



Conserving Connecticut's Wood Ducks







**Laurie D. Morrissey**, had an unusual—and enviable childhood. For forty years, her father, William P. Dougal,

served as the ranger at Lake Waramaug and Mt. Tom state parks. Laurie grew up exploring the woods and waterways of Connecticut's Western Highlands with her father, whom she credits for her love of nature. Today, she resides in New Hampshire where she writes about the environment, culture, and higher education. We caught up with Laurie to learn more about her childhood and her writing.

## What is something you were surprised to learn while researching the story about wood ducks?

I was surprised that to learn that the ducklings leave the nest cavity or box just a day after hatching, and that they may leap from as high as 50 or 60 feet.



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On the cover: A male wood duck with its distinctive plumage poses for photographer Jeff Ginsburg.

### What was it like growing up with a father who was a Connecticut park ranger?

It was the best possible childhood. My brother and I had a state park for a back yard! Our father's work was always interesting to us, whether it was running and maintaining the campground in summer or building picnic tables and making signs in winter. Squantz Pond State Park was the first state park he worked at as a young man, so the wood duck project at Squantz Pond is of special interest to me.

#### What inspired you to become a nature writer?

I spent lots of time by my father's side growing up, and he was a great observer of nature.

#### What is one piece of advice you'd give others who are interested in nature writing?

The most important would be to spend as much time as possible outdoors observing nature in every season. I also recommend reading good nonfiction, starting with John McPhee.



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#### **Editor's Note**

Apple picking. The smell of pumpkin pie cooling in the kitchen. The brilliance of red, orange, yellow, and purple leaves shimmering under a crisp, powder blue sky. Like many others in Connecticut, autumn has long been my favorite season. After the oppressive heat and humidity of summer, fall feels fresh and invigorating. There's no better time of year for hiking, camping, sleeping, and, of course, eating.

But my love affair with fall is becoming increasingly tempered by the blunt indifference of climate change. As I write this, much of the East Coast from Maryland to New England is recovering from Hurricane Ida—the second most damaging hurricane to ever hit the state of Louisiana—which brought record rainfall and lethal flooding to the Northeast. While in California and other parts of the West, wildfires rage, consuming millions of acres and threatening people, property, and wildlife with no end in sight.

As the father of two small children, I try to focus on the joys of fall, to cultivate in our kids a sense of wonder and awe in the changing seasons. But sometimes—particularly in the midst of a pandemic that has devastated our country, amplified political divisions, and sown scientific misinformation about a vaccine that holds the power to save lives—it's hard to remain optimistic about what the future will bring.

It's during these times of doubt that I know I need to go to for a hike. I need to hear the crunching of dry leaves underfoot and feel the quiet strength of a majestic oak as I press my hand against its thick bark. Nature draws me out of my head and back the present moment restoring my hope for the world. Just writing about hiking rekindles my excitement for the coming fall.

I'm eternally grateful to the private landowners throughout Connecticut who allow me to reconnect with nature by accessing the Blue-Blazed Trails that cross their land, and to the countless CFPA volunteers who maintain them.

I'll see you outside,

Timothy Brown

Editor

#### The Connecticut Forest & Park Association, Inc.

The Connecticut Forest & Park Association (CFPA) is a 501c3 nonprofit organization that protects forests, parks, walking trails, and open spaces for future generations by connecting people to the land. Since 1895, CFPA has enhanced and defended Connecticut's rich natural heritage through advocacy, conservation, recreation, and education, including maintaining the 825-mile Blue-Blazed Hiking Trails system. CFPA depends on the generous support of members to fulfill its mission. For more information and to donate, go to ctwoodlands.org

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#### From the Statehouse

By Eric Hammerling

## 2021 Legislative Recap and Look Forward to 2022

As we look forward to CFPA's priorities for the 2022 CT General Assembly session which begins in January, it's important to first take stock of the good, the bad, and the ugly from the most recent session which adjourned in June.

An overriding feature of the 2021 session is that it was held 100% virtually with no members of the public allowed in the State Capitol or Legislative Office Building due to Covid-19 restrictions. Legislators conducted most committee work and votes from the comfort of their homes. This made it impossible to buttonhole legislators in person to discuss various bills (a big disadvantage), but it did allow for some logistical flexibility for those of us who took the time to testify on various bills remotely via Zoom. (I was glad to be at home when waiting to offer testimony late into the evening).

Several CFPA priorities did quite well in 2021 considering the challenges everyone faced:

- The Passport to the Parks and Community Investment Act funds stayed intact with no diversions and no exceptions allowed. One exception that would have allowed multiple-car owners to only pay the reasonable \$5 per vehicle per year DMV registration fee on one car was raised. That single exception would have reduced funding available to sustain clean, safe State Parks by \$10 million or more (approximately half) and likely would have invited other exceptions. Fortunately, that exception was removed and the Passport to the Parks was kept whole.
- Bonding was authorized in the biennial state budget for recreational trails (\$3 million per year for two years); open space and urban gardens (\$10 million per year for two years); acquiring state forest, park, and wildlife management area properties; climate resiliency; park infrastructure; other conservation-related investments.
- A budget accountability bill was passed that requires DEEP to report on positions funded through the Passport to the Parks and provide an assessment on the anticipated impact on DEEP of impending retirements (see my column in the summer 2021 issue of Connecticut Woodlands for more on this topic).

At the same time, there were some frustrating outcomes from the session. Most notably, an important climate change adaptation bill passed with some significant gains, such as establishing municipal stormwater authorities and expanding the purview Connecticut Green Bank to include green infrastructure. However, an important section of the bill was removed at the very end of the session that would have enabled municipalities to utilize a local buyer's conveyance fee to generate up to \$75 million per year statewide for local conservation priorities. We consider this to be a huge, missed opportunity for Connecticut.

CFPA has developed a Conservation Agenda every year since 1897 (two years after our founding) that spells out our priorities for forests, parks, and trails conservation at the state and federal levels. Although the 2022 conservation agenda won't be finalized until this winter, I suspect some of our priorities will include legislation that:

- Provides incentives for private landowners to permanently protect trail corridors on their properties;
- Implements recommendations for Connecticut's forests that further the Forests Report to the Governor's Council on Climate Change and the state's 2020
   Forest Action Plan; and
- Facilitates the ability of DEEP to administer federal and state contracts either directly or with assistance from partners.

There is so much more that we must do together in 2022, and your personal involvement makes a huge difference. If you have already been contacting your state legislators about your forests, parks, and trails, thank you for being an engaged citizen and answering the call. If you haven't yet participated in the policy-making process by letting legislators know how you feel, I hope you will this coming year—an election year, by the way. We look forward to working with you with optimism and enthusiasm.

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



Town Hill Rd

Find the complete map

in the Connecticut Walk

Book, published by CFPA.

Wyantenock State Forest

Black Rock State Park and Mohawk State Forest where my responsibilities included keeping the trails clear for hikers. When I heard that hardworking CFPA volunteers were blazing

the paths, building bridges, and keeping the trails clean, I thought: "Wow, it is great to get this kind of help with my job!" Considering my responsibilities for three state properties also included mowing, pruning trees, planting and weeding flower beds, overseeing seasonal workers, preserving historic buildings, and maintaining the vehicles and tools required for this work, it was a relief to have help with the trails. DEEP maintainers value and depend on this type of volunteerism as the number of state park and forest staff has been reduced in recent years.

It has always been important for me to connect with and give back to my community. I am a volunteer EMT and firefighter with the Bantam Fire Company and a member of the Region 5 Dive and Rescue Team. I also am actively involved with the Bantam Historical Society, Litchfield Land Trust, Litchfield Community Emergency Response Team, and Friends of Topsmead State Forest. In June 2017, there was an opening for a trail manager near my home in Bantam. Joining CFPA as a trail manager was a way for me to expand my efforts and to utilize my professional skills. And I relish outdoor work with its challenges and rewards.

I manage a four-mile section of the Blue-Blazed Mattatuck
Trail in Warren. It is rocky and tree-covered with two small
stream crossings. It is pleasant and quiet with many opportunities to observe woodland birds, plants, and wildlife. This
section has two trailheads, one at Valley Road and the other
at Hardscrabble Road. Both are dead-end roads separated by
Waterbury Water Company land and the Shepaug Reservoir.
Starting at Valley Road, the trail follows the boundaries of
nearby Wyantenock State Forest, winding through hardwood
and hemlock forests and roughly paralleling the Shepaug
Reservoir, which provides water for the city of Waterbury.

In June 2021, the trailhead at Hardscrabble Road that connects the section going to Mohawk Mountain was relocated to accommodate a private landowner. The Waterbury Water Company generously provided a new parking area. All of these changes are clearly marked for hikers. (The former parking area is currently restricted as a school bus turnaround.)

he entire Mattatuck Trail is 42 miles long and runs from Wolcott to Mohawk Mountain in Cornwall.
Peter Dorpalen, a CFPA trail leader, was instrumental in the original layout of my section of the trail, along with help from David Irvin, DEEP state forester, and Dr. Joseph Struckus, a neighboring landowner. They had to navigate rough terrain and dense mountain laurel to create this trail.

There is a gap in the trail from Valley Road to its resumption at White Memorial Foundation in Litchfield; my trail section helps to close this gap. I hope to further improve connectivity of the trail by mapping a route that includes a Litchfield Land Trust trail, Mt. Tom State Park land, and an abandoned railroad bed.

I've always marveled at the ability of Indigenous people and early European settlers to eke out an existence on this thin, rocky soil and swampland. There is evidence of early settlement here, including charcoal mounds from land clearing and burning for Connecticut's charcoal industry in the 19th century. Observant hikers can also find evidence of early

Indigenous ceremonial stone structures in the woods near the trail. Dr. Struckus has identified many of these structures, signifying use of the area for centuries. These stone structures may have been memorials and markers along early trails. Today, the trail is the site of the annual Angevine Farm Half Marathon Trail Race. As an EMT, I cringe at the thought of twisted ankles and falls during the race, but so far all is well.

As a Trail Manager, I enjoy the autonomy and flexibility of keeping the trails clear. I walk the trail after major storms and on a seasonal basis. Last August, Tropical Storm Isaias slammed through our area, leaving downed trees and debris. Even in the middle of deep woods, snapped oak and hickory trees resembled the aftermath of a tornado. My husband and I cleared downed trees and branches from the trail. One of the blowdowns in Cornwall left a dangerous, leaning tree above the trail. In my advanced age, I decided that perhaps "older is wiser" and left it alone. Recent storms and the demise of the white ash trees due to the infestation of the emerald ash borer are providing plenty of challenges to keep the trails clear and safe.

This trail section is wooded with few lookouts, but there are several landmarks along the way that spark fond memories. A huge erratic that makes a good resting stop. A massive white oak blowdown that required a detour. The large white pine that means I'm about 20 minutes from the Hardscrabble trailhead. I remember once following a grumpy porcupine waddling down the trail. Porcupines don't have to hurry or move for anybody.

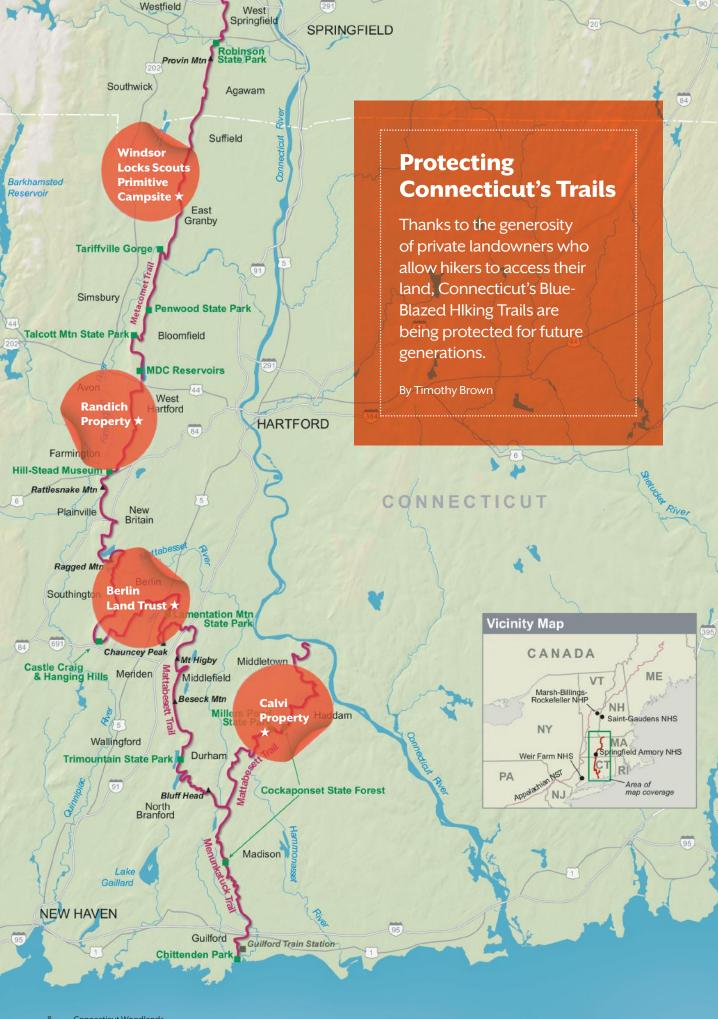
I hope that the network of trails in Connecticut will continue to be used and loved. I value being part of that community.

Jane Golding has always loved being outdoors. A former National Outdoor Leadership School (NOLS) instructor and certified Master Gardener, she retired in 2020 after 27 years

with DEEP. In addition to serving as a CFPA Trail Manager, she is a 22-year veteran of the Bantam Fire Company and an active volunteer in her community.

Explore the Blue-Blazed Hiking Trails Interactive Map on the CFPA website.







2012 Teresa
Gallagher hiked
the New England
National Scenic Trail,
or NET, from Guilford
to the ConnecticutMassachusetts border.
Well, almost. She
couldn't quite make

it to the state line. "The trail just stopped at this No Trespassing sign," she says. "You had to go on a road, and I really didn't want to do that." For Gallagher, it was a disappointing end to a journey that had taken her well over a hundred miles through ancient forests, past agrarian fields, and atop some of Connecticut's most spectacular ridgelines. But today, thanks to the generosity of private landowners who allow the public to access their land, hikers can now complete that final stretch of trail.

The NET is a 215-mile, federally administered trail managed by the Connecticut Forest & Park Association in Connecticut and the Appalachian Mountain Club in Massachusetts. Designated in 2009, the NET is comprised of several established trails, notably the Blue-Blazed Metacomet, Mattabessett, and Menunkatuck, that weave through of a patchwork of public and private lands from Long Island Sound to the Massachusetts-New Hampshire border.

Of Connecticut's 120-mile-portion of the NET, some 48 miles, or 40%, is privately owned. While some landowners have taken steps to formally protect public access to the trail on their land, many sections of the approximately 300 private parcels along the NET are open to the public only by handshake agreements, vulnerable to market forces and competing values. Other sections are closed to the public, forcing hikers onto roads, an inconvenience at best and at worst, dangerous.

As a section hiker in 2012, Gallagher skipped many of the longer road walks. "The road walks are actually not as much of a problem when you're backpacking because they get you to another point," she says. "But if you're day hiking and it's a four-mile road walk and you have to go out and back, you're like, why am I doing this?"

Eventually she continued north, section hiking the Massachusetts portion of the NET in 2016-17, and later making her way to the Canadian border, a tremendous accomplishment by any standard. But it bothered her that she had skipped some of Connecticut's NET. "Once I got to Massachusetts, I did every step, but I didn't have that for Connecticut," Gallagher says.

So earlier this year, she decided to hike the NET again, this time as a backpacker. She started on Mother's Day, solo hiking half the trail over the next four days. She then took two weeks off before completing the other half, including the final section to the Massachusetts border.

"In 2012 when I did it, there was still survey tape down in Guilford," she says. "It was fun to watch the trail being formed while I was hiking it. And now, it's really neat to see, in those nine years, there had been a lot of trail improvements and there are a lot of people out there hiking it."

Trail preservation doesn't mean that a private landowner must relinquish all their rights. It simply guarantees the public access to the trail on their land. The following vignettes highlight four conservation heroes who are committed to protecting public access of Connecticut's Blue-Blazed Hiking Trails and helping to create connectivity for hikers on the NET.

#### **New England Trail in Connecticut**

≥ 120 miles

> 4 overnight sites

➤ Approximately 300 private parcels

> 48 miles (or 40%) of the trail is privately owned/hosted

#### **Mike Randich**

When Mike Randich and his wife, Lisa Spalla, purchased property in Farmington in 2011, there was a conservation easement that allowed the Metacomet Trail to cross their land. "It wasn't a problem for us," says Mike. "It was actually an attraction. Living next to a trail is wonderful because you can just go out the door and hike."

In 2013, Mike and Lisa built an award-winning, energy efficient home on their land. A year later, he heard that CFPA was looking for a Trail Manager to maintain the four-mile section of the Metacomet that lies just outside their home. "It seemed like a natural fit," Mike says, "and being a Trail Manager, I'm also a little more protective of the trail, making sure that it's in good condition and that people can use it."

But Mike insists that hikers are generally respectful of the trail. "There's never been an issue where people are leaving garbage or things like that," he says. "I know that can happen at trailheads where people park, but it's never been an issue when it comes to my yard. The worst thing is the invasive plants, but you would have that whether or not you had a trail on your property."

While he recognizes that some landowners might not appreciate the value of having a trail on their land, Mike says it enhances the value of their property.

"Everybody has a different perspective on keeping spaces permanently available for hiking trails. Our attitude was, it's a good thing because we like to hike," he says. "When I go hike somewhere else, I'm appreciative of a landowner who allows us to pass through their property to get to a state forest, or just to hike on their property. This is a way that we can pay it forward."





## Ray Archacki

Ray Archacki, who served as director of the Berlin Land Trust from 2015 to 2020, is currently the steward of Lamentation Mountain, a two-and-a-half-mile-long stretch of the Metacomet Ridge that spans the towns of Middletown, Meriden, and Berlin. Protecting the mountain has become a passion for Archacki, who has worked with CFPA to secure land and further enhance the trail experience there.

Approximately 85% of Lamentation's ridgeline—some 1300 acres—has been protected as open space by land trusts and municipalities. But conservation deals are complicated and can take years to complete. One of the challenges at Lamentation, Archacki says, is the way lots were divided decades ago. While the ridgeline—and the popular Mattabessett Trail—runs north-south, lots run east-west abutting farmland in the lower part of the valley. "You had these 10-acre woodlots that were probably a thousand feet long by only a hundred feet," he said. Protecting just a short section of trail requires working with multiple landowners, each with their own values and desires, thus complicating conservation efforts. Over time, the Berlin and Middlesex land trusts, as well as the City of Middletown and the Town of Berlin have been able to stitch together several of these long woodlots to protect the trail, but a few private parcels still lie along the ridgeline.

Recently, the Berlin Land Trust purchased a 47-acre parcel on the northern end of the ridge that helps to tie together some of these privately held lands and will make it more difficult for a developer to put a house there. But despite their conservation successes, significant challenges remain in protecting the trail and the land that surrounds it.

"I think it's important for the public to realize that there's this dwindling supply of land, especially in central Connecticut," he says. "Open space is a valuable commodity. We need the younger generation to step up in these communities, to be the vanguard and carry on the conservation that was started a generation earlier."

#### **Dwight Phelps**

There are four designated campsites throughout the Connecticut portion of the NET: Godman Group Campsite in Madison, Cattails Shelter in Durham, Lamentation Mountain Primitive Tentsite, and the Windsor Locks Scouts Primitive Campsite, which is owned and managed by the Windsor Locks Scouts Foundation.

Dwight Phelps is the president of the Foundation, which manages the property for the benefit of all Windsor Locks Scouts—Boy, Girl, and Cub Scouts. Phelps says it was his son who initially got him into Scouting, and eventually hiking.



"My son talked me into hiking the Appalachian Trail, so we section hiked the AT over a period of 13 years," says Phelps. "I learned how it was to have trail magic, what volunteers offer to hikers along the way. When Clare (Cain) approached us (about hosting a campsite on the land), I went back to the committee and said, 'This is going to be a good thing."

The property spans the east and west sides of the ridgeline with the Scouts' campground on the western side. The Foundation wanted to keep backpackers and Scouts separated, so they decided to establish a primitive campsite on the east side of the ridgeline specifically for hikers. There are no fire rings and open fires are not allowed. "It's a wilderness campsite," Phelps says.

While the lack of established campsites on the NET can pose challenges for backpackers—stealth camping is not permitted along the trail—access to water is an even more critical issue. "There was no water on the property, so CFPA put a hamper up there with water in it," says Phelps, who helps to re-supply the 10-gallon container every two weeks. "Water is so important for hikers; my son and I experienced this hiking the AT," he says. "Every morning we'd wake up and say, 'Where are we gonna get water during the day?' All my experiences on the AT really played into how we support that campsite on the NET."

Phelps says the best way that hikers can give back to the Scouts is by being respectful of the land. "The only problem I had is that some people were doing open fires. At the wrong time of year, if the fire got away, it would be very difficult to control it," he says.

#### **Janice Calvi-Ruimerman**

Many Connecticut families hold property that has been passed down for generations. But for Janice Calvi-Ruimerman, land has a value that extends far beyond one's family. "When people think of property, they often think of power or money," she says. "And that's not what the intention was for this land."

Her extended family owns 146 acres in Durham, an inheritance from her great-grandfather. Their land abuts Millers Pond and is a key parcel connecting the popular state park with the Cockaponsett State Forest.

She has been working with CFPA to keep the property intact while also making it accessible to the public. "I think it's going to be a really good addition to the network to make that trail open to everyone," she says.

While some may have the misconception that preservation will restrict a family's access, Calvi-Ruimerman insists that's simply not true. "You can create the deed however you want to put in whatever clauses you need to make sure your family has access," she says. "But be clear about your intent. And for my great-grandparents, the intent was preservation."

Her 87-year-old Auntie Toni, the ninth of 11 children, grew up on the land. She fondly recalls her childhood, sitting around a bonfire in the summer, singing songs and roasting corn. She believes that preservation is essential for keeping the land intact and accessible, not just for their family, but for the public.

"I'd like to see this property used for conservation," she says, "so people can enjoy a rural wooded country area, and maybe learn something about nature and conservation."



# Thinking Inside the Box: Father and Son Build Real Estate for Ducks

By Laurie D. Morrissey Wood duck photos by Jeff Ginsburg

oah Wistman was just three when he began his first environmental project. Kneeling in his dad's canoe on Squantz Pond, he leaned out with a long-handled fishing net and scooped up any cans or plastic bottles that floated his way.

"We helped to keep the lake clean," his father says, "and Noah developed better balance." Noah still keeps a balance, spending most of his year studying psychology at Hunter College and many weekends working with his father on a project they are passionate about: reintroducing wood ducks to Squantz Pond and other wetlands in northwestern Connecticut. Together they have built, installed, and monitored wooden nesting boxes that provide safe shelter for wood ducks to lay their clutches of 8 to 10 eggs. Over

the past dozen years, these homemade II by 22-inch boxes have housed hundreds of downy chicks. It's likely that as adults, many of these birds return to the area—possibly the same boxes—to build their nests and rear the next generation of Aix sponsa.

It all started one cloudy August day when Jim Wistman and his then-eight-year-old son, on one of their weekend paddles on Squantz Pond, spotted something bobbing in the pickerel-weed. After heaving the water-logged object into the canoe, they saw that it was a half-rotten box made of thick cedar planks with an oval opening.



"I knew right away that it was for a duck because of the hole shape. My best guess was a wood duck," Jim says.

On one side, he noticed a mysterious carved number: 2998. His research led him to the Candlewood Lake Authority, which led him to Peter Picone at the state's Wildlife Division. He told the paddlers they'd found a box installed during an early DEEP (Department of Energy and Environmental Protection) nesting box program. Since the day of their first conversation, Picone has been "a guru and a great motivator" to the father-son team of wood duck defenders.

"He was very enthusiastic about our find of a DEEP relic and wished us luck," Jim says. "He said we'd need some perseverance, so we knew it wouldn't be easy. He outlined what to do and what not to do in order to attract wood ducks. He also asked us to send field reports of what we saw and recruit local folks who would make field observations and submit their notes and photos."

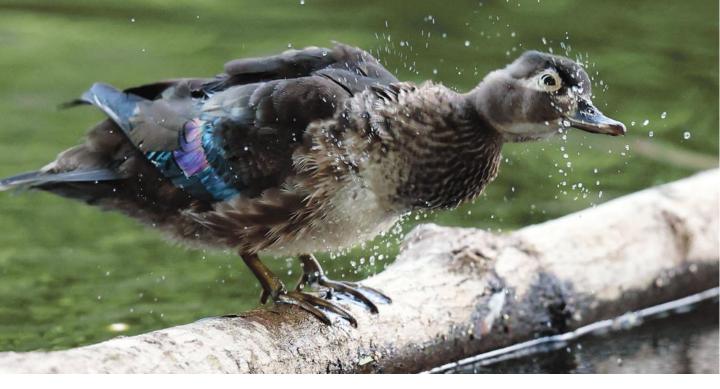
They've done all that and succeeded in bringing breeding pairs of wood ducks back to nest in a place they'd

only been seen as passing migrants for many years.

With their bright plumage and distinctive markings, wood ducks are one of North America's most beautiful waterfowl species. The male is easily identified by its greenish-purple crest, chestnut breast, and bold white markings, while the female is a modest brown or gray with a blue wing patch. The population was decimated due to habitat loss and market hunting, and by the early 1900s, the bird was threatened with extinction. The wood duck's

"I think the hen is really pretty too. They have this slight blush of blue, and a white eye ring."







Above: While not as showy as the male, female wood ducks have their own distinctive beauty. Below: "Old 2998" has become something of a talisman for the Wistmans.

survival and recovery, thanks in large part to the 1918 Migratory Bird Treaty Act, is a wildlife success story. Hunting was curtailed, and the population recovered sufficiently to re-open hunting in 1941. Nesting box programs have helped since human pressure has led to loss of habitat in many areas.

According to DEEP biologist Min Huang, Connecticut's breeding wood duck population is stable and there is even a slight upward trend, though not a statistically significant one. "Citizen science projects such as this, as long as they are conducted using appropriate methods, are great ways for people to contribute to conservation," he says.

The Wistmans, who don't consider themselves wildlife experts or birders, have learned a lot about wood ducks through their project. The birds nest in natural cavities in trees near or directly over water, although when such trees are scarce, they readily use a nesting box. They are frequently seen perching on a branch or a log near the nest. They're the only North American duck to regularly produce two broods a year, and their offspring are precocious—jumping out of the nest from as high up as 50 feet, just 24 hours after hatching.

Jim has seen many wood ducks, but he is still in awe of the beautiful birds. "People talk about the male because of its noticeable markings, but I

think the hen is really pretty too. They have this slight blush of blue, and a white eye ring," he says.

His first glimpse of a hen with ducklings is one of his favorite memories. The second time he saw a hen with chicks, he recalls, "The mother faked a broken wing as she wildly paddled away from me and her ducklings. The babies took cover under the rushes. That's not common behavior for them, and Peter Picone says it may be a first report."

For Jim, who works in the financial industry in Manhattan, and Noah, weekends in Sherman are a not only a respite from the city but a welcome opportunity to spend time together. Besides working on wood duck boxes, they volunteer many hours on the Blue-Blazed Hiking Trail System.

"Every summer we try to log at least 100 hours on existing trails, and we also try to resurrect a forgotten trail or blaze a brand-new trail so the public has safe access and more choices," Jim says.

"We use the time to catch up," adds Noah. "I think it's been great for our relationship to have long periods where we can talk while working together on a task."

The father and son monitor 16 boxes on protected wetlands in Sherman, New Milford, South Kent, and Brookfield. Success did not come easily, however. Although the swamp adjoining Squantz Pond seemed like perfect habitat, Jim says, the ducks hadn't been nesting there.

"At first we tried putting

the boxes in coves and inlets on Squantz Pond, but there were too many motor boats and jet skis. We had no luck for the first three or four years. Once I saw a wood duck look at a box, but she didn't move in. Then we moved to the swamp at the north end where a stream comes in. Still no luck. Then one fall, the beavers arrived at Glen Brook and built a dam. The next spring the wood ducks

moved in, and they've come back every



Above: Jim and Noah Wistman monitor 16 wood duck nesting boxes. Below: Jim pulls Noah and their Wenonah canoe ashore. Photographs by Mark Howarth.





year. Now when scouting a new location, we look for beavers. They're truly keystone critters."

The project requires effort even in the dead of winter. After putting up any new boxes in the spring, the Wistmans leave the ducks alone. When the ponds freeze, they load up their green Wenonah canoe with tools, safety ropes, life vests, snowshoes, and ladders and haul their craft over the ice.

"It was Noah who came up with the idea," Jim says. "When it's coldest outside, it's safest for us." They cut a hole in the ice, set up a step ladder, hammer

down a pole, and attach each box to a pole. They clean out existing boxes, which often have become homes for mice, and put in clean wood shavings. They check to see which boxes have been used, looking for down feathers and eggshell scraps. Other species, such as owls and kestrels, have also used some boxes.

The Wistmans may not increase the box count for a while. "It would be nice to put up more, but once they're up, we have to maintain them. We accept new responsibility carefully," Jim says.

Fortunately, theirs are not the only efforts on the wood ducks' behalf. DEEP maintains more than 500 boxes on state land, according to Huang, with an average annual box use of approximately 77 percent. Boxes are installed at Audubon sanctuaries, including Deer Pond Farm in Sherman, and many people maintain boxes on their property or other private lands. Volunteers with the Connecticut Waterfowlers Association, along with DEEP and other groups, help build and maintain

boxes to continue the success of wood duck restoration. DEEP coordinates a box-building day every spring, using wood from state-owned forests.

"Old 2998" has become something of a talisman for the Wistmans. "It's the first nesting box we install when we start up at a new pond," Jim says. "It's a powerful, gnarly old lure, almost magical."

While birds benefit, they never say thank you. People do, though—and at least one local resident has. One of the most meaningful experiences for the Wistmans came a year ago when a lifelong resident waved them down. Jim recalls, "He said he hadn't seen wood ducks nesting since he was a boy. As he reminisced about row-boating with his dad, he was teary-eyed. Like a sports coach, he gave me an 'atta boy' pep talk. That unexpected chat really means a lot to me."

Laurie D. Morrissey is a New Hampshirebased writer of articles, essays, and poetry. Her writing has appeared in Kearsarge Magazine, The Outside Story, and other publications.

"When it's coldest outside, it's safest for us."



f you have lived in New England for as long as I have, you might suspect that intense fall storms are becoming more common. It's not your imagination. Jonathan Winter, assistant professor of geography at Dartmouth College, says that indeed, since 1996 the Northeast has received about 1.5 times the number of extreme precipitation events than in previous decades.

This figure illustrates a key challenge when it comes to our thinking about climate—how do we perceive climate change? Almost a third of us were not yet born in 1996 so it's impossible for many to remember a time before smartphones or social media, let alone environmental change on this scale. Moreover, our view of the world is often limited by where we live. For example, Hurricane Ida caused widespread destruction in New Jersey and New York; a decade ago, Irene devasted Vermont; and just

last year, Isaias battered Connecticut. Considered individually, each of these storms is simply an example of extreme weather. But when viewed together, these hurricanes paint a very different picture. For most people, it's as hard to observe our changing climate as it is to see the bacteria that sicken us. But unlike bacteria, scientists can't just haul out a microscope to see our changing climate.

To truly "see" what's happening to our planet, scientists rely on a variety of tools that give us a broader view. These tools include super computers and satellites, but also low-tech rain gauges employed by generations of scientists who may have never considered a changing climate. They must go back in time to understand how conditions differ today and look beyond what's happening in a particular location, such as a city or even a state, to consider regional shifts. In other words, scientists need lots and lots of data.

Dr. Winter and his colleagues indeed analyzed lots of data for their research. They crunched numbers spanning back more than a century from 116 weather stations scattered throughout New England. They looked at total rainfall and then focused their study on very large storms, the kind of storms that frequently have proper names, so-called "extreme weather." But how does one define what is extreme?

Many scientists consider events that happen one time out of twenty to be exceptional; think of the 0.05 p value used by statisticians. But Dr. Winter raised the bar. He defined "extreme events" as those that happen just one time out of a hundred. In other words, he focused on the largest 1% of rain events. To put this in human terms, a newborn would have to weigh 10 pounds, 6 ounces to be in the top 1% for birth weight.

## While it is essential that we reduce carbon emissions to avoid the worst effects of climate change, we must simultaneously adapt to those changes that are already happening.

So how has precipitation from the top 1% of New England's storms changed since 1901? It turns out that the volume of precipitation falling on the wettest days was consistent for almost a century. But starting in 1996, precipitation began to increase. Again, taken alone, 1996—or 2021 for that matter—might just be an unusually rainy year. This is what scientists call weather. But year after year, the volume of extreme precipitation falling in the Northeast in autumn has increased by 50%. This indicates that something significant is happening to our climate.

This uptick in extreme precipitation has serious consequences for human communities. Civil engineers use 100-year floodplain maps to determine where it's safe to build homes, but these maps no longer reflect reality in the era of climate change. What is the meaning of a so-called "100-year flood" if such a flood happens, say, every 30 years, or more frequently? Some parts of New England are already experiencing "100-year storms" every few years.

s an aquatic ecologist, I am interested in the effects of these extreme storms on water bodies. Cyanobacteria, also called "blue green algae," thrive in warmer temperatures. Like plants, cyanobacteria need nutrients, including phosphorus and nitrogen, and they need light. These factors help us predict where and when potentially harmful algal blooms may occur. Increased rainfall from storms flushes nutrients into lakes, ponds, and other water bodies where they remain in circulation for long periods and can



amplify cyanobacteria growth. And storms are not the only changes influencing water bodies. As our climate warms, data compiled by the Environmental Protection Agency show New England states are warming faster than any other region in the lower 48.

Another important factor is a reduction in wind speeds during the warmest months. Ponds and lakes of sufficient depth are like layer cakes in cross section. Surface water, heated by the sun, is warmest, but how deep that warmth extends varies. Temperature changes rapidly from

## How can homeowners help protect Connecticut's water?

- 1. Plant buffer strips along shorelines to reduce erosion.
- 2. Install rain barrels and rain gardens—smaller versions of engineered retention ponds—that hold water and slow its progress toward waterways.
- Replace asphalt and concrete sidewalks and driveways with bricks or other pervious surfaces that allow rainwater and snowmelt to penetrate and recharge the groundwater.
- 4. Don't use chemicals and artificial fertilizers on lawns and gardens.

warm to cold in the water column in a zone called the "thermocline." The water close to the lake floor is coldest and darkest. The bright—and now warmer—surface waters of our lakes provide ideal conditions for the toxic cyanobacteria, forcing the closure of beaches. In the short term, windy summer storms mix lake layers driving warm water down, bringing cooler water to the surface where it breaks up blooms, enabling our beaches to reopen.

But climate change is influencing summer winds. Peter Siver, a professor of botany and environmental studies at Connecticut College, and his collaborators documented a 31% decrease in spring and summer wind speeds at Candlewood Lake over the past three decades. As a result, the lake is more strongly stratified with the upper, warmer piece of the layer cake extending deeper than was previously the case. These changes help to explain the cyanobacterial blooms that periodically show up in Connecticut's largest lake.

The local nonprofit Save the Sound, which monitors the water quality of Long Island Sound, issues a biennial report for the 200-plus beaches that dot its shoreline. Although 79% of beaches in Connecticut and New York received an A or B grade in their most received only a C or D. The report cites increased rainfall as the leading cause of water pollution at local beaches, largely due to increased stormwater runoff or sewer line overflow. Heavy rainfall can divert untreated sewage directly into the Sound in communities

#### The Woodcock

By Terry Blackhawk

Weary of the daily terror I turn to the mystic body of the bird. A woodcock I found crackling the twigs and ivy, barely escaped from a cat's clumsy claws. I feared for the odd angle of its wing, the surprised flopping it made there, but I did not fear the extreme length of its beak or the eyes popping diametrically on either side of its head. I loved the feathers' deckled edges and the light weight it made as I scooped it up and put it, limpsy and weak, into an old canvas book bag, and when I released it from that soft safe space some time later, out on the island, I missed it at once, as one would miss a friend. It whirred straight up, explosively, toward freedom on the other side of the river, its pulse now gone from my hands.

Italicized phrases from Walt Whitman, "Song of Myself, Section 10"

First published on line at Peacock Journal. Collected in One Less River (Mayapple Press, 2019)

Now residing in Connecticut, Terry Bohnhorst Blackhawk is founding director (1995-2015) of Detroit's acclaimed writers-in-schools program, InsideOut Literary Arts Project, and a widely published poet. Her fifth collection One Less River (Mayapple Press) was a named a Best 2019 Poetry Title by Kirkus Reviews. View her work at terrymblackhawk.com

## **Sowing Seeds of Change**

Herb Virgo, director of Hartford's Keney Park Sustainability Project, is helping to create the next generation of healthy, environmentally conscious citizens.

By Hanna Holcomb

s a child, Herb Virgo spent a lot of time in Hartford's Keney Park, one of the largest public parks in New England at nearly 700 acres. "I grew up right around the corner from Keney Park," he said. "As a kid, Keney Park was our playground." Today, Virgo serves as the founder and executive director of the Keney Park Sustainability Project (KPSP), a nonprofit organization that provides urban agriculture and forest management education to community members and youth in Hartford.

Following graduation from Connecticut College, Virgo spent five years working for a wilderness education program for adjudicated youth in Florida. In 2009 he returned to Hartford. "I felt like home was calling, like I had unfinished work here," he said. But when he returned to the capital city, Virgo found himself missing the outdoors. "Keney Park was the closest thing to wilderness, and it just became 'home' once I returned."

Virgo took over the Family Day Foundation, the nonprofit that hosted the annual Family Day Festival at Keney Park, and began to think about how the organization might be able to better serve the park and the community. KPSP began as a program to manage the state-funded renovation of trails in the park.

As trail maintenance proceeded, Virgo began to build an urban agriculture program inspired by Growing Power Inc., a former Milwaukee-based nonprofit that gained national attention as a leader in the local food movement, providing access to fresh produce and engaging youth in the community. "They were doing amazing things in the area of urban agriculture, and little by little we started bringing those things back to Hartford," said Virgo.

The Family Day Foundation gradually evolved into the Keney Park Sustainability Project with the goal of using Keney Park as an outdoor classroom to help families become more self-sufficient and environmentally conscious. Today KPSP boasts four greenhouses, four growing locations, and a wood materials management program. These on-site resources provide opportunities for community members to learn about urban agriculture and forestry through vegetable gardening, lumber milling, animal husbandry, and aquaponics.

More than 500 citizens—from individual youth to school groupsvolunteer with KPSP each year. These volunteers learn about urban agriculture and complete a service-learning project, such as building raised beds, planting crops, or maintaining hiking trails.



"We relied heavily on in-person volunteer activities and during COVID, all of that stopped," said Virgo.

With pandemic restrictions in place, KPSP pivoted to help community members garden at home. They gave away materials to construct raised beds, plus seeds, hydroponic kits, and grow bags. "I think people are a lot more curious about where their food is coming from and they're more interested in being self-sustainable and in cutting costs," said Virgo.

KPSP also helps construct and maintain garden beds at local schools. "The kids can do their gardening instruction right on-site," said Virgo. "Teachers see it as an opportunity for education and to get kids back into hands-on learning."

Recently, KPSP launched the Urban Ecology Wellness Center at Keney Park. Guided by research on the benefits of nature immersion, the Center addresses health and wellness needs while teaching community members about urban agriculture. Activities such as yoga in the park, health and wellness screenings, and environmental education programs connect community members to traditional health system resources while leveraging the healing power of nature.

Across race and income, access to green space and nutritious food is unequal. On average, parks in communities of color are half the size of those in white communities, and people of color are more likely to live in food deserts—areas where access to healthy food is restricted, or nonexistent, due to a lack of grocery stores. By empowering community members to grow their own food, KPSP helps provide nutritious food and opportunities to enjoy nature in Hartford's North End.

"I feel like part of what I'm doing here is my way of giving back to the park," said Virgo.

Hanna Holcomb, a native of Woodstock, Conn., has written for Woodlands since 2017.

#### It's raining, it's pouring, continued from page 18

that have combined stormwater and sewer lines or aging sewer pipes where undetected leaks allow storm water to enter and overwhelm sewage treatment plants. The report notes that even 48 hours after a moderate rain event, the failure rate of water samples more than doubled from 5.5% to 11.4%. With the long-term prediction for increased precipitation in the region, it's critical to invest in improved stormwater and sewer infrastructure and increase water testing at area beaches to keep swimmers safe.

By individual actions, and collectively as communities, towns, states, and at the national level, we can undo some of the environmental damage and improve our waterways for the benefit of all. While it is essential that we reduce carbon emissions to avoid the worst effects of climate change, we must simultaneously adapt to those changes that are already happening. As the western U.S. struggles to adapt to persistent drought, soaring temperatures, and devastating wildfires, here in New England, we must adapt to higher storm intensity and frequency in fall, and reduced wind velocities in spring and summer.

The Candlewood Lake Authority has identified several actions that homeowners can take to help protect our waterways, such as planting buffer strips to protect shoreline from erosion, installing rain gardens and rain barrels to reduce runoff, reducing the amount of impervious surface on driveways on walkways by replacing asphalt or cement with a porous material such as crushed stone, and reducing or eliminating fertilizers from your lawn and garden.

My gutters had lived past their prime and developed the annoying habit of dumping water down the side of my house and promptly into my basement. Two downspouts shot water directly onto the driveway which, in addition to contributing to larger downstream problems, caused hazardous icing. The professional I hired to replace them pointed out that down pipes can be placed anywhere along the length of a properly hung gutter. Water from my new gutters now drains into my garden where it infiltrates the soil. It's a small step, but a simple example of the incremental improvements each of us can make to leave better waterways for our children.

Declan McCabe teaches biology at Saint Michael's College. His work with student researchers on insect communities in the Champlain Basin is funded by Vermont EPSCoR's Grant NSF EPS Award #1556770 from the National Science Foundation.



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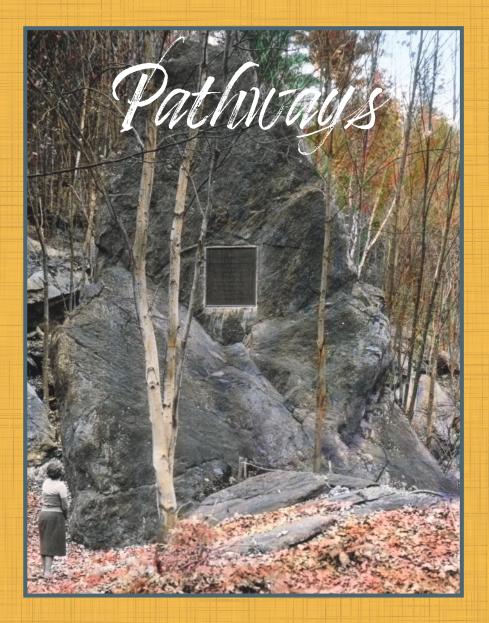
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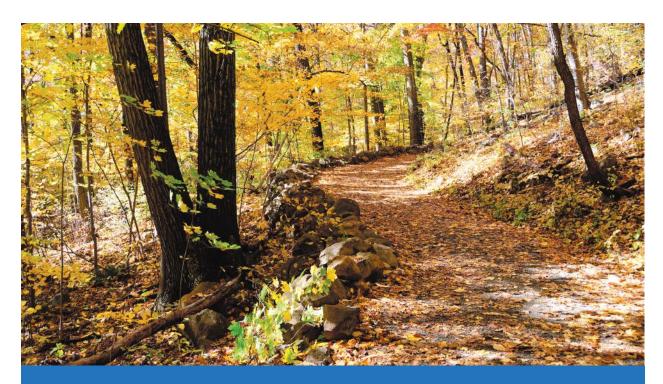


In 1925, Harley F. Roberts helped create the Black Rock Association whose mission was to purchase land in Connecticut's Central Naugatuck Valley and donate it to the State for conservation. But the landscape Mr. Roberts sought to protect was not the same one you see today. At the time, the area was largely deforested, razed for cordwood that was used to fuel the local brass industry. Mr. Roberts, the master of the Taft School in Watertown, believed that conservation was key to healing the land. A year later, the Association gifted the State 723 acres to establish the Mattatuck State Forest. By the time Mr. Roberts passed away in 1930, the forest had grown to over 2500 acres. The Mattatuck State Forest now spans some 4,500 acres across 20 parcels in six towns. The largest parcel adjoins Black Rock State Park, which hosted the Civilian Conservation Corps' Camp Roberts during the Great Depression. The CCC built trails and planted trees, slowing erosion and reforesting the land. Mr. Roberts' vision, leadership, and commitment to conservation were memorialized in the plaque seen in the above 1932 photograph. Today, hikers can follow the Blue-Blazed Mattatuck Trail to visit the plaque, located near Bidwell Hill Road, and explore the Leatherman's Caves, which were used by the legendary 19th century vagabond during his 34-day, 365-mile loop through Connecticut and New York.





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