CONNECTICUT Woodlands

INSIDE CFPA'S LEGISLATIVE AGENDA *for* 2015

KISS YOUR ASH GOODBYE?

ALSO: A FATHER CHANNELS *WILD* ON THE NEW ENGLAND TRAIL
13 IMPERILED ECOSYSTEMS, NEW SERIES

The Magazine of the Connecticut Forest & Park Association SPRING 2015 Volume 80 No. 1

CHRIS DONNELLY

Can you see the whippoorwill here? This ground nester hopes you can't. *See page 20.*

Connecting People to the Land

Our mission: The Connecticut Forest & Park Association protects forests, parks, walking trails and open spaces for future generations by connecting people to the land. CFPA directly involves individuals and families, educators, community leaders and volunteers to enhance and defend Connecticut's rich natural heritage. CFPA is a private, non-profit organization that relies on members and supporters to carry out its mission.

Our vision: We envision Connecticut as a place of scenic beauty whose cities, suburbs, and villages are linked by a network of parks, forests, and trails easily accessible for all people to challenge the body and refresh the spirit. We picture a state where clean water, timber, farm fresh foods, and other products of the land make a significant contribution to our economic and cultural well-being.

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Emerald ash borers have infested this ash tree. The proof is that the lighter inner bark shows. Experts call this "blonding." Woodpeckers looking to eat the insects inside have stripped the bark.

PHOTO BY JERRY MILNE, CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION

Thoughts on Aldo Leopold

BY ERIC LUKINGBEAL

I recently agreed to speak to a group on behalf of the Connecticut Forest & Park Association. The topic they want to hear about is broad and a little vague—CFPA and forests. At about the same time, another group asked me to be on a panel to watch and then discuss *Green-fire*, a film about Aldo Leopold. This coincidence of two requests gave me an excuse to revisit Leopold's ideas. As most who think of themselves as conservation-minded, I have read Leopold's short classic, *A Sand County Almanac and Sketches Here and There* (Oxford University Press, 1949). That was a long time ago, when I was in my 20s, not yet a lawyer. I was reading a lot of the standard conservation stuff at the time, including Henry David Thoreau, Edward Abbey, Farley Mowat, John Muir, and Rachel Carson.

So, I thought that I should reread *A Sand County Almanac and Sketches Here and There* if I were expected to talk about Leopold, and that reading it would take me into quite familiar territory. I'm glad I read it again, but it didn't seem like the same book I thought I'd read. (I've had similar experiences rereading other books, such as J. D. Salinger's *Catcher in the Rye*). Many of you reading this believe that you know Leopold. A Yale Forest School–educated forester (Class of 1909), he worked for the U.S. Forest Service in the West as a conservationist and researcher. Most of the writings in Leopold's book are drawn from his experiences on a worn-out 120-acre "sand farm" in Dane County, Wisconsin, where he spent weekends hunting, fishing, and tramping. During the week, he taught at the University of Wisconsin. No hermit or recluse, he had a wife and five kids.

Today, Leopold may be best known for his "golden rule," which he explained in "Land Ethic," an essay included in *A Sand County Almanac* and *Sketches Here and There*: "A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise." Leopold is also known for his passionate advocacy of the notion that our economic well-being could never be separated from the well-being of the environment. Later, Senator Gaylord Nelson of Wisconsin, the founder of Earth Day—and also a resident of Dane County—would make the same point, when he said, "The global economy is a wholly owned subsidiary of the environment."

Here is what surprised me as I read the book again. There is a lot of the misanthrope and pessimist in Leopold's writing. He could be quite caustic about his fellow man. Consider this: "How like fish we are: ready, nay eager, to seize upon whatever new thing some wind of circumstance shakes down upon the river of time." And this: "The modern dogma is comfort at any cost." He could also be negative about the prospects of conservation itself: "But all conservation of wildness is self-defeating, for to cherish we must see and fondle, and when enough have seen and fondled, there is no wilderness left to cherish." At times, I felt he was channeling William Wordsworth ("The world is too much with us; late and soon, Getting and spending, we lay waste our powers;—Little we see in Nature that is ours.").

Almanac is mostly about what Leopold saw on his poor sand farm, which he bought in 1935. It's also filled with the odd fact that struck him: Juvenile sandhill cranes are not called chicks but colts. Robins begin their morning song in the spring when the light reaches 0.01 candlepower. He cites research that Wisconsin deer hunters kill at least one illegal deer, and leave the carcass to rot, for every two legal bucks taken.

Some of *Almanac* could have been written last week. "The disappearance of plant and animal species without visible causes, despite efforts to protect them, and the irruption of others as pests despite efforts to control them, must, in the absence of simpler explanations, be regarded as symptoms of sickness in the land organism," he wrote in his essay, "Wilderness." He continued, "Both are occurring too frequently to be dismissed as normal evolutionary events."

One thing Leopold was very clear about—economics could not be the basis for a land ethic. Here's what he said in his essay, "Land Ethic":

> One basic weakness in a conservation system based wholly on economic motives is that most members of the land community have no economic value. . . . When one of these non-economic categories is threatened, and if we happen to love it, we invent subterfuges to give it economic importance.

Leopold died of a heart attack at 61 in 1948, while helping a neighbor fight a grass fire, only a week after hearing that the manuscript that would become *A Sand County Almanac* had been accepted for publication. It's still in print, it's cheap, and I commend it to you as worth a rereading. Or a first reading.

Eric Lukingbeal is a retired environmental lawyer. He lives with his wife, Sally King, in Granby, where he serves on the town's land trust and planning and zoning commission.

No success without "U"

BY ERIC HAMMERLING

You have heard that there is no "I" in the word team, but you may not realize that the word success means nothing without "u." I am talking about fulfilling the Connecticut Forest & Park Association's 2015 Conservation Agenda (featured in the middle of this issue). That's right. *You* are the key to ensuring better protection and management of forests, parks, trails, and public lands in Connecticut.

You may be interested in furthering the principles, programs, and policies highlighted in the Conservation Agenda, but you may not know where to start. Here are five tips that can help you ensure your elected representatives will make a difference for conservation in Connecticut:

1. Realize that your legislators are people just like you. Most legislators first got involved with politics to make a difference for their communities in one way or another. They may not have conservation at the top of their agenda, but they can only represent their community well if they hear from you about issues that are important to you and to their districts. Think of each contact you make as a way to elevate conservation among their many policy considerations.

2. If you live in their district, you matter to them. As a voter, you have a direct influence on the outcome of the next election (and both your House and Senate representatives are elected to two-year terms, so they have to be responsive). Legislators who hear from you will assume that you vote, and that you also talk with other constituents who vote.

3. Just a few contacts make a difference. Several politicians at both the federal and state levels have said that contact from just five people in their district is equivalent to a groundswell of interest on an issue. If you get just a few friends involved with you, you can be a big part of that groundswell!

4. You don't have to be an expert for your voice to be heard. Some people fear that they don't know enough about an issue to make contact. Keep in mind that people who are opposed to your viewpoint (who may not know what they are talking about) will not hesitate to make contact, and you don't want their voices to carry the day. And remember that legislators have access to numerous experts, but they want to know how much *you care* about a particular issue.

5. It is so easy to make contact. Every legislator has a phone number and an e-mail (or sometimes an e-mail form). Whichever way you like to communicate, they would like to hear from you. Also, many legislators hold office hours for constituents. Drop by, or make an appointment.

Be courteous, even if they disagree with you. Thank them when you like what they do. And above all, *follow up*. It is amazing how many people legislators meet with each day and how many issues they juggle. If you don't ask again, your (hopefully conservation-related) issue could get lost in a sea of competing priorities.

For more information about CFPA's Conservation Agenda and public policy issues throughout the year, visit CFPA's website, ctwoodlands.org, and go to the Public Policy pages. Good luck, and thank you for your outstanding support of CFPA.

Eric Hammerling has directed CFPA for six years. He lives in West Hartford.

KISS YOUR ASH GOODBYE

IN THE TWO YEARS SINCE SCIENTISTS CONFIRMED THAT THE INSECT EMERALD ASH BORER HAD ARRIVED IN CONNECTICUT, STATE FORESTERS HAVE STARTED CUTTING DOWN HEALTHY ASHES TO SALVAGE THE TIMBER.

"Blonding" of the bark by woodpeckers is the first sign that emerald ash borers have infested an ash. Top, just weeks after foresters marked a boundary tree with paint, the birds had stripped through the marker. Above, an infested ash in Naugatuck State Forest in Hamden reveals stripped bark, the work of woodpeckers.

JERRY MILNE

BY JERRY MILNE

If you find a tree with grayish, grooved bark and leaves that grow in leaflets, it might be an ash tree, and now might be time to kiss it goodbye. In the two years since scientists confirmed that the insect emerald ash borer (*Agrilus planipennis*) had arrived in Connecticut, state foresters have started cutting down healthy ash trees so that their timber can be used before the EAB destroys it. EAB is the most devastating threat to our forests since Dutch elm disease and chestnut blight, and it is spreading quickly.

The destructive Asian insect has shown up in most corners of the state. As reported in Connecticut Woodlands (Summer 2014), by the time the Connecticut Agricultural Experiment Station scientists confirmed the EAB was tunneling beneath ash trees' bark in Prospect, it had been in North America for a decade. (It arrived in Detroit in packing material.) After the Prospect sighting, the EAB quickly spread to Middlebury, Oxford, Southbury, Cheshire, and Hamden—all in New Haven County. Unfortunately, as of

this writing, it now infests ash trees in Fairfield, Litchfield, Hartford, Middlesex, and New London counties.

The devastating effects of EAB are now quite visible in the Connecticut towns where it was found first. Ash trees are dying along roadsides and in forests and yards. The most obvious symptom is the stripping of the outer bark by woodpeckers looking to eat the borers. This is called "blonding" because the inner bark is beige. Adult borers create tiny D-shaped exit holes as they leave the trunks. When the leaves emerge, the canopies will be sparse if not already dead. Ash trees usually die within five years of infestation.

More subtle indications of EAB include the serpentine tunnels just under the bark where the larvae feed on the tree's phloem (the vessels that transport nutrients up and down the tree). It is this feeding that kills the trees, rather than the nibbling of the leaves by the adults.

Why State Foresters Are Cutting Ash

Connecticut's state foresters are evaluating state forest lands with significant amounts of ash and considering "presalvaging" them—removing trees before they die while they still have value. In Naugatuck State Forest, in the heart of the initial infestation, we were able to sell 30,000 board feet of dying ash (roughly 200 trees) as part of a larger ongoing timber sale. By acting quickly, we were able to salvage some economic value from the trees before they became worthless. Ash wood is used for many products, including baseball bats, furniture, and flooring.

Ash usually grows on moist, fertile sites in combination with red and sugar maples and tulip poplar. Unfortunately, these are often the same places where exotic, invasive plants such as Japanese barberry and Oriental bittersweet are found. Suddenly removing the ash in the overstory will let more sunlight reach the forest floor, allowing these invasives to proliferate. These plants will have to be controlled, most likely with approved herbicides, before the presalvage of the ash.

If you own a woodlot and are unsure how EAB could affect you, contact a Department of Energy and Environmental Protection Service forester by calling the DEEP Forestry main office in Hartford at 860-424-3630. You can also contact a private Connecticut certified forester. A list of certified foresters can be found at ct.gov/deep.

JERRY MILNE

Above, Ash trees are loaded during a harvest. Below, Emerald ash borer holes in the bark are tiny, even next to a quarter.

Strategy for Homeowners

If you have ash trees in your yard, you can call a Connecticut licensed arborist for advice. The Connecticut Tree Protective Association maintains a list of its members who are licensed arborists (ctpa.org). Some insecticides can protect healthy ash trees from EAB. Trees can be treated with systemic insecticides for a few years until the initial wave of EAB passes through. But, trees with more than 30% canopy dieback are unlikely to recover even if treated.

Strategy for Municipalities

Towns with questions about ash trees along roads and in other public spaces can call DEEP's Urban Forestry Program at 860-424-3178 for management options.

On December 5, all of Connecticut was placed under the federal quarantine for EAB. This is a good news–bad news situation. The bad news is that most of Connecticut is likely or soon to be infested with EAB. The good news is that the movement of ash logs, ash nursery stock, and other regulated articles within Connecticut is no longer subject to state or federal quarantine. However, there are still restrictions for moving these items out of Connecticut into other states.

Moving firewood within Connecticut is still regulated. In fact, anybody who transports firewood within Connecticut must have a Self-Issued Certificate for Transportation of Firewood. The certificates can be downloaded from ct.gov/deep.

Because the EAB situation is so dynamic, go to ct.gov/caes for the most recent information about quarantines. The purpose of the quarantines is not to eliminate EAB but to slow its spread, allowing landowners and communities to plan for the impact and buying time for biological controls to take effect.

Is There Any Hope?

The Connecticut Agricultural Experiment Station is testing biological controls. Two kinds of non-stinging wasps that kill EAB by parasitizing its larvae or eggs were released in several towns in western Connecticut in 2013 and 2014. These insects are specific to EAB and control the population in its native China. Their effectiveness is being evaluated this year by Dr. Claire Rutledge at the station.

More Information

emeraldashborer.info.

Jerry Milne is a forester for the Connecticut Department of Energy and Environmental Protection.

WIKIMEDIA COMMONS

Pitch pines cling to the edge of Pinnacle Rock in Connecticut's Central Valley.

PITCH PINE–SCRUB OAK BARRENS

BY EMERY GLUCK

Those who walk on Connecticut's Blue-Blazed Hiking Trails may know the pitch pine, which grows on some of the ledges—at least for now. But in most areas of the state, you could walk all day or take a decent road trip without seeing one. In Connecticut, the conifer is also found on ledge outcrops where there is enough soil in the cracks to support them away from their competitors (hardwoods and white pine). Pitch pine is found on Lantern Hill in North Stonington, Pine Ledge in Chester, White Bluff in Plymouth, the ledges on the way up to Bear Mountain in Salisbury, and on a ridge top south of Candlewood Road in Groton.

Connecticut's 13 Imperiled Ecosystems

FIRST IN A SERIES

The historic pine with the alligator scale–like bark would be at home in parts of the Quinebaug and Connecticut River valleys, where glaciers deposited outwash sand and gravel. But today, just remnants of this ecosystem's previous self can be found southwest of Bradley International Airport along Route 20. The largest Connecticut River Valley stand left today grows on the Montague Plains in Massachusetts.

Seeing large stands of pitch pine today usually means going out of state. On the outer portions of Cape Cod, it is often the most common tree. It dominates southern New Jersey's Pine Barrens, which covers approximately 1 million acres and where forest fires persist. In 1957 in Plymouth, Massachusetts, a sea of pitch pine fueled a 15,000-acre wildfire that stopped only when it reached Cape Cod Bay. Scattered pitch pines grow near Lake Champlain, north of Burlington, Vermont. Pitch pine clings to the ledges on the southern Maine coast and climbs partway up Cadillac Mountain in Acadia National Park.

Sandy Soil: Attractive to Pitch Pines — and Developers

Connecticut's sand plains were once occupied by pitch pine and scrub oak as well as grasslands. Short trees and occasional openings were characteristics of the barren sand plains, though taller pines could grow in most areas in the absence of fire. Over time, sand plains were carved up for gravel pits and development.

Even early farming took a crack at the sand plains. Connecticut Governor John Winthrop visited the Royal Society in London in 1670 with the tangled roots of a dwarf oak (presumably scrub oak from sand plains) and plump Indian maize. They represented the before and after in his apparent pitch to finance missionaries to convert the Natives so their labor could be used to expand agriculture and other enterprises. Sand plains in North Haven, Suffield, and Windsor were cleared for agriculture in the 18th century. Agriculture on North Haven's sand plains was largely abandoned in the first half of the 19th century. Much of the land has since been developed. It is estimated that 95 percent of the state's pitch pine–scrub oak barrens have been lost, making their landscape the most decimated upland ecosystem. The losses have occurred in Massachusetts, too. The largest pitch pine forest known in the Connecticut River Valley once occupied approximately 20 square miles in Springfield and Chicopee, covering over one-third of those two municipalities.

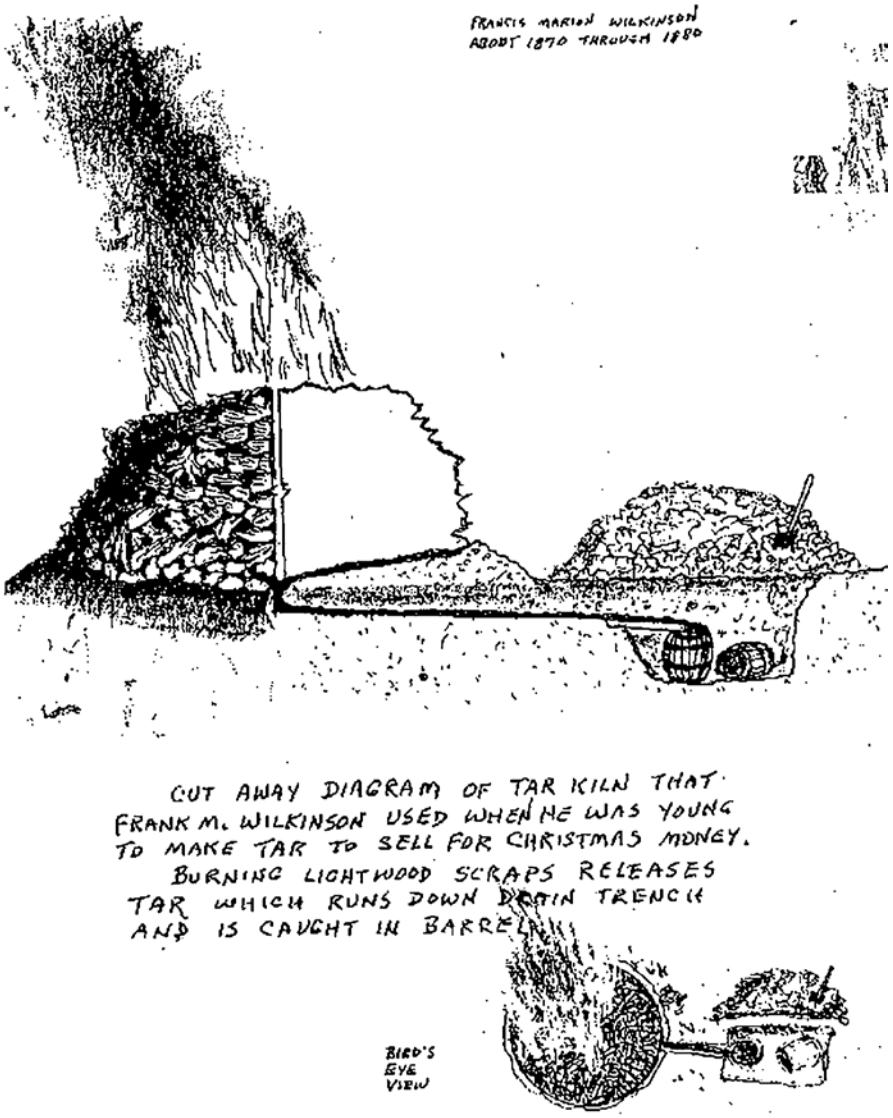
The sand plains barrens, along with ridge top pitch pine–scrub oak barrens and heathland, are the most important shrubland habitat for rare moths and butterflies such as the buck moth (*Hemileuca maia maia*) and Gerhard's underwing (*Catocala herodias*). Scrub oak is the primary host for many of these rare *Lepidoptera*. Unfortunately, the small remaining habitat probably does not support many of more specialized species. The remnants are now overrun with taller white pines (*Pinus strobus*) and other hardwoods; fire is no longer prevalent to keep the invaders at bay.

Pitch Pine in Sun and Shadow

The traprock ledges in the center of Connecticut and many smaller ledges provide limited sanctuary for pitch pines and scrub oaks because they get the sun they need. In lower areas, adjacent hardwoods close in, casting deadly shade. Ordinary forests are generally too choked for pitch pines' offspring to thrive but are loaded with competing trees' broods, as Henry David Thoreau noted in *Faith in a Seed* (Island Press, 1993):

> To my surprise I find that in the pretty dense pitch pine wood . . . where there are only several white pine old enough to bear . . . yet there are countless white pine springing up under the pitch pines (as well as many oak) and very few or scarcely any little pitch pines and they are sickly.

Not only do the seedlings wither in the shadow of others. Carcasses of older pitch pine can be found littering the forest floor where other trees overtopped them, squeezing the life out of them as they spent their last years grasping for sunlight.



GEORGE K. WILKINSON NCROOTS.COM

This sketch is of a North Carolina tar kiln, similar to those used to extract tar from pitch pine bark.

U.S. Forest Service Forest Inventory and Analysis data corroborate the absence of new generations of pitch pine seedlings in Connecticut and a substantial mortality rate of older trees. Pitch pine-scrub oak ridge top and sand barrens are down to 0.04 of 1 percent of the Connecticut forest, and the conifer now composes less than 1 percent of all the pines that grow in the state.

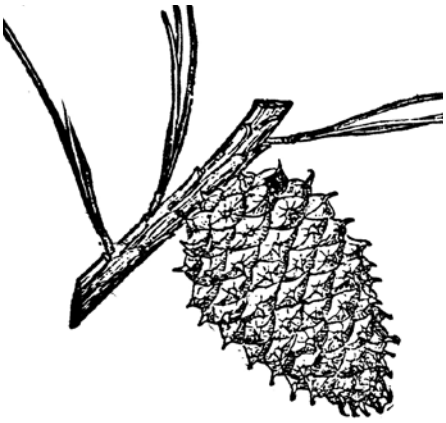
Our Pitch Pine Heritage

Dr. Charles Cogbill's study of "witness trees" in 389 towns in New England and New York paints a picture of the forest before Colonial settlement. He studied deeds of early landowners, which included surveys of trees that marked the corners of the properties. Overall, 18 percent of the

pines in the entire study were recorded as pitch pine, but half the pine recorded in the deeds did not specify white or pitch, so the pitch pine component could be substantially higher. In some areas of Connecticut, a maximum of 40 percent of the trees were pine and as many as 60 percent of those were pitch pine, according to the study.

Early colonists called pitch pines "candlewood," although other species, particularly in the South, also had that nickname. The settlers found it valuable for providing light because they lacked tallow for candles. Settlers burned the pitch pine knots (the most resinous part where the trunk meets the limbs) and shivers. Mr. Winthrop wrote in the 1660s that pine knots were often all that remained from generations of fallen trees in fields burned clear by the Indians. Families would gather pine knots and deadwood from the pine plains—as Mr. Winthrop wrote, the knots were "provided without any labour but the gathering together." A Springfield historian in 1828 noted, "A prudent farmer would almost as soon enter upon the winter without hay, as without pine." Many of Connecticut's landmarks such as Candlewood Mountain in New Milford, Candlewood Hill in Haddam, and Candlewood Ledges in Lyme bear witness to their namesake. A hill and ledge in Ridgefield were previously called Candlewood Hill and Ledge. Also, the lumber was used in barns and for floorboards. Pitch pine floorboards were identified in a house built in 1744 in Haddam.

New England colonists in the 17th century started to produce pine tar, which was crucial for the shipbuilding industry, from pitch pine. The tar was used as a preservative for the rigging and probably for oakum, a fibrous material that was caulked between ship planks to make the ship watertight. Connecticut had oakum mills in Higganum and Middle Haddam. The latter has an Oakum Dock Road. Tar was made by burning logs, stumps, and deadwood in an earthen kiln. A sloped gutter at the bottom of the kiln directed the oozing tar to a collection barrel. One cord of pitch pine was estimated to make 40 to 60 gallons of tar. Pitch, which is boiled down tar that hardens when spread out, was used to protect ships' hulls and make them more watertight. It was said that ships never left port without a barrel of tar for use during the voyage. Tar was also used for axle grease and to tar and feather a scoundrel.



FOREST TREES OF CONNECTICUT- CFPA

*Pitch Pine (*Pinus rigida*).*

England, which was largely deforested by the 1700s, needed shipbuilding material and tar to expand and maintain its merchant fleet and navy. Her Majesty's Navy's traditional source was northeastern Europe. But when the Baltic Sound, the narrow waterway between Sweden and Denmark, was closed by the Dutch and Danes during the First Dutch War, England started importing tar and masts from the colonies. But the colonists also needed tar as they ramped up their own shipbuilding industry, which thrived in nearly all of the towns on the Connecticut coast and the navigable part of the Connecticut River. New England established itself as the dominant shipbuilding area of the colonies.

Tar production, which began in Connecticut around 1643, was called the colonies' first industry. Business partners John Griffin and Michael Humphreys made it in Windsor and worked their way up the Farmington River (then called the Tunxis River) cutting the surrounding pine plains in North Bloomfield, East Granby, and Simsbury (then called Massaco). Above the gorge at Tariffville, Mr. Griffin and Mr. Humphreys found a broad open savannah on the west bank, and (as an old history reports) "back of the savannah were great ranges of stately primeval pines, and straightway John Griffin, trader at Windsor, began to utilize them in the making of tar, pitch, turpentine and candlewood."

Turpentine was another valuable product produced from pitch pine knots and by tapping the trees for sap. The sap was spooned out into a container in a process known (at least in the South) as "dipping gum." Spirit of turpentine was the aromatic product produced by distillation and rosin was the dense, waxy residue. Rosin was used for making adhesives, sealants, coatings, fluxes, printing inks, emulsifiers, and chewing gum. Turpentine was used in solvents, cleaners, antiseptics, insecticides, flavors and fragrances, and synthetic resins.

In the early 1700s, turpentine was shipped from Hartford to a distillery in Boston, and the Reverend Timothy Woodbridge sent five tons in a single shipment from the Simsbury, Connecticut, area to New York.

The demand for tar began to affect the forest. So much was made by the burning of pines along the banks of the Connecticut River that as early as 1650, the towns began prohibiting the use of candlewood for tar-making if gathered within 6 miles of the river. Families were allowed to use it for light and fuel. Tar burning was forbidden in Windsor in 1696, in Glastonbury by 1700, and in Hartford in 1709.

To conserve its source of tar, England imposed the Act of 1705 forbidding the colonists from the cutting of small pitch pine and tar trees not within any fence or actual enclosure until growth of 12 inches in diameter 3 feet from the ground and growing on un-granted lands (that is, forests that were reserved for the crown) from Nova Scotia to New Jersey.

But the same act encouraged production with a bounty of 4 pounds per ton of pitch or tar sold to the Royal Navy, and the English thought American tar was poor quality, so Her Majesty's Oversea Civil Service appointed a Surveyor-General of the Woods for New England whose duties included teaching the colonists how to produce tar and pitch (and enforcing a statutory provision for the protection of the forests reserved for the crown). The preferred method of preparation for quality tar production included stripping almost all the bark from live trees a year before harvesting them, to allow pine sap to collect on the trunks. But then, the forest the surveyor-general was preparing, presumably for instructing the colonists, burned down. He blamed the colonists for the fire. (The colonists and England already were in conflict over the cutting of white pines for ship masts. Conflicts surrounding pine tree ownership appear to have contributed to the American Revolution.)

Tar production in New England dropped precipitously in the 1700s. Production increased in the South with its abundant longleaf and slash pineries and slave labor.

(Tar and turpentine production helped decimate the longleaf pine ecosystem.) New Englanders kept their hands in the trade because their ships transported much of the tar produced in the South. In this way, New Englanders were able to collect the bounty of 4 pounds per ton of tar or pitch, which was authorized only for colonies from New Jersey north. Ships from New London and Milford were among those that carried cargoes of tar.

Through the names it left behind, the industry left its legacy in New England. Though there is only one Tar Kiln Hill Road in Connecticut (Voluntown), there are others in Raymond, Maine, and New Bedford, Massachusetts. Other names in surrounding states remind us of the extent of the tar industry that the pitch pines fueled: Burrillville, Rhode Island, has a village of Tarkiln, a Tarkiln Road, and a Tarkiln Pond; Duxbury, Massachusetts, has the village of Tarkiln; and Tarkiln Hill stands in Wareham, Massachusetts.

Abandoned Farms: A Second Breath of Life

Pitch pine resurged following the widespread abandonment of farmland in the second half of the 19th century, especially on droughty outwash plains. The tree became large enough for logs in the early 20th century. In 1910, the Connecticut Agricultural Experimental Station reported 1.5 million board feet of the pine were cut that year. That's more pitch pine timber than existed in the entire state in 1998, according to the U.S. Forest Service. Pitch pine was ninth of all the species cut for lumber in 1910. (American chestnut was first.)

Thoreau's observations in *Faith in a Seed* are a reminder of the special conditions that pitch pines require:

> It is mainly the little pitch pines that spread so fast into the pasture, then, and perchance have already extended the wood a dozen rods into the grass. The spreading is commonly not at all into the adjacent woods, but only in the open land. . . .
>
> It will be seen, then, that, generally speaking, pitch pines will not spring up numerously within a wood, though they may take advantage of any thinness or openings, and most of the large pitch pines we see within the woods are probably as old as the wood itself, having come up with it. . . .
>
> Where then did the pitch pine stand before the Colonial settlers came—if there were any dense groves of it then? Who cleared the land for its seedlings to spring up in? Is it, perhaps, proportionally a more common tree now, being better able to survive cultivation and maintain its ground? . . .
>
> Who knows but the fire or clearings of the Indians may have originated many of these bare plains, and so account for the presence of these trees there? We know that they not only annually burned the forest to expedite their hunting, but regularly cleared extensive tracts for cultivation. . . .

Fire benefits pitch pines not just on the plains, as Thoreau noted, but on ridge tops. The western ridge above Route 8 near the Beacon Falls–Naugatuck town line was undressed by recent fires allowing pitch pine (and scrub oaks) to grow in some areas. An 1,800-acre fire in May 1930 that roared over Bear Mountain in Salisbury probably helped repopulate the ridge top with those trees. But fire is not the only factor helping the trees. A study of dwarf pitch pine just across the Massachusetts state line from Bear Mountain found no evidence of fire for at least 300 hundred years.

Resetting the Ecological Clock

Almost none of Connecticut's pitch pine–scrub oak barrens are sustaining themselves under current natural conditions. A major reason is that today, wildfire in Connecticut is a faint flicker of its past self. Historically, fires were relatively frequent except in the hinterlands. When there was a fire epidemic in the early 20th century, as much as 1 of every 33 acres burned annually. Now, only 1 of approximately every 4,000 acres burns annually, and the fires are generally less intense.

The Connecticut Department of Energy and Environmental Protection Division of Forestry implements controlled burns and tree harvests to sustain pitch pine–scrub oak and other disturbance-dependent ecosystems. Severe fires create seedbeds for the pine by devouring pine duff and exposing mineral soil. Fire provides the forest openings such as those where Thoreau found the little pitch pines in the midst of woods. The harvesting of white pine timber makes the restoration of pitch pine with fire more feasible. Larger white pines accrue thick fire-resistant bark, so they generally do not succumb to controlled burns. Additionally, their large crowns cast so much shade it is less likely that the pine duff will dry enough to burn well.

Pitch pine cones have historically required fire to open. But as fire becomes infrequent, the population adapts to open its cones without fire. This change provides foresters with an opportunity, because the pine can be sustained near a parent tree by scarifying the ground (usually with logging equipment) to expose mineral soil. The other trees are harvested, because the pitch pine seedlings will not tolerate shade. Where there are no parent trees, seeds can be shaken out of recently opened cones taken from other areas.

Besides the lack of new pines, there is another concern. The southern pine beetle, which has been affecting the Jersey Pine Barrens lately, recently has been found on Long Island. This could be bad news for the older stressed trees in Connecticut.

Creating Conditions to Help Pitch Pines

History describes a forest largely unfamiliar to Connecticut today. The conditions that established the pitch pine ecosystem no longer exist for the most part. It is easy to misunderstand what has been lost, or to miss the glacial pace of change in the forest. It is hard for some to accept that human-made disturbances such as judicious tree harvests or controlled fires are needed to sustain diverse forest ecosystems and habitats.

The slow displacement of these trees is a problem that generally does not show up on environmental "radar screens." But the pitch pine–scrub oak forests can be considered the proverbial canary in the coal mine—the sensitive species that detects something harmful happening. This ecosystem might be the first casualty of the Connecticut landscape. Without mindful intervention, other ecosystems too may slowly disappear.

Emery Gluck is a Connecticut state forester who has worked on tree harvests and controlled fires to provide openings on state lands for pitch pines. He wrote the article, "Confessions of a Pitch Pine Enthusiast," in our Winter 2008 issue. For a list of his sources for this article, contact the editor at chris@chriswoodside.com. Our series on 13 imperiled ecosystems is inspired by a 1998 report by Kenneth J. Metzler & David L. Wagner for the state's Blue Ribbon Task Force on Open Space.

NEW AUERFARM STATE PARK SCENIC PRESERVE

A public–private partnership for perpetuity

BY LINDSAY SUHR

At the end of 2014, the state of Connecticut added a new state park to its system in Bloomfield. Auerfarm State Park Scenic Preserve is no ordinary donation. It is a property that maintains some of the most scenic views of the Metacomet Ridge on the nearby Talcott Mountain State Park. This special land offers a variety of habitats, including woodlands, apple orchards, and grasslands that act as valuable feeding, resting, and breeding sites for an array of wildlife. Auerfarm State Park Scenic Preserve is beautiful but also unique, because its donor had the foresight to ensure its protection in perpetuity.

Over the years, many conservation organizations and private individuals have begun to realize that no donation of open space to the state is truly protected in the current legislative system. Each year, the General Assembly uses a legislative mechanism known as the Conveyance Act to sell, trade, or give away public lands. Many times, legislators have added the most valuable conservation lands (state parks or forests) to bills as amendments during the last few days of the session, leaving no

time to hold a public hearing or do the appropriate research.

This troubling reality has led environmental advocates such as the Connecticut Forest & Park Association (publisher of this magazine) to push for changes to the system. These modifications might take years to transform the current practice. We cannot halt the expansion of the state park and forest system while we wait for the law to change, or we will lose thousands of acres of valuable conservation land to development. So what are we to do?

One option is to follow the example set by Elizabeth Auerbach Schiro, who donated the Auerfarm State Park Scenic Preserve. Ms. Schiro was willing to donate more than 40 acres of her family's land to become a state park, but she wanted her gift to be protected against the whims of a future state legislature. She was wise to think ahead and partner with CFPA to ensure the protection of the land in perpetuity. The acreage, a special place to her family, has now become an important part of her family's legacy of progressive, community-oriented philanthropy.

Ultimately, Ms. Schiro chose to place a conservation easement, to be held by CFPA, on the property. Next she donated the land to the state. This conservation easement, which CFPA has agreed to steward in perpetuity, ensures that the property will be protected forever by restricting the development and other rights of the owner—in this instance, the state of Connecticut. If this property were ever proposed by the General Assembly to be included in a future Conveyance Act, the conservation easement would easily prove the donor's intention of protecting this piece for open space.

CFPA is excited to add this beautiful property to the 1,784 acres of conservation easements that CFPA already stewards and hopes that Ms. Schiro's generous example will serve as a model for future state lands protection.

Lindsay Suhr is the land conservation director of CFPA. She lives in North Haven.

2015 CONSERVATION AGENDA FOR THE LAND & PEOPLE OF CONNECTICUT

2015 PRIORITIES SUMMARY

1) Pursue legislative and policy improvements to protect publicly-owned conservation, recreation, and agricultural lands; for example:
   a. Require a public hearing before the Environment Committee if State Forest, Park, or Agricultural lands are proposed for conveyance.
   b. Encourage DEEP and DoAg to place protective measures (e.g., a conservation restriction) on public conservation, recreation, and agricultural lands.
   c. Expand authority of State Properties Review Board to include review of land records and deed restrictions when evaluating a legislative conveyance.
   d. Promote a Constitutional Amendment that mandates a transparent process for considering conveyances of public lands acquired for conservation, recreation, and agricultural purposes.
2) Eliminate 70% cap on federal/state matching grants for open space and agricultural land preservation as required in C.G. S. 7-131g(c).
3) Dedicate revenues from cabin rentals in State Parks to help offset ongoing cabin maintenance costs.
4) Refill depleted Forestry, Land Conservation, and Parks vacancies at CT DEEP.
5) Provide municipal option to provide a property tax credit or deduction for donation of easement to protect a trail corridor.
6) Require Planning & Zoning Commissions to consult with Municipal Tree Wardens to ensure planting plans do not conflict with the "Right Tree, Right Place" concept.
7) Support Community Investment Act & Bonding for Open Space, Agricultural Lands, and Trail Conservation.
8) Support key Federal programs that further environmental education and the conservation of forests, open space, and trails.

CFPA Public Policy Committee Members

William D. Breck	John E. Hibbard	Lauren L. McGregor
Russell Brenneman	David K. Leff, Chair	John C. Larkin, Lobbyist
Hon. Astrid T. Hanzalek	Eric Lukingbeal	Eric Hammerling, Staff

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CFPA's 2015 Conservation Agenda Priorities Analysis

1) Pursue legislative and policy improvements to protect publicly-owned conservation, recreation, and agricultural lands.

Without a conservation restriction attached to the land on the land records, your State Forests and Parks are vulnerable to the "Conveyance Act," a legislative mechanism which the General Assembly uses every year to sell, trade, or give away public lands. Many of these annual conveyances are not harmful (e.g., sometimes this process is used to clarify a boundary between state and municipal or private lands), but at times, there are proposals to give away portions of State Parks and Forests to municipalities or private interests that eat away at the public's confidence in Government.

In 2014, a section of American Legion State Forest was given to the town of Barkhamsted (this conveyance is currently in dispute because this parcel may have been donated to the state with a deed restriction from the original land donor). In 2013, a section of public land managed with Hammonasset Beach State Park was given to the town of Madison. There are many more examples available at http://ctwoodlands.org/ProtectYourStateLands. One of the backstops written into the Conveyance Act (presumably to evaluate the legality of a proposed conveyance) is a technical review by the State Properties Review Board (SPRB). However, the current authority of the SPRB does not clearly authorize the SPRB to review legislative conveyances. The authority for the SPRB to review legislative conveyances should be clarified to give the public confidence that existing deed restrictions, conservation easements, or other restrictions on state lands are not being violated.

CFPA's Public Policy Committee recommends that the best solution to protect vulnerable public lands is a Constitutional Amendment that requires the Conveyance Act process to become more transparent. Without a Constitutional Amendment, the General Assembly will continue to suspend its own rules, limit public input and awareness, and at times make decisions that are not fully evaluated or in the best interests of the public. CFPA's recommendation echoes the call for a Constitutional Amendment by the CT Council on Environmental Quality published in its important January, 2014 report, "Preserved But Maybe Not: The Impermanence of State Conservation Lands."

2) Eliminate 70% cap on federal/state matching grants for open space and agricultural land preservation as required in C.G. S. 7-131g(c).

Since 1999, Connecticut has had a goal of protecting 21% of its land as open space by 2023. To meet this goal for land not owned by the State, DEEP grants funding to municipalities, water companies, and land conservation organizations through both the Open Space and Watershed Land Acquisition Program and the Community Investment Act. Although the State does not know exactly how much land has been preserved, it is clear that we are short of this goal, and the progress toward the 21% goal is not proceeding quickly enough. What we do know is that State open space grants in 2013 helped protect 1,068 acres, but even that is far short of the goal that would roughly require protecting over 6,000 acres/year.

Given the open space acquisition goal we are now pursuing, why would the State make it more difficult to conserve land?! Unfortunately, C.G.S. 7-131g(c) makes it more difficult for municipalities, water companies and land conservation organizations to protect open space by capping the combination of grant funds from the State and Federal governments at 70% of the appraised value of the land. That means that the organizations that are trying to protect valuable conservation, recreation, and agricultural lands have to raise at least 30% of the value of the land in non-state, non-federal funding.

There are some communities that can find that required 30% local match from wealthy individuals or from municipal funds, but there are many that cannot. If the goal is conserving more land, we ask the General Assembly to eliminate the 70% cap by removing the last sentence in C.G.S. 7-131g(c) which currently reads "A potential grantee may use funds made available by the state and federal government to fund not more than seventy per cent of the total cost of any project funded under the program."

3) Dedicate revenues from cabin rentals in State Parks to help offset ongoing cabin maintenance costs.

The 100 year anniversary of the State Parks was celebrated in 2013-2014, and one tangible legacy of the centennial is the construction of 100 cabins in the State Parks for public enjoyment. Unfortunately, the rental revenues from these new cabins are going to the General Fund and do not assist DEEP with the maintenance, repairs, and improvements necessary for these structures.

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CFPA's 2015 Conservation Agenda Priorities Analysis

In 2014, the Program Review and Investigations Committee recommended that the revenues from the cabin rentals be dedicated to the maintenance of those cabins. We ask the General Assembly to act on this recommendation from the Program Review and Investigations Committee and dedicate revenues from cabin rentals in State Parks to the CT DEEP Maintenance, Repair, and Improvement account.

4) Refill depleted Parks, Forestry, and Land Conservation vacancies at CT DEEP.

Parks: In 2014, the General Assembly supported budget increases for 6 Park Maintainers and 3 Park Supervisors for the State Parks, and to refill several vacant Environmental Conservation Officer positions. At current time, several of these positions are caught in a budget-related hiring freeze. We ask the administration to fill all of these positions approved during the 2014 legislative session.

We also ask the Administration and General Assembly to address staff shortfalls in two additional critical areas at CT DEEP – Forestry and Land Conservation.

Forestry: The Forestry Division is responsible for managing 170,000 acres of State Forests for multiple benefits – demonstrating best management practices, drinking water protection, recreation, sustainable timber harvest, wildlife, reducing wildfire risks, and many others. In addition to providing these benefits, the State Forests also generates approximately $400,000 each year from sustainable harvest revenues. Forest Management Plans (updated every 10 years) are critical tools for managing the State Forests. However, due to chronic staff shortfalls, there are up-to-date Forest Management Plans on only 40% of the State Forests. Without an up-to-date Forest Management Plan, CT DEEP does not allow sustainable harvests to take place. This hurts both the health of the forests and local forest economies that depend upon them. To bring 75% of the Forest Management Plans up to date within the next 5 years would require the hiring of 3 forest technicians.

The Forestry Division is also the State leader (along with UConn Extension) on working with private landowners to receive technical assistance and develop forest management plans. Approximately 90% of the forests in Connecticut are privately owned, and the needs for assistance are significant for more than 10,000 private forest landowners who own properties of 10 or more acres. Well-managed private forests in Connecticut also create jobs in the forest industry and sustain a maximum of benefits for communities.

We request the appropriation of $275,000 to accommodate the hiring of 3 forest technicians and the refilling of at least 1 Service Forester position (the Service Forester positions are partially offset with matching federal funds). Altogether, this would likely support the sustainable forest management of an additional 60,000 acres of public lands, and another 8,000 acres of privately-owned forests each year.

Land Conservation: Land Acquisition and Management is responsible for acquiring lands for the State (Recreation and Natural Heritage Program), giving grants to municipalities, water companies, and land conservation organizations to protect open space (Open Space and Watershed Land Acquisition Program), guiding the State's land protection priorities through the Green Plan, and building a Public Use and Benefit Land Registry. At current staff levels, CT DEEP is unable to juggle all of these existing and new responsibilities effectively.

Land Acquisition and Management has diminished to only 5.5 full-time staff, compared to more “fully-staffed” levels closer to 10 professionals just 4 years ago. Last year, the Recreation and Natural Heritage Program only acquired 467 acres, and this falls far short of the 6,500 acres/year (estimated in several CT CEQ reports) that would enable the State to meet its portion of the 21% goal. Falling short is both due to inadequate staff as well as funding levels.

Although we are very excited about the recently authorized Public Use and Benefit Land Registry, the requirement to add 3 State Parks by January, 2015 and another 4 State Parks every quarter to an online, searchable database is painfully slow (although it is realistic given current staff constraints). With the current 109 State Parks, this basic inventory would not be complete for another 7 years for the State Parks alone, and would not yet scratch the surface of the state's many State Forests and Wildlife Management Areas. We recommend an addition of 3 full-time positions (2 property agents and 1 supervisor) in Land Acquisition and Management to enable the State to increase the pace and effectiveness of land conservation in Connecticut.

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5) Provide municipal option to provide a property tax credit or deduction for donation of easement to protect a trail corridor.

People want to live near trails and beautiful open spaces. According to a 2008 National Association of Home Builders study, "Trails consistently remain the #1 amenity sought by prospective homeowners." The CT SCORP (State Comprehensive Outdoor Recreation Plan) emphasizes that people desire trails more than all other types of recreational amenities. There is also a growing recognition of the economic, health, and quality of life benefits associated with having protected and well-managed forests, parks, and trails.

We ask the General Assembly to support giving municipalities an option to provide a property tax credit or deduction for the donation of a conservation easement that would protect a trail corridor in perpetuity.

6) Require Planning & Zoning Commissions to consult with Municipal Tree Wardens to ensure planting plans do not conflict with "Right Tree, Right Place" concept.

For over a century, municipal tree wardens have been responsible for the "care and control" of trees in the public right of way in every community. In many towns, the municipal tree warden is the only person who has some professional knowledge about what it takes to keep community trees healthy. Over the past couple of decades, municipal tree wardens as well as utilities and others have rallied around the concept of "right tree, right place"; i.e., ensuring that the right species of tree to meet landowner, community, utility, and other goals is planted or replanted in the right location for maximum long-term benefits.

Unfortunately, many towns and town commissions do not utilize the expertise of their tree wardens in reviewing planting plans for newly proposed housing and commercial developments. This level of review should help avoid future conflicts that would otherwise arise if the wrong species of trees were planted next to roads, beneath power lines, in transportation lines-of-sight, et cetera. We ask the General Assembly to support legislation that would require Planning and Zoning Commissions to consult with their municipal tree wardens when reviewing planting plans to ensure "right tree, right place" is considered.

7) Support Community Investment Act & Bonding for Open Space, Agricultural Lands, and Trail Conservation.

In 2014, the Administration and General Assembly supported funding for the Community Investment Act, the Open Space and Watershed Land Acquisition Program, and the Agricultural Land Preservation Program. We ask that these critical programs be supported at least at current levels for the next biennium.

We also strongly support the proposal by the Administration to establish a new $5 million Local Trailway Fund to address the high public interest as well as the community health, economic, and recreational needs for more trails.

8) Support key Federal programs that further environmental education and the conservation of forests, open space, and trails.

There are several federal programs that are essential to support CFPA priorities in environmental education as well as in the conservation of forests, open space, and trails. We recommend that Connecticut's Congressional Delegation support fully authorized funding levels for the following programs: USDA Farm Bill (Conservation Title programs); USDA Forest Service - Forest Legacy Program; Land and Water Conservation Fund (LWCF); No Child Left Inside Act (new proposed legislation); New England Trail funding through the National Park Service; and the U.S. Department of Transportation/FHWA Recreational Trails Program.

CONNECTICUT Forest & Park ASSOCIATION

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FINDING MEMORIES ON *WILD* TRAILS

On the New England Trail, in the spirit of Cheryl Strayed, a father finds wild landscapes inside himself.

BY RICH NOVACK

Traveling northward on I-91 in Wallingford, I anticipate a glimpse of Higby Mountain. Whenever I approach this towering rampart, I recall a hike I took with friends. From atop the mountain I looked down on I-91 thinking, *I will remember this hike whenever I travel by this mountain for the rest of my life*. The story of that day is preserved in my mind, and it is tied to that mountain for me.

In the book *Wild: From Lost to Found on the Pacific Crest Trail* (Knopf, 2012), Cheryl Strayed chronicles her memories made while hiking the Pacific Crest Trail in California and Oregon. Woven into these memories are the poignant experiences of a young woman whose life is in flux. Her textured tales unearth hardship both on and off the trail. After losing her mother and her marriage, Ms. Strayed looks to the trail as a means to find "many beginnings" and rediscover "the person [she] used to be."

RICH NOVACK

Rich Novack in the woods with his daughter.

As hikers, don't we bring our historic baggage from the front country into the backcountry? We mark milestones in our lives like cairns on the trail and tether those moments to the land as markers, so that when we trek past certain places we sometimes think to ourselves, *last time I was here, this had happened, or I had just done that.* Yet in the moment of that experience, as Ms. Strayed notes, we don't know what those places will mean; we only "understand its meaning without being able to say precisely what it [is]."

In the book *Wild,* the PCT is a character, serving as both the narrator's foil and as a metaphor for the narrator's disposition. "The trail didn't feel two years old to me. It didn't even feel like it was about my age. It felt ancient. Knowing. Utterly and profoundly indifferent to me." Hiking in the dawn of the PCT's official completion in 1993, Ms. Strayed appreciates both the newness of the trail and its history.

Finding Out Who We Are, on the Trail

Today, we in Connecticut stand at the precipice of a similar national landmark's birth. The recent designation of the New England Trail as a National Scenic Trail offers Connecticut another place in which memories can be found and entwined. I hope people are drawn to the NET as Ms. Strayed was drawn to the PCT to find something about themselves. I encourage you to begin your own journey through our national treasure here in Connecticut and preserve them, both in mind and in body. Perhaps

I HOPE PEOPLE ARE DRAWN TO THE NET AS MS. STRAYED WAS DRAWN TO THE PCT TO FIND SOMETHING ABOUT THEMSELVES. I ENCOURAGE YOU TO BEGIN YOUR OWN JOURNEY THROUGH OUR NATIONAL TREASURE HERE IN CONNECTICUT AND PRESERVE THEM, BOTH IN MIND AND IN BODY.

RICH NOVACK

Rich Novack's photos of hikes with his children feel as important to him as the experience.

I might offer a few suggestions as to how you might record your future adventure.

Ms. Strayed fashions the records of her journey into a book. I think there is something to be said for the way in which we document and record our adventures. In Ms. Strayed's backpack, "there were two pens" and "there was an eight-by-eleven two-hundred-page hardback sketchbook that [she] used as a journal." Journaling is great, but it isn't the only way of recording and representing an adventure.

Creativity Through Technology

Maps offer spaces to record and re-create woodland travels. For years, I have been using the Connecticut Forest & Park Association's *Connecticut Walk Book* and its maps to note the dates on which I hiked certain trails. My first trek across Higby Mountain took place on "4/20/08" according to my scratches in the margins. Map annotations are likely a form of recordkeeping that is shared by many hikers, and it is reminiscent of an earlier era of exploration, when hikers and cartographers such as Meriwether Lewis and William Clark documented their journeys across the continent. However, graphite markings on paper are an analogue mode of representation.

More recently, I decided to move my markings from the page to the screen. As a relatively new parent, I find social media are wonderful instruments for sharing photos of my children with family and friends. Likewise, I've begun to use digital tools to chronicle my wilderness explorations. My children now accompany me on most of my travels along the Blue-Blazed Hiking Trails, and I take pictures and share our hikes with friends through Facebook status updates. When I tag the people in the photo, I'm documenting and announcing their shared presence in this moment. But I don't only tag people. I also tag places. The Global Positioning System functionality of my smartphone often allows me to tag the location in my status update when I click check-in and select the appropriate location. In so doing, I am adding the place as a companion in my adventure. When I post, I'm not only inviting viewers to share in our outdoor excursions, I'm also documenting this moment. On Facebook, my posts are chronologically ordered on my timeline. Years later, I can go back to my timeline and look to see exactly where I've been, when I was there, and with whom I traveled.

Many Beginnings

My more recent adventures with social media have involved the use of Google Maps. After signing into Google maps, I click to "my maps" and create my own map called Family Map. I can place a pin drop marker on all of the places where my family and I have hiked. On the place marks, I can post pictures of our hike. Using GPS coordinates on my phone, I can even post the exact place where a picture was taken on the pin drop marker.

We weave into the land our timeline memories, our literary experiences, and our social interactions. Our memories are captured in pages, on screens, and through photos, and they are shared with others. Ms. Strayed has shared *Wild* and the PCT with us, and the book inspires me to embrace and share Connecticut's newest National Scenic Trail. I hope to hike, share, and record parts of the entire NET with my daughter and experience "many beginnings" all over again. I invite you to do the same with your loved ones.

Rich Novack is an English teacher at Fairfield Warde High School.

NESTERS ON THE FOREST FLOOR

Many birds like ruffed grouse and whippoorwill still prefer living on the ground, where amazing adaptations keep them blended in.

BY DIANE FRIEND EDWARDS

Top, an American woodcock mixes in with leaves in Southington.
PAUL J. FUSCO/MOUNT VERNON SONGBIRD SANCTUARY

Above, from left, whippoorwill chicks rest; a turkey pushes forth; and an eastern towhee sits on a branch.
PAUL J. FUSCO/CONNECTICUT DEEP

Hoping to evade potential enemies, the little mother-to-be takes an elusive route to her destination: a nest on the forest floor. She lands nearby, then cautiously approaches the nest under cover. For this bird—a rufous-sided towhee (*Pipilo erythrophthalmus*)—being unobtrusive may mean the difference between life and death for her soon-to-be-hatched nestlings.

Elsewhere in the woods, another mother hunkers down on her nest, safely (she hopes) camouflaged by her mottled plumage that blends in with the leaf litter. This bird is an eastern whippoorwill (*Caprimulgus vociferus*).

But a bigger threat than predators looms for these and other forest ground nesters in Connecticut: It's becoming increasingly hard for them to find suitable, high-quality habitats where they can successfully breed and rear their young. State wildlife experts and concerned citizens are working to improve habitats not only for the towhee and whippoorwill but also for the ruffed grouse (*Bonasa umbellus*), ovenbird (*Seiurus aurocapilla*), and American woodcock (*Scolopax minor*).

PAUL J. FUSCO/CONNECTICUT DEEP

A ruffed grouse likes young forests with scattered clearings.

Where in the Woods?

In a forest filled with branches that could provide elevated—and, you might think, safer—locations for nests, why would ground-nesting birds choose the forest floor? For one thing, nests in trees and shrubs aren't necessarily safer: They're vulnerable to predation by larger birds or by raccoons, snakes, and other animals that can climb.

"All nesting locations, from the top of the trees to the ground, have inherent dangers," said Peter Picone, a wildlife biologist with the Connecticut Department of Energy and Environmental Protection who specializes in habitat management. "The strategy of nesting on the ground stems from the bird's adaptation to the type of habitat it has evolved in."

Birds, as well as animals, have adapted over millennia to certain niches in their environment to minimize competition with other species for resources. For ground nesters, those adaptations include strategies such as camouflage coloration and evasive behavior to avoid detection by would-be predators. The American woodcock, for instance, has a mottled brown back resembling a dead-leaf pattern that camouflages the bird on the forest floor. And its large eyes are positioned high and far back on the head, which aids in detecting the approach of a predator. The plumage of a ruffed grouse has cryptic coloring that makes it inconspicuous. Whippoorwills will feign injury to lure predators away from their nests. Ovenbirds make a leaf-covered, dome-shaped nest with a side entrance that is hidden from above. And wild turkeys (*Meleagris gallopavo)* have precocious hatchlings that leave the nest after just one day.

To breed successfully, these species need particular types of forested locations:

► **The eastern towhee** nests near forest edges, among brush and thickets, where there is a lot of leaf litter. The female uses bark strips, twigs, and dead leaves to make a cup-shaped nest that is sunk into fallen leaves up to the nest rim.

► **The eastern whippoorwill** doesn't build a nest; instead she lays her marbled eggs in the leaf litter on the forest floor in a leafy, mixed forest with openings and little underbrush.

► **The ruffed grouse** prefers early-successional forests (those with mostly young trees, shrubs, and open areas) or forest interiors with scattered clearings, where the female makes a bowl-shaped depression in fallen leaves.

► **The American woodcock** nests in young, open hardwood stands dominated by seedlings and saplings, near open areas, such as old fields, forest clearings, and bogs, where males perform their amazing courtship flights. The nest is a shallow depression lined with leaves, often at the base of a small tree or shrub.

► **The ovenbird** needs large tracts of mature forest with closed canopies. The nest is made of dead leaves, grasses, stems, bark, and hair.

► **The wild turkey** nests in open forests with interspersed clearings. The hen scratches a shallow depression in the soil among dead leaves at the base of a tree, under a brush pile or thick shrubbery, or occasionally in an open hayfield.

Need for Conservation

The wild turkey, at one time extirpated from Connecticut, is now abundant thanks to past conservation efforts by wildlife management experts. Largely because of habitat loss, the other five bird species mentioned earlier are on the DEEP's list of "species of greatest conservation need"—that is, wildlife species whose populations are declining or in danger of declining here. The woodcock, towhee, and whippoorwill are in the "Most Important" category on the list; the ruffed grouse, "Very Important"; and the ovenbird, "Important." Connecticut has mostly mature forests. Our state has steadily been losing early-successional forest habitat, which birds such as the grouse and woodcock need. And development is fracturing the once-large tracts of mature forest—essential for the ovenbird's nesting success—into smaller, disconnected tracts. Ovenbirds' breeding and nesting activities are hampered by such human activities as road building and logging, and by exposure to forest edges, where predation and nest parasitism by brown-headed cowbirds (*Molothrus ater*) are more likely. (Cowbirds deposit their eggs in other birds' nests, often pushing out the host birds' own eggs. The host birds wind up raising baby cowbirds.)

PAUL J. FUSCO/CONNECTICUT DEEP

The ovenbird thrives in mature forests with closed canopies.

State wildlife experts have begun revising the state's wildlife conservation strategy (created in 2005) to guide conservation efforts during the next decade for birds and other wildlife. The new strategy, covering 2015 to 2025, is called the Connecticut Wildlife Action Plan. The plan identifies species of greatest conservation need and their habitats. The plan also identifies priority research needs and conservation actions required to address problems facing these species and habitats. You can keep abreast of the revision process by visiting the DEEP Wildlife Division Web site at ct.gov/deep/wildlife.

Meanwhile, if you go for a walk in the woods, tread carefully. You might not see a well-camouflaged nesting mother and brood. You can also help ground nesters by keeping cats indoors and dogs leashed and by helping control nonnative invasive plants that can overgrow the birds' mating and nesting grounds.

Diane Friend Edwards, a writer who contributes often to Connecticut Woodlands, also volunteers as a master wildlife conservationist with the Connecticut DEEP. See her article about hiking on the Naugatuck Trail on page 22.

DIANE FRIEND EDWARDS

Laurels create tunnels on the ledges of the Naugatuck Trail.

EXPLORING THE NAUGATUCK TRAIL

BY DIANE FRIEND EDWARDS

Mountain laurel, Connecticut's state flower, grows in profusion along the Naugatuck Trail. I can't recall ever seeing a trail with so much mountain laurel. Some of the laurels had healthy-looking leaves and should be lovely when they bloom in early June. But, on a hike here a few months ago, I found even the old, dead shrubs, with their gnarly branches, fascinating.

So, too, were several boulders that had been split in two as if a giant had cleaved them with an enormous ax. What force of nature could have caused such a clean break? The answer, I later discovered, is ice repeatedly forming and thawing over the eons, slowly widening a crack until the two halves fall apart.

The Naugatuck Trail extends 5.5 miles through the eastern block of Naugatuck State Forest in the New Haven County towns of Bethany and Beacon Falls. My husband and I wanted to take one car, and we wouldn't have enough time to do the entire round-trip trail. Looking at the trail map in the *Connecticut Walk Book: West*, I noticed it was possible to do a loop hike by starting at the Naugatuck Trail's eastern trailhead, on Route 42 in Bethany, hiking 2 miles to the intersection with the Whittemore Trail, and following that trail 0.8 mile back to Route 42. A short (0.2 mile) walk on the road would take us back to our car. We also decided to take the 0.4-mile side trail, the Beacon Cap Trail, out and back to a high point with views and a huge glacial erratic. In all, we hiked 3.8 miles.

The Hike

Both the Naugatuck and the Whittemore trails are moderately easy, with mostly gentle ups and downs. The Naugatuck Trail meanders through the forest, at times twisting through narrow gaps between mountain laurel thickets or over bald rock outcroppings. With a short, somewhat steep, rocky climb,

Moss and mushrooms thrive on the forest floor.

Right, hikers rest on the Beacon Cap Trail.

PHOTOS BY DIANE FRIEND EDWARDS

THE NAUGATUCK TRAIL MEANDERS THROUGH THE FOREST, AT TIMES TWISTING THROUGH NARROW GAPS BETWEEN MOUNTAIN LAUREL THICKETS OR OVER BALD ROCK OUTCROPPINGS.

the Beacon Cap Trail is more challenging but worth the effort.

You can begin the hike at either trailhead on Route 42. We started at the one for the Naugatuck Trail and hiked in a counterclockwise direction. To follow our route, walk downhill on the graveled woods road that parallels Route 42, then turn left to follow the blue blazes northward. You will be in a narrow valley, with a small ravine to your left and rock outcrops on your right. In about 100 feet, you will reach what looks like a very old utility right of way. (The *Walk Book* describes this as a utility line, but no wires or poles are visible today.) Turn left here, then right to cross the small brook. Follow the blue blazes, passing a large boulder. The trail climbs gradually through a mostly deciduous forest, levels off, then climbs a ridge.

In 0.7 mile, you will come to the intersection with the blue-and-yellow-blazed Beacon Cap Trail. This trail climbs over a rocky knob, descends, and then ascends again to the 770-foot summit called Beacon Cap, which marks the boundary of Bethany and the town of Naugatuck. A pile of rocks provides a stairway of sorts for those brave enough to climb onto the huge glacial boulder. On our hike, a young couple and several boys enjoyed the views from atop the boulder, but my husband and I were content with what we saw from *terra firma*.

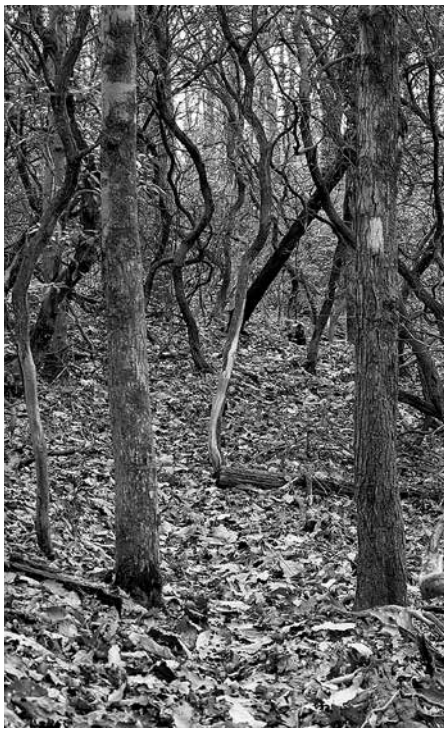
From Beacon Cap, retrace your steps to the Naugatuck Trail. At the intersection, head west along a ridge. The trail follows, then passes through, a large stonewall and weaves gently up and down through the forest. About a mile from the intersection with the Beacon Cap Trail, you will come to a section of bare-rock ledge with limited views. Bear slightly left here and continue another 0.4 mile to a four-way intersection, where you pick up the blue-and-white-blazed Whittemore Trail. This easy trail, named for former Connecticut State Forest & Park Commissioner Harris Whittemore, who once owned the land here, heads southward through a deciduous forest with almost no understory. The openness gives you a good look at the undulating terrain but does not bode well for the future forest. (There will be no young trees to replace the old ones as they die off.) Along the Whittemore Trail, you will walk uphill and down, cross the old utility right-of-way, and go over two small brooks.

When you reach the trailhead at Route 42, turn left to return to the Naugatuck Trail trailhead (if that's where you left your car; you can park at either trailhead).

Directions

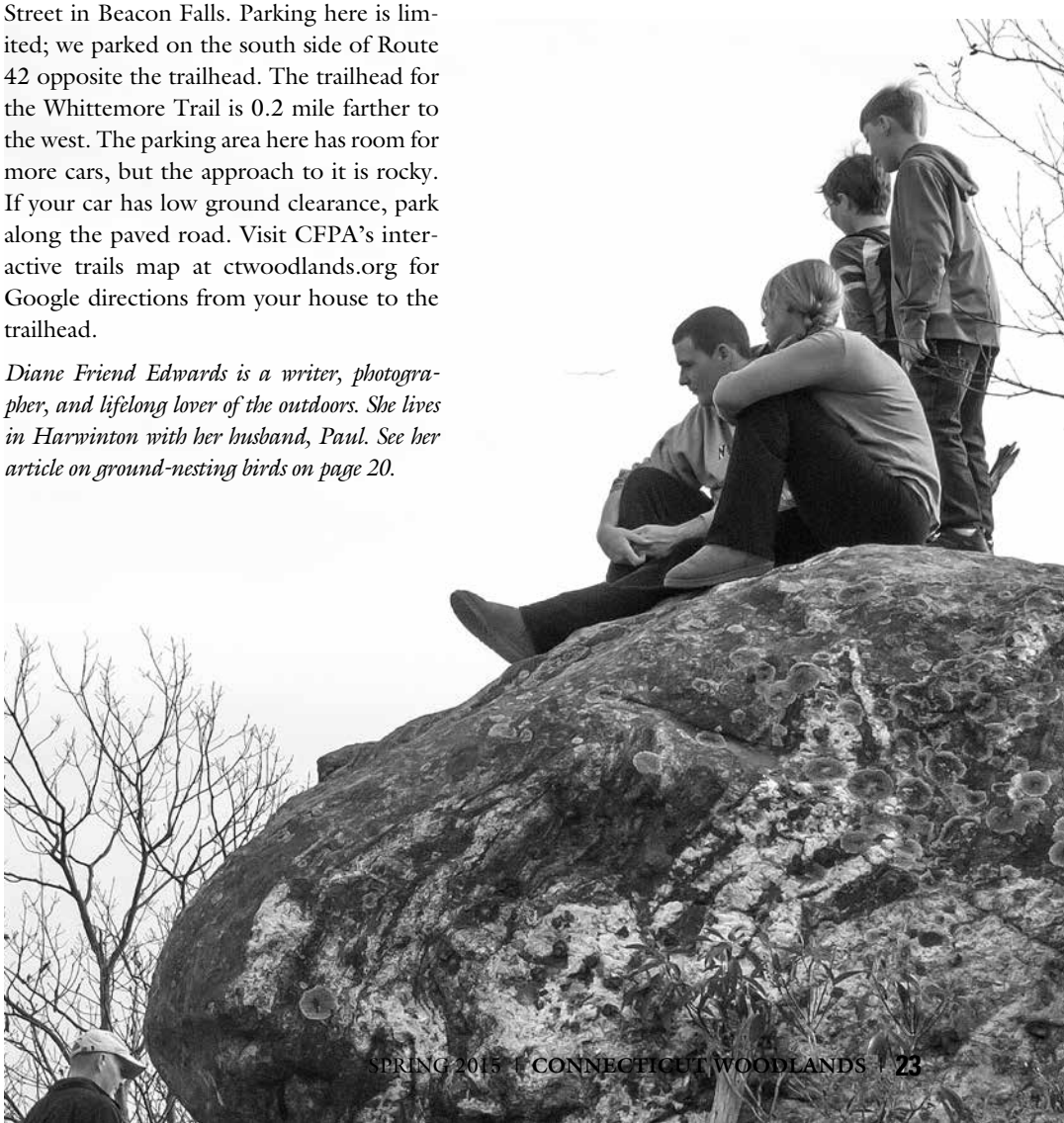
The trailhead for the Naugatuck Trail is located on the north side of Route 42 (Beacon Road) 1.2 mile west of Route 63 in Bethany and 3.2 miles east of South Main Street in Beacon Falls. Parking here is limited; we parked on the south side of Route 42 opposite the trailhead. The trailhead for the Whittemore Trail is 0.2 mile farther to the west. The parking area here has room for more cars, but the approach to it is rocky. If your car has low ground clearance, park along the paved road. Visit CFPA's interactive trails map at ctwoodlands.org for Google directions from your house to the trailhead.

Diane Friend Edwards is a writer, photographer, and lifelong lover of the outdoors. She lives in Harwinton with her husband, Paul. *See her article on ground-nesting birds on page 20.*



DIANE FRIEND EDWARDS

Young trees grow in front of curvy trunks of mountain laurel.



RHUBARB,
THE VEGETABLE THAT TASTES LIKE A FRUIT

BY JEAN CRUM JONES

Bewitching Rhubarb

Rhubarb is such a strange food. It is a vegetable that tastes like a fruit. If you eat the leaves, you can be fatally poisoned. The stalks require sweetening to be edible, and most of the uses for this vegetable are in dessert recipes. Rhubarb is most pleasing as a food adjunct. It does not stand well on its own but is best combined with other food components. Then it showcases its bright, refreshing, lemony flavor. This perennial plant grows easily and well in New England, yet it is barely known and eaten here.

I had never tasted rhubarb until I moved to the Connecticut farm I now call my home. On one of my first visits to the farm in the spring of 1969, I remember being served strawberry-rhubarb pie with vanilla ice cream, by my soon-to-be mother-in-law. I loved the sweet-sour-creamy combination. By the following spring, I was learning how to cook with rhubarb and made rhubarb compotes to top rice pudding, tapioca pudding, and custard.

As I began freezing excess farm fruits to use during the long, cold winter, I learned how to combine rhubarb with peaches, blueberries, or raspberries to make fruit crumble desserts. (I've never mastered New England pie!) I also found rhubarb froze exceeding well and easily, so that I could always have some on hand for a tart addition to a batch of homemade applesauce or to add to a winter strawberry shortcake treat. Before long, I looked forward with great eagerness to the harvesting of the first rhubarb stalks from the garden in early May when they reached a height of 10 inches. I can hardly wait to experience the crisp, sharp, sour taste of fresh rhubarb after eating soft farm comfort foods all winter. Rhubarb seems to wake up the taste buds.

Not So Old-Fashioned

Rhubarb seems like such an old-fashioned food that it is often assumed to have been brought over by the original European settlers to North America. However, garden rhubarb was unknown by colonial Americans. This food plant was first introduced into New England in the early 1800s and gained great popularity during the Victorian era when many new varieties were developed and introduced. Then, during the sugar rationing days of World War II, use of rhubarb in cooking declined significantly and survived primarily in the homes of gardeners who like to cook. What is currently promising is that *au courant* farm-to-table chefs are rediscovering rhubarb, and they are finding

Top, these stalks, when cooked with sugar, seem to be almost like fruit.

Above, rhubarb looks so strong when it pops out of the ground in the early spring. But don't eat those leaves—they're poisonous.

PHOTOS FROM WIKIMEDIA COMMONS

creative ways to incorporate this unique plant ingredient into salads and vegetable dishes.

Actually, rhubarb is an ancient plant whose primary historical use was as a medicinal. Cultured in China for thousands of years before Christ, rhubarb was prized for its ability to rid the body of dysentery and to relieve constipation. The medicine was derived from the root of the rhubarb plant, which was dried and powdered for use. The rhubarb powder was especially useful for traders, explorers, and armies and was a well-known remedy since the Roman times in Europe.

The rhubarb plant family contains about 20 wild perennial species, high-altitude plants that range from the mountains of Turkey and the Caucasus via the Himalayas to central Asia and up into Siberia. The plants like harsh winters. Their rhizomatous roots lie dormant beneath the snow and then grow rapidly in early springtime. The rhubarb name is derived from a first-century Roman doctor's description of the plant, *Rheum barbarum*. Rha or rheo is the ancient name of the Volga River, and *barbarum* referred to the people of the land beyond the river, the barbarians. As has been discovered in more recent times, the Chinese rhubarb that produced the most effective purgative drug (anthaquinone) was derived from a species that originated in the mountains of eastern Asia. The garden variety of culinary rhubarb that the Europeans first cultured was from a species that originated in central Asia to western China. Though rhubarb looks like celery, it is actually a member of the buckwheat family and a very close relative of sorrel.

Death by Rhubarb

Unfortunately, during the time rhubarb was first being cultured in England in the 1600s, some people died after eating the boiled leaves. The leaves contain high concentrations of oxalic acid and can cause poisoning. But, at some point in the early 1700s, an English naturalist noted that rhubarb stalks were as good to eat as sorrel, and another Englishman in the mid-1700s described the deliciousness of "Siberian rhubarb" baked in a pie with sugar and cinnamon. As sugar became cheaper and more available in Europe and North America during the early 19th century, cooked rhubarb pies became popular as did a mild rhubarb wine.

Rhubarb was introduced into New England from Britain in the early 1800s, where the plant thrived because of the cold winters and its natural self-sufficiency. It became a valued foodstuff because the chopped stalks provided a spring pie filling after all the storage apples and pears were used. Because it was easy to transplant, pioneers carried the plant westward with them. Often called pie plant in America, rhubarb seemed to grow in every northern garden after the mid-1800s.

Since its near disappearance as a common household food product after World War II, rhubarb seems to be making a comeback. Heirloom nurseries, such as the White Flower Farm, in Litchfield, carry some proven old-time rhubarb varieties for the home gardener as well as provide advice on how to establish and to harvest rhubarb. Connecticut rhubarb is being seen at farmer's markets, in community-supported-agriculture delivery boxes, and at farm stands. You find it featured at fine Connecticut restaurants. Look for it this spring and rediscover the lure of rhubarb.

Jean Crum Jones is a registered dietician who helps run the Jones Family Farms in Shelton with her family.

A guidebook evolves:

PLANS FOR THE NEXT EDITION OF THE *CONNECTICUT WALK BOOK*

The 20th edition of the Connecticut Forest & Park Association's *Connecticut Walk Book* will be published next year in partnership with a local press. Nearly 86 years ago, the Blue-Blazed Hiking Trails were established. And 78 years ago, the Connecticut Forest & Park Association published the first *Connecticut Walk Book*, the guide to the trails. The book has been reissued 18 more times since then with the cooperation of volunteers and staff members.

The 19th edition of the *Walk Book* came out in 2005 (covering the eastern trails) and 2006 (the western trails). Those books are still available through CFPA and bookstores. In consort with the book, consult trail updates and an interactive map of all the trails at ctwoodlands.org. Click on Blue-Blazed Hiking Trails. Clicking the hand tool on the map zooms in to good detail. Click on "parking" and "trail notices" in the upper-right corner of the map, and that information appears on the map. Trail maps for some areas also can be uploaded through the QR codes on many trailhead kiosks.

The new, 20th edition will draw on the latest maps and Global Positioning System data, said CFPA Trail Stewardship Director Clare Cain. The guide will measure smaller than the 19th edition, fitting conveniently into a pack. The guide will cover all of the Blue Trails in one volume. It will focus on the trails and the maps, leaving the other articles on history and the natural world that came with the 19th edition to other sources. The new guide will also be available as an e-book. More details will come in the next several months. Stay tuned.

JEFFREY BRADLEY,

Antiquarian, carpenter, and parks activist

Jeffrey Leete Bradley, a builder who specialized in the restoration and moving of historic buildings and an activist who fought for the preservation of Forster Pond State Park in Killingworth, died November 2. He was 65 years old and had lived most of his life in Connecticut. His family reported, "He took down his first antique house in the early 1970s, saving it from the fate of being bulldozed. That began his lifelong work of studying, documenting, and preserving every antique/historic building he could." Mr. Bradley told me last year, when I interviewed him for an article about his quest to preserve the derelict buildings of Forster Pond, that he discovered the Forster buildings when the estate manager for Mary Forster invited him to dismantle and remove barns for reconstruction. "In my first week of operations," he said, "I went up to the loft of the main barn, and it was swayed out like a horse." He discovered piles of architectural files and photos belonging to the late Frank Forster. In keeping with his historian's ethic, Mr. Bradley stored the papers at his properties in Clinton and, more recently, Ivoryton. He'd learned through Columbia University that Mr. Forster had been an important architect. Mr. Bradley and others formed the Friends of Chatfield and Forster Pond State Parks, although in recent years, he had left the work of this group to others.

"What our parks managers in Hartford don't seem to understand or have forgotten," Mr. Bradley wrote in his opinion article last year, "is that historic buildings in state parks belong to the citizens of Connecticut."

For his obituary, his family wrote,

> While Jeffrey worked in other parts of the country, his life and heart were deeply planted in the Connecticut shoreline. He loved this place and knew every home, barn, and antique building in the entire area. He had a deep connection with the history and architecture of these homes and at a young age saw the need to save them from being lost to what some thought was "progress." Jeffrey had an innate relationship with these buildings, how they were built and put together, the materials used, and he was deeply fascinated by the history of each structure. . . . Jeffrey taught everyone within earshot about responsibility, stewardship of the land, and repurposing of materials, choosing to salvage everything right down to the last hand-forged nail.

A memorial gathering was held December 7. Plans were unfolding as this magazine went to press for a possible spring event in his memory.

Mr. Bradley leaves behind his sister, Patti Bradley of Gilmanton, New Hampshire, and his brother, Ellis Bradley of Branford.

—Christine Woodside, with thanks to the Bradley family

JOSEPH VOBORIL,

Dedicated forester and CFPA lifer

Joseph "Pep" William Voboril Jr., 79, of Willington, Connecticut, a forester and life member of the Connecticut Forest & Park Association, died peacefully in his sleep on January 15 at home.

A native of Windham, Mr. Voboril graduated from Windham High School in 1953 and earned a forestry degree from the University of Connecticut. He also served as an instructor in the U.S. Army. He retired from the State of Connecticut as director of property management. He also briefly served as First Selectman of the Town of Willington. Mr. Voboril would always want to be remembered as Joe Voboril, forester, his family said. With his passing, landowners will be hard-pressed to hire a more able and dedicated land representative.

His other memberships included Connecticut Farm Bureau, Connecticut Professional Timber Producers Association, Society of American Foresters, Connecticut Christmas Tree Growers, Connwood Foresters, Eastern Connecticut Forest Land Owners Association, and Willington Cemetery Association. He most recently chaired the Town of Willington Salary Study Committee.

His survivors include his wife, Ruth Voboril; daughters Pamela and Valerie and their respective husbands, Jeff Landon and Scot Rogers; three grandsons; and many members of a loving extended family. His first wife, Joan Kent Voboril, predeceased him.

The family requested that people plant trees in Mr. Voboril's memory and to hold their families and loved ones close to their hearts. His funeral took place in Willimantic on January 21. CFPA Executive Director Eric Hammerling and former Executive Director John Hibbard both attended.

—From death notices

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