization. We would invite his classmates to join us. This was the perfect playdate—the trails were familiar, there was no pressure to "perform," and they could see Jer in his element. Hiking also became Jer's primary form of exercise. He tried lots of different sports, from rock climbing to unified soccer to yoga, but the only activity that came easy to him was walking in the woods. Jer became a true tree hugger and his peers recognized how much he loved the outdoors. They learned to see him not only capable but outstanding at something.

Once adolescence hit, hiking became our path to find moments of peace. Jer grew stronger, and with hormones raging, he became more self-injurious and aggressive. His toddler meltdowns became adult episodes that were—and still can be—scary. If one doesn't know Jer and understand how difficult transitions are for him, that his actions are borne of frustration with not being able to communicate how he feels, they may incorrectly assume that he is misbehaving and not realize that this is just a part of BIG autism. On the trail, all these issues seemed to dissolve into the vast forests and what was truly important—simply spending time together in the fresh air—came into focus. As a result, the woods also became our path to clarity. The challenges of endless IEPs, PPTs, and IPs faded away.

Today the woods are our path to adventure and new experiences. Finding new trails to discover has become our thing. In the car, I'll say, "Let's go on an…" and Jer replies "adventure!" During the first wave of the pandemic, when day programs for people with special needs people were shut down, getting into the woods became a daily necessity for both Jer and me. But with the trails becoming more crowded as people sought refuge in nature, we decided to explore less traveled trails. My sister, Mary, one of Jer's favorite hiking buddies, suggested some different sections of the Metacomet. Over the years we had hiked parts of this Blue-Blazed Trail at the West Hartford Reservoir, Talcott Mountain, and Penwood State Park, but now we ventured to the other side of Penwood into Simsbury, Tariffville, and beyond. We also hiked at Ragged Mountain, Rattlesnake Mountain, and one of our favorite trails behind the Hill-Stead Museum. Finally, we explored the Shenipsit State Forest and Soapstone Mountain. I'll often say to Jer, "What is my favorite thing to do? Hiking…" He'll move closer to me, look at his reflection in my eyes, and reply, "with Jer-ry." Now we have lots of favorite "secret spots" where Jer can be himself.

One of the main reasons Jer feels so comfortable in the woods is because of the supportive hiking community. We are grateful for the CFPA volunteers who take care of the trails and for the friendly hikers we encounter along the way. When we meet hikers and explain that Jer has BIG autism—and may smell them or hug them as they pass by—they seem to immediately accept him. If Jer is in the middle of an episode, hikers tell me not to worry and share words of encouragement. Others greet us and pass by as if the situation is normal, which eases everyone's stress level.

Whether Jer is "skippy" and happily describing our natural surroundings on repeat—"gee, ra, sa, lee," (tree, rock, sun, leaves)—or sitting at the base of a tree enjoying the view, hikers always extend a warm "Hello." They understand the need for calm and always remember us when we meet them again. There is the woman with her rescue dogs who always stops to get a hug from Jer. It makes her day, she says. There's the hiker with two labs who never minds if Jer pulls him close for a quick sniff. The family who tells us that Jer reminds them of their cousin. The man who, without being asked, retrieves Jer's water bottle that he has tossed over the edge. The trail runners who insist that it makes them better runners when Jer sits regrouping in the middle of the path. These are just a few of the kind people who, whether they know it or not, help to make the world a better place and the woods our safe escape.

*Rosie Craemer Shea is an avid hiker and yogi who spends a lot of time on Blue-Blazed Trails and has summited the highest peak in each of the New England states. An academic advisor and English tutor at Opportunity Academy High School in Hartford, Rosie also serves on the boards of Connecticut Families for Effective Autism Treatment and Journey Found, Inc.*

# Creating Habitat for a Native Rabbit

## Once a candidate for protection under the Endangered Species Act, the New England Cottontail is making a comeback.

By Hanna Holcomb

Searching for the New England Cottontail, the region's only native rabbit, isn't exactly glamorous work. Tucked in the tangled shrubs, saplings, and vines of a thicket too dense and thorny for people to walk though, this shy brown rabbit often eludes visual detection.

"The most efficient way to determine whether you've got New England Cottontails in an area is to go out and collect fecal pellets and have those analyzed for DNA," said Lisa Wahle, a wildlife biologist and contractor to the Wildlife Management Institute at the Connecticut Department of Energy and Environmental Protection (DEEP). "That involves going into some terrible thorny thicket, crawling through, and picking up poo."

Researchers are driven into the thicket to help save this vulnerable rabbit. Once abundant from New York to Maine, the New England Cottontail (*Sylvilagus transitionalis*) now occupies only about 15 percent of its historic range, living in five isolated subpopulations throughout the region. The decline is largely caused by loss of young forest habitat.

> "If you go in and wipe out all of the habitat because it's all invasive, you've basically wiped out the New England Cottontail." **Lisa Wahle**

In 2006, the U.S. Fish and Wildlife Service (USFWS) classified the New England Cottontail as a candidate species for protection under the Endangered Species Act. But thanks to the efforts of multiple agencies to create new habitat and establish a captive breeding program, rabbit populations began to recover. By 2015, the region had 18,000 acres of young forest habitat and an estimated 10,500 New England Cottontails. The federal government delisted the rabbit with the expectation that conservation targets of 27,000 acres of young forest habitat and 13,500 rabbits will be met by 2030.

Though powerline corridors, abandoned fields converting to forest, and coastal shrublands may look different, they are all examples of young forest habitat, places where enough sunlight reaches the ground to support the dense growth of shrubs, vines, wildflowers, and small trees. These thickets are ideal for the New England Cottontail. Research suggests that rabbits will stay within 16 feet of a thicket to avoid predators like fox, coyote, and owl. Thickets also provide food, especially when interspersed with open grassy areas. Rabbits feed on grasses, sedges, and flowers in summer, and bark, twigs, and buds in winter. And though they prefer native species like blueberry and dogwood, New England Cottontails will also eat non-native species like multiflora rose.

"It is almost blasphemous to say that an invasive has some value because everybody's really gotten the message—and rightly so—that invasives aren't good, and we certainly don't want to promote them," said Wahle. "But if it's the only habitat there and you have an existing population of cottontails, you've just got to be really careful on how you manage that. If you go in and wipe out all of the habitat because it's all invasive, you've basically wiped out the New England Cottontail population."

In addition to the New England Cottontail, Connecticut's Wildlife Action Plan identifies more than 50 young forest species as species of Greatest Conservation Need. The American Woodcock, Golden-winged warbler, wood turtle, and bobcat all depend on the food and cover provided by young forest.

But young forests don't last forever. After about 10 to 20 years, depending on factors like rainfall and growing season length, the broadening canopies block light from reaching the forest floor and stunt the understory growth. Historically, natural forces like wildfire, flooding, and pests periodically cleared patches of mature trees, giving rise to young forest. But today those forces are largely suppressed.

According to data from the Forest Inventory and Analysis National Program, young forest made up about 30 percent of all of Connecticut's timberland in 1953. By 2019, however, young forest accounted for only 5 percent of the state's timberland, much of it lost to development and forest maturation. New England Cottontail populations require 25-acre blocks of young forest habitat, and studies suggest that rabbits in a block 5 acres or less are twice as likely to be killed by predators as rabbits in a 12-acre block or larger.


Creating young forest habitat—stands of thick shrubs and young trees interspersed with open areas of grasses and other low plants—is critical for conserving the New England Cottontail.

Habitat quantity is especially important as New England Cottontails compete for resources with the nearly identical and more abundant Eastern Cottontail (*Sylvilagus floridanus*), a non-native species introduced from the Midwest for hunting in the late 1800s. Having evolved in grasslands, the Eastern Cottontail's eyes are about twice as large as the New England Cottontail's, making it better at detecting predators from a further distance. It can outcompete the New England Cottontail where resources are limited and is less dependent on young forest stands than the New England Cottontail. "They just do better in our fragmented landscape," said Wahle of the Eastern Cottontail. "And they came from all over their range when they were imported so they've got great genetic diversity."

By contrast, New England Cottontails are threatened by a genetic bottleneck, when a population gets too small and lacks genetic diversity. As young forest becomes more fragmented, isolated New England Cottontail populations are unable to disperse and exchange genetic material. Smaller populations can lead to inbreeding, which can

The captive breeding program at the Roger Williams Park Zoo has released more than 300 New England Cottontails into the wild.

amplify the effects of harmful genes and reduce the likelihood of survival.

Though the New England Cottontail needs young forest to survive, managing for this habitat is labor intensive, time consuming, and expensive. Keeping young forests young or establishing new young forest may require clear-cut logging, controlled burns, removing non-native species, and planting native shrubs.

Tom McAvoy, owner of Cottontail Farm knows just how intensive establishing and maintaining young forest can be. When McAvoy moved into his farmhouse on 115 acres in Scotland, Conn., he planned to clear some of the overgrown pastures, but stopped when a DEEP biologist asked if they could survey for New England Cottontails on his property. After a population was found, McAvoy began working with federal and state agencies to manage for young forest habitat and support the cottontails.

McAvoy began the arduous process of removing invasive species and planting native shrubs with assistance from DEEP, the Natural Resources Conservation Service (NRCS), and USFWS. It took seven years to transform the once-overgrown pastures into 75 acres of New England Cottontail habitat. Connecticut is more than 90 percent privately-owned, and private landowners are crucial to providing enough connected habitat for New England Cottontails.

> Despite the success of the captive breeding program, sustaining wild populations will require the continued creation of connected young forest habitat throughout the Northeast.

"I would encourage anyone to learn about how they can best manage their land for the long term, not only for themselves but for all the species that benefit from it," McAvoy said.

Over the last three years, NRCS has funded the creation of about 240 acres of young forest habitat in Connecticut through their Environmental Quality Incentives Program. The program provides private landowners with funding for timber harvests required to create young forests. In addition, many landowners sell the felled timber. Future cuts to maintain young forest, however, can be costly.

"If you're having an early successional forest and you're trying to keep it in early successional forest, it means that every 7 to 10 years you're cutting down the taller trees and there's not really a market for them," said Thomas Morgart, Connecticut State Conservationist. "If you own a large parcel of land, maybe 100 acres of timber, rotate your early successional habitat across the property so that every 10 years you're harvesting about 10 acres. You always have a new block of early successional habitat coming on as the other block is getting a little less early successional. The birds, the bunnies, and all the critters that like that are going to move along with it."

The Great Thicket National Wildlife Refuge was created in 2016 to ensure permanent young forest and shrubland management throughout the Northeast. Rather than protecting a single parcel, the refuge is comprised of 10 broad Refuge Acquisition Focus Areas (RAFAs) in New England and New York.

"These RAFAs were based on recent and historic locations of New England Cottontail that represented the best opportunity for sustaining populations," said Julia Firl, Senior Realty

> "Nobody has ever bred this thing in large numbers, or at all. We weren't quite sure how they were going to do in captivity, being a wild, flighty rabbit." **Louis Perrotti**

Specialist with the USFWS. "They were developed in collaboration with biologists and wildlife managers with the various state wildlife agencies."

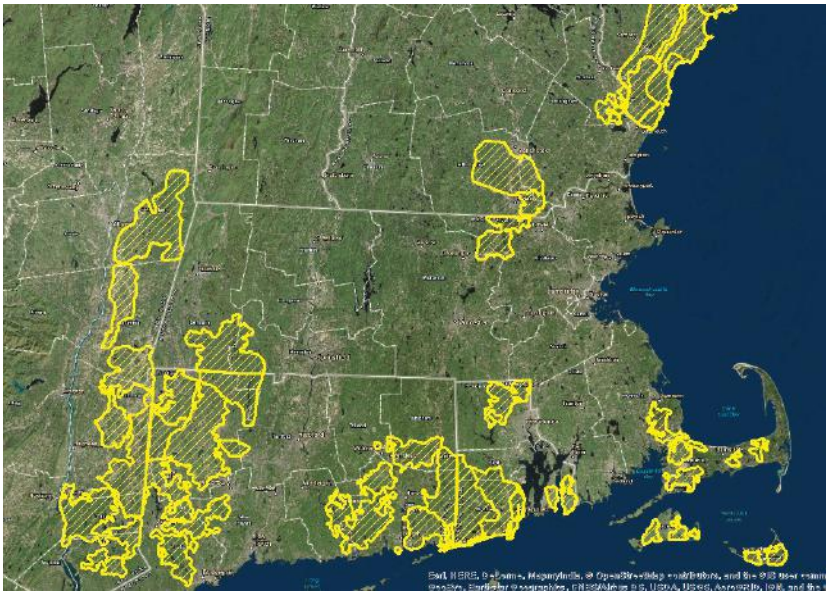
Within each RAFA, the USFWS works with landowners to acquire property that will help protect habitat quality and connectivity for the New England Cottontail and other obligate young forest species. So far, 270 acres have been acquired in Maine, New York, and Connecticut. Connecticut's first contribution, a 78-acre parcel on the edge of the Ledyard-Pachaug RAFA, was acquired in 2020.

CFPA's Caron Forest, located within one of the RAFAs in Stonington, is under consideration by the U.S. Fish and Wildlife Service to potentially join the Great Thicket National Wildlife Refuge. In 2020, 12 acres were harvested at Caron Forest to create young forest habitat. Though New England Cottontails don't yet inhabit the forest, a population exists about 2 kilometers away and may one day disperse to this area.

At Roger Williams Park Zoo in Providence, Rhode Island, a New England Cottontail captive breeding program is helping to boost rabbit populations in the wild. The program began in 2010 with just six rabbits, three male and three female.

"Nobody has ever bred this thing in large numbers, or at all," said Louis Perrotti, Director of Conservation Programs at the Zoo. "We weren't quite sure how they were going to do in captivity, being a wild, flighty rabbit."

Today, Roger Williams Park Zoo typically has 18 breeders at a time, five males and 13 females. To date, more than 300 rabbits have been released in Maine and New Hampshire as well as to stocking areas in Rhode Island where biologists use "hardening pens" to acclimate rabbits to the wild without the threat of predators.



The Great Thicket National Wildlife Refuge is comprised of 10 broad Focus Areas that represent the best opportunity for sustaining populations.

In addition to augmenting the number of wild New England Cottontails, the program helps promote genetic diversity. Roger Williams partners with the Wildlife Genetics and Ecology Lab at the University of Rhode Island to analyze the DNA of bred rabbits to determine the best release locations based on their genetics.

"They do a lot of the recommendations based on who the sires and the dames are, and where offspring from those animals have gone before," said Perrotti. "We have a DNA snapshot of every single rabbit that's been bred, and we can look at populations and make really well-educated decisions based on that data."

Despite the successes of the captive breeding program, sustaining wild populations will require the continued creation and management of connected young forest habitat throughout the Northeast.

Why are conservationists working so hard to protect a rabbit whose relative, the Eastern Cottontail, serves a similar ecological function, particularly when maintaining the young forest habitat that New England Cottontails require is difficult and often provides little recreational, aesthetic, or lumber value to people? For Wahle and other conservationists, the answer is simple: we have a moral responsibility to protect this native rabbit and other obligate young forest species.

"It's true an Eastern Cottontail probably functions as dinner for a predator just as well as a New England Cottontail," she said. "But we still have this native animal. We don't know exactly if it holds some special virtues, but we have an obligation to see that it survives."

*Hanna Holcomb, a native of Woodstock, Conn., is a freelance writer and naturalist living in Idaho.*

## Night of the Blood Moon

By Srinivas Mandavilli

I.
My grandmother told me stories of Rama Chandra
on a terrace during summer nights,
and the moon watched us like an owl.
I can see the empty early morning sky,
suddenly resplendent like her saree unfurled.

I tell grandmother's stories to my daughter,
mythical tales of the moon,
stroking her back
sing that it is a bird and could be netted to stay.

It was born out of churning oceans,
a minor God riding his chariot,
tonight is an angry moth penetrating the opacity,
a corpuscle carrying all the oxygen for this night,

I point to it, a quiet evanescent hole in the sky
past the skylight—
sweet red flesh of a peach. I say
it had the skin of a bone yesterday, a sesamoid,
mere suffix to the mighty Rama.

II.
She calls to ask if I see the Blood Moon.
I say I cannot see anything through the tall pines,
will need to visit her world of open spaces.

I see her stand by windowpanes,
her body between continents,
solar systems, universes.
The moon is not an eye, it is her face—
white as the ivory tusk of Ganesha.
She becomes a crescent, a necessary hook
the night hangs on.

This poem first appeared in the chapbook, Gods in the Foyer (Antrim House, 2016).

*Srinivas Mandavilli, who was born in India, is a Senior Attending Pathologist at Hartford Hospital and lives in West Harford. He has published poems in The Raven's Perch, Indolent Books, Connecticut River Review, Caduceus, and the Journal of the American Medical Association.*

## CFPA Updates

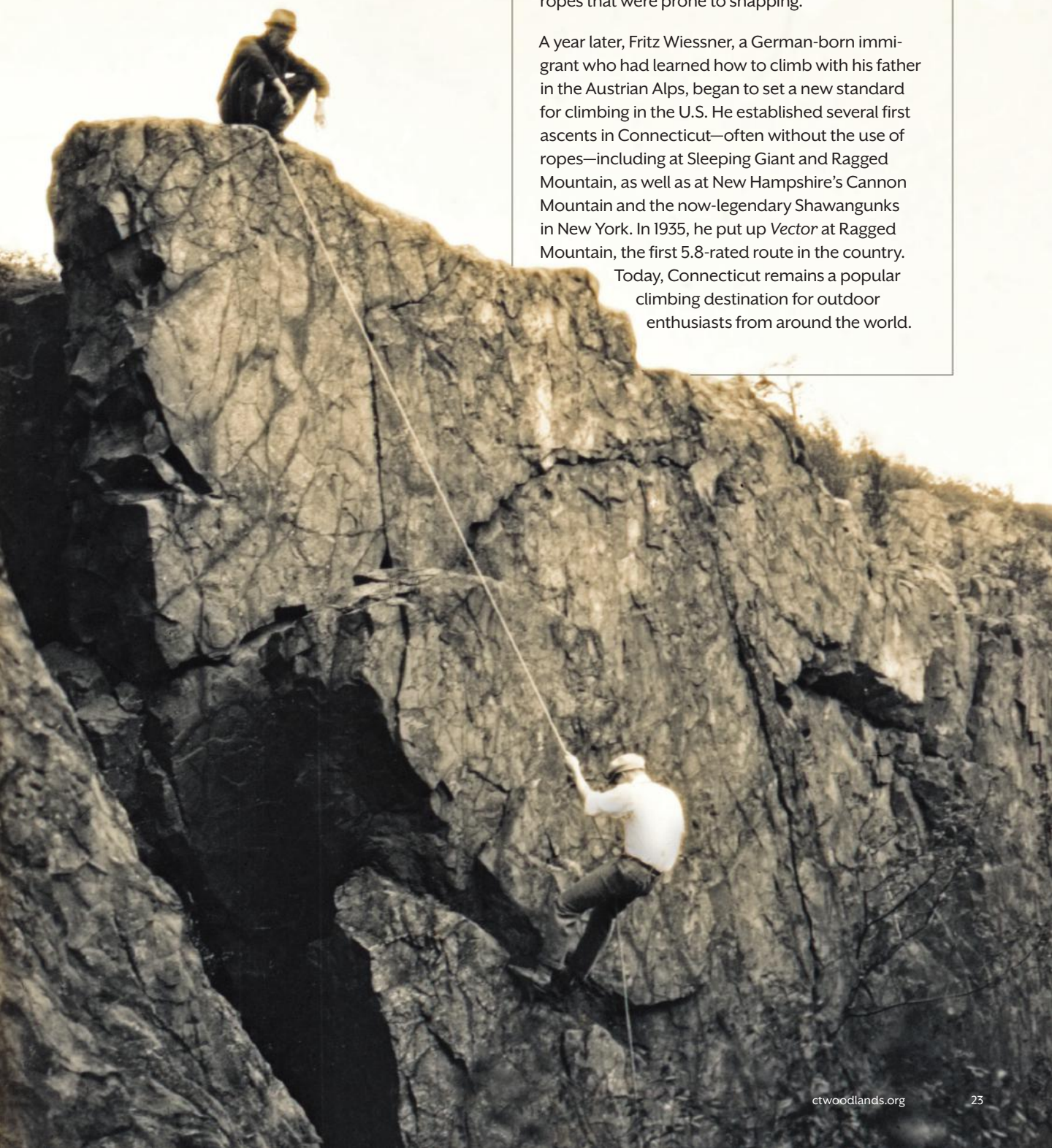
CFPA member Morrow Long recently completed the 800-mile Challenge.

CFPA's Blue-Blazed Trails Hiking Challenge is a great way to motivate yourself–and others–to get outside and stay active as you explore the beautiful and diverse 825 miles of Blue-Blazed Trails. The Challenge is open to everyone regardless of hiking experience, and you set your own hiking goals. Since September, Kate Chamberland, CFPA's AmeriCorps service member, has managed the Hiking Challenge, including overseeing several improvements to the program, such as new Challenge categories (50, 200, 400, and 800 miles), new prizes, and an online registration system. The Hiking Challenge currently has more than 190 active participants, with three-quarters being new participants. "Just do it! You'll find amazing sights and wildlife close to home," said Morrow Long, a new CFPA member and 800-miler who recently completed the Challenge. "And you'll never regret time spent in nature."

"I absolutely love hearing all these stories and the personal connections formed out in nature," Kate said. "It increases my own sense of community as well as uplifting the wonderful members that make up the CFPA community."

Are you ready for a challenge? Join us at: ctwoodlands.org/blue-blazed-hiking-trails/blue-blazed-trails-hiking-challenge

# Pathways



**IN 1930,** a group of climbers from the Connecticut chapter of the Appalachian Mountain Club (AMC) traveled to Boston to learn the latest techniques, including top roping, of the emerging sport. They introduced these techniques to climbers in the AMC, Yale Mountaineering Club, and other local outing clubs. Soon, Connecticut's iconic Traprock Ridge, as well as points further south, such as Chatfield Hollow, began to attract climbers from across the region. Protection was scant in those early days, as seen in the above photo. Climbers wore hiking boots, but no helmets, and used hemp ropes that were prone to snapping.

A year later, Fritz Wiessner, a German-born immigrant who had learned how to climb with his father in the Austrian Alps, began to set a new standard for climbing in the U.S. He established several first ascents in Connecticut—often without the use of ropes—including at Sleeping Giant and Ragged Mountain, as well as at New Hampshire's Cannon Mountain and the now-legendary Shawangunks in New York. In 1935, he put up *Vector* at Ragged Mountain, the first 5.8-rated route in the country. Today, Connecticut remains a popular climbing destination for outdoor enthusiasts from around the world.

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