



The Tree URchin

Newsletter of the Maine Chapter of The American Chestnut Foundation

December, 2025

MEchapter@tafc.org

Maine Chapter plans a new seed orchard with Viles Arboretum

The Maine Chapter will participate in The American Chestnut Foundation's (TACF) new breeding strategy and establish a new seed orchard at the Viles Arboretum in Augusta. TACF is using an advanced breeding method called recurrent genomic selection (RGS) to breed disease tolerance into the American chestnut. In a nutshell....over 5,500 hybrid chestnut trees in breeding and seed orchards from Maine to Georgia were genetically tested for the genes responsible for blight tolerance. Data on tree growth form and responses to disease like blight canker size and were also considered.

Using a sophisticated computer model, TACF scientists identified the very best parent trees for breeding. Here in Maine only a dozen trees made the rigorous selection process. Controlled crosses are identified by the computer model to optimize the breeding selections. Pollen from the "best" trees is being shared between chapters across the chestnut range. Chestnuts resulting from hand-pollinated trees will be grown to seedlings in a greenhouse and challenged immediately with the blight fungus using a technique called small stem assay. The top 10% of offspring from the first round of genomic selection will be planted in several seed orchards including the Viles Arboretum, Tom Rush Forest in New Hampshire, TACF's Meadowview Research Farms in Virginia, and at the Pennsylvania State University. These trees will be compared with American and Chinese chestnut controls and confirm or update predictions of blight tolerance.

"Recurrent" refers to repeating this cycle for multiple generations to improve resistance each time. These best performing trees will become the parents for the next round of rigorous selection. We will repeat the cycle until the average disease resistance is high enough for long-term survival in the wild. RGS is currently the global standard method to improve complex genetic traits, such as crop yields or milk production in cows, which are controlled by many unknown genes.

TACF is exploring methods of shortening the breeding cycle by inducing trees to flower within one to two years (rather than the usual five to eight) using supplemental light (often referred to as "high light") and fertilizer treatments. This "speed breeding" approach was pioneered by METACF board member Dr. Tom Klak at the University of New England in Biddeford. Speed breeding would allow us to breed selected trees more rapidly and creates exciting possibilities for speeding up the RGS cycle. A new greenhouse at Meadowview Research Farms will feature expanded high-light breeding capacity.

The goal of the new breeding program is to optimize tolerance to the chestnut blight and *Phytophthora* root rot, a problem in the southern portion of the chestnut range. Within a few generations, chestnuts with disease tolerance and at least 70% American chestnut ancestry will be selected for reintroduction trials in the forest.



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Chestnuts at The Common Ground Fair

– By Eva Butler

The Maine chapter of TACF staffed a booth at Maine's Common Ground Fair in Unity in September. Located betwixt two mature chestnut trees, our chestnut ambassadors ranged from well-honed elders to willing novices. We learned from one another and had a rocking good time with hundreds of fair guests. More than 64,400 people attended the fair this year!

Some slowed long enough to taste a fresh-roasted chestnut. Others fell into animated conversation with our volunteers Abby Arena, Al Faust, Alan Cohen, Andy Reed, Eric Evans, Eva Butler, Hunter Manley, Lea Sewell, Mark McCollough, Peter Hayden, and Todd Bluhm. They met our guests as strangers and sent 96 of them home as new TACF members. If all their seedlings survive the winter, these new members will be proudly parenting 200+ young chestnut trees next year!



Many sweet memories linger: Young people with bare feet and flowers in their hair. Children with painted faces, tasting their first wild chestnut. Couples, young and old, side by side, posing with their seedling chestnuts. A man from Nyack launching into “Chestnuts Roasting on an Open Fire,” in full-chested baritone from start to finish.

Over and over, I am both bemused and delighted at how this tree can bring together such an extraordinary assortment of folks and give them a reason to shine on its behalf. Long live the chestnut and the community it creates! We are lucky to be together in these times on this common ground.



Maine Chapter Launches Chestnut Chasers - by Eva Butler

Lots of people want to get up close to a big, wild American chestnut tree. Some want to steal a hug. All of that's more likely after the launch of our chapter's newest initiative "Chestnut Chasers." Trainings were held this past summer but there will be more opportunities in the future.

When TACF volunteers are out in public, talking chestnuts at a fair or event, we often hear reports of chestnuts in the wild. We wonder:

Is it an American chestnut? Could it be a hybrid or a Horse Chestnut?

Is it a new find? Might it already be in TACF's database, in need of a check-up?

Where is it? Can we find it and secure landowner permission to visit it?

How's it doing? How do I assess and report its current size and condition?

ME-TACF launched Chestnut Chasers to train volunteers to answer these questions and more!

This past summer we held training sessions in three locations, preparing over 25 volunteers to chase chestnuts. Within two weeks some were already reporting new tree sightings.

Soon after attending the Falmouth training, Peter Hayden met up with Sam Mudge in Belfast to show him the ropes. Sam, a self-described "tree geek," bagged his first chestnut moments after Peter had to give up the chase!

Finding older, wild trees helps ME-TACF add their genetics to our gene conservation plantings. With landowner permission, some trees could

even scratch that

itch to spend time in the company of an old chestnut; to sit in their shade, to

hear their leaves rustle overhead, and to absorb their rich past into one's own future. The trees enjoy the company too!

If you're up for a sole excursion, a walk with a friend, or a trip with another Chestnut Chaser, this could be your calling. The task is suitable for any age. Would you enjoy a day trip with a destination, just to get outside, explore a new place and possibly find a living chestnut?

If you're intrigued [email our volunteer coordinator](#) with your name, address and phone number.



Earle Davis doesn't have to leave home to hug a big American Chestnut. He inherited this one in Windham, planted by his Dad about 50 years ago. Earle is chasing down a plausible pollinator of his tree in a nearby woods, after attending Chestnut Chaser training last August.



As a reward for completing their training in Bridgton, Chestnut Chasers hiked to a big chestnut.



Chestnut Chasers' trainer Camden Ador (front left) gathers trainees around a chestnut near Bridgton, ME. A few weeks later, Jacob (in the grey T) led a local hiking group to visit the same tree and found more chestnut trees in the vicinity.

TACF hires a new President and CEO

In August, The American Chestnut Foundation's (TACF) Board of Directors announced that Michael Goergen was named as the organization's new President & CEO. He succeeds interim President & CEO Bruce Levine.

A strategic executive with more than 25 years of leadership in the forest products and climate sectors, Michael has driven innovation, sustainability, and transformative partnerships throughout his career. As Vice President of Innovation at the U.S. Endowment for Forestry and Communities, he spearheaded groundbreaking initiatives including the commercialization of cellulosic nanomaterials, development of the forest sector's first carbon accounting platform, and securing more than \$45 million in funding to advance measurable climate solutions. Michael is eager to apply his expertise in research and development to advance the science of restoring the American chestnut. Building on a career of driving innovation and partnerships, he is committed to helping TACF accelerate progress toward developing blight-tolerant trees and returning this iconic species to eastern U.S. forests.

Previously, Michael served 20+ years at the Society of American Foresters, including over a decade as CEO. Earlier in his career, he held leadership positions in forest policy and programs and has been a key voice on sustainability, green building, and public-private partnerships. He holds both a Bachelor and Master of Science from the State University of New York College of Environmental Science and Forestry (SUNY-ESF).



The Dexter chestnut in full bloom in 2004.

Requiem for a Friendly Giant

One of the largest and most loved old American chestnuts in Maine shaded the Roger and Marcie Clukey home in Dexter for decades. It was "discovered" by Welles Thurber, a founding member of the Maine Chapter. In 2004, he taught Glen and Ann Rea how to pollinate the tree since it had no pollinating partner. It was used to create a line of chestnuts in our breeding orchard in Veazie. About the same time Ann and Glen planted 5 chestnuts from the grove in Atkinson as pollinators.

This tree was undoubtedly planted many decades ago. In full sunlight in the Clukey's yard it grew to an enormous size with spreading branches. Mark McCollough and Glen Rea visited the tree in April 2023 and discovered that a large branch was infected with chestnut blight. Marcie Clukey was worried that the weakened tree could fall on their house. She had the tree taken down in November 2024. Her brother, a woodworker, is using the chestnut wood for projects.

In the meantime, Ann and Glen's young chestnut trees began to flower. It is likely that the grand old Dexter tree produced viable nuts last fall just before it was cut down. Chestnuts dying from the blight often produce a profusion of nuts, and 2024 was a bumper year for chestnut production. Our hope is that blue jays hid chestnuts in the vicinity and that a few chestnut seedlings will replace this friendly giant.

This sad tale illustrates the need to revisit our old chestnut trees and collect their nuts (or harvest pollen) to preserve their genetics.



Big Chestnut Trees

Mark McCollough, President Maine Chapter TACF



For reasons that aren't entirely clear, Maine still has several dozen large, surviving chestnut trees. Some of these trees approach 26 inches or greater in diameter and soar to lofty heights exceeding 100 feet. Some may have been alive when the chestnut blight was discovered in New York City in 1904.

There are more big trees to be discovered. There is much conjecture why these big chestnuts persist in northern New England and are gone in states south of us. It is wishful thinking that we have trees that are tolerant of the chestnut blight fungus. Eventually, we say goodbye to our old chestnut friends as the blight finds them. Perhaps the fungus operates differently at the cold northern extremes of the chestnut's native range. Chestnut blight is widespread and completes its life cycle on oaks, sumacs, and maples. Perhaps the blight fungus is patchily distributed across the landscape or set back by colder winters. There are different strains of the blight; some virulent, others less so. We don't know which strains are in Maine and whether they have different tolerances to cold weather. The mystery is begging for a scientific investigation by a curious graduate student!

The tallest known American chestnut tree in North America was discovered by METACF board member Brian Roth about a decade ago in Lovell, Maine. In recent years the crown of this tree was badly damaged by gypsy moth, but there is no sign of blight...yet. The snag of a dead chestnut tree leans precariously nearby. Sadly, we learn of the passing of one of these big chestnuts every few years. Many of these big chestnut trees have not been visited by chapter members in over a decade. Are they still alive and producing chestnuts? If so, we want to collect the nuts to produce many seedlings and preserve their genetics. Or have they succumbed to the chestnut blight fungus? Is there a population of seedlings nearby in the understory or was this tree lacking a pollinating partner?

Recently-retired board member Roger Willby chaired our "big tree" committee and spent years chasing down reports. He maintained an archive of chestnut lore started by his predecessors Bob Baross and Doug Starks with the Maine Forest Service. Early chapter members Welles Thurber, Eric Evans, and Glen Rea chased down many reports of surviving chestnuts in the late 1990s.

Following in the footsteps of these pioneer chestnutters, we initiated a new program called "Chestnut Chasers" this summer. You can read about it elsewhere in this newsletter. Finding surviving chestnuts is a great way to get involved and make a significant scientific contribution. We provide the information about possible chestnut locations, you take a walk in the woods and record what you find. With any luck you will find and document a big chestnut tree and return in the fall to harvest some nuts for our genetic conservation orchards.

One of Maine's spectacular big chestnut trees located in Readfield. Imagine a forest where chestnuts of this size were once common.



Camden Ador, a Michigan State University forestry graduate student, measures the diameter of one of the larger chestnuts in the Atkinson stand.



grow quickly to fill the gaps in the canopy created by their dying parents. Dr. Harmony Dalgleish has studied the survival of chestnut seedlings in this unique stand for decades and published a paper in 2023 in the journal *Forest Ecology and Management*. She and her colleagues found that seedlings that survive for at least two years had consistently high survival thereafter. Long term studies like this will help us learn how to restore chestnuts to forests in the future.

Northeast Wilderness Trust ecologist Becky Clough and METACF summer contractor Camden Ador evaluate one of the largest chestnut trees at Atkinson that recently died of chestnut blight.

A visit to the chestnut stand in Atkinson

There are few places in Maine to get a feel for what a chestnut forest looks and feels like. A stand of about a dozen mature chestnut trees occurs on 14 acres in Atkinson Maine conserved by the Northeast Wilderness Trust. Some chestnuts are greater than 24 inches in diameter and approaching 75 feet in height.

Members of the Maine chapter learned of this stand in the early 1990s, and it became instrumental in TACF's chestnut breeding program. Pollen from hybrid American-Chinese crossed trees was brought to Maine from TACF's Meadowview research facility and used to pollinate some of the trees at Atkinson. Seeds resulting from these pollinations were planted by the hundreds in some of Maine's seed orchards.

It has been 10 years since TACF volunteers visited the Atkinson stand. Mark McCollough, Camden Ador and Becky Clough visited this summer. Sadly, nearly all of the mature trees are now infected with the chestnut blight fungus. In most instances the blight entered high in the crowns of the large trees. Epicormic branches grew in profusion on the trunk below the cankers. Epicormic branches emerge from dormant buds beneath the bark, typically triggered by stress like mechanical damage or blight. These sprouts are a survival mechanism, but in most cases the blight canker spreads down the tree causing its eventual demise. Usually chestnuts dying of the blight will produce extraordinary crops of nuts before they die of the blight. We found little evidence of recent nut production suggesting that blight entered the stand 3 to 5 years ago.

One of the largest chestnuts at Atkinson died about 15 years from chestnut blight. The Maine chapter salvaged the lumber to make many educational items including a large tree cookie, turned bowls, picture frames, a guitar and ukelele. Today, it is the policy of the Wilderness Trust to let nature take its course. Any dead chestnuts will benefit generations of bark beetles and woodpeckers.

On a more positive note, there are thousands of chestnut seedlings and saplings in the understory. Some of these will



Pruning chestnut trees

Thanks to popular TACF seed and seedlings sales, thousands of people are now growing American chestnuts in Maine. Trees grown in full sunlight in wire cages will grow many side branches. This is perfectly natural, and the lower branches will eventually die and self prune. Can you prune live branches from young chestnut trees or will the open wounds invite an infection by chestnut blight?

Chestnut trees acquire the fungal blight through injuries, branch crotches, and cracks in the bark where the spores can infect the growing layer of the tree called the cambium. Pruning a few low branches can often be accomplished without a blight infection (but not always). Viable wind-born fungal blight spores are present only in warm weather; spring through early fall. The ideal time to prune is on a cold, dry day in December to February when the tree is dormant and fungal blight spores are minimal. Use a sharp saw. Cut just beyond the branch collar, not next to the stem of the tree. The exposed cambium will heal in the spring before new wind-born blight spores are present. Some people like to warm up a can of Tree Kote or other pruning sealer and immediately apply it after the cut. Sterilize the saw blade in a weak bleach solution between cuts.

To prevent re-infection after cutting down a blighted chestnut tree,....cut stump sprouts as close to the ground level as possible. Cover the resulting stump with a weed mat or forest soil (blight spores do not grow in the dark and the soil may have microbiota that deters growth of the chestnut blight). One or two blight-free stump sprouts can be selected to grow into a new chestnut tree.



Lipovsky Chestnut Trees

We occasionally hear from folks who believe they purchased a blight-resistant American chestnut tree many years ago in Maine. Invariably, these trees were purchased from Louis and Mary Lipovsky in Brunswick. In the 1980s and early 1990s long before the Maine Chapter of The American Chestnut Foundation, the Lipovskys sold chestnut seedlings “for less than what it costs to buy a donut and a cup of coffee.” Born in Ohio, Louis held a Ph.D. in entomology from Kansas University and worked as an entomologist for the Maine Bureau of Forestry.

Lipovsky’s seedlings originated from three trees planted in his backyard on Bunganuc Street in Brunswick. He purchased the original chestnuts from a grower in Tennessee who said they originated from American chestnut trees that survived the blight in Illinois and other Midwestern states. Believing he had something special, Lipovsky began selling 2-year-old chestnuts seedlings produced by his trees. He and his wife Mary sold hundreds of chestnut seedlings to Mainers. The Lipovskys were careful to say their seedlings were not “blight free” but believed they would be “blight resistant.”

His intentions were good. However, hopes for these chestnuts came into question when one of his parent trees died of the blight in the early 1990s. Perhaps Lipovsky’s greatest contribution was keeping hope alive for the American chestnut.

Even today, many nurseries claim to have blight resistant American chestnuts. The “Dunstan” lineage of chestnuts developed in the 1950s by Dr. Robert Dunstan is an American chestnut crossed with several Chinese cultivars. Recent genetic testing shows they have more than 90% Chinese chestnut genes. They may produce big seeds for eating, but are not a candidate for restoring the ecology of our eastern forests. Many other nurseries claim to have created their own blight resistant varieties, but like the Dunstan chestnut they likely have a high percentage of Chinese, Japanese, or European chestnut genes.

Maine Chapter The American Chestnut Foundation

email: MEchapter@tacf.org

website: <https://tacf.org/me/about-us/>

Founded in 1998, the Maine Chapter (ME TACF) is one of the oldest chapters of The American Chestnut Foundation, Inc., a nonprofit 501(c)(3) membership organization. ME TACF is working with the national TACF and other chapters to restore the American chestnut to our eastern forests for the benefit people and wildlife. It takes just a minute [to become a member](#).

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Transgenic update

Dr. Tom Klak, a board member of the Maine Chapter TACF and faculty with the University of New England, continues research on the Darling 54 (D54) and DarWin transgenic lines developed at the Environmental Science and Forestry College (ESF). Tom has an orchard of these trees under USDA permit in southern Maine and continues field evaluations of growth, blight tolerance, and their potential for future restoration. Advances in evaluating chestnuts are slowed by the many years it takes for seedlings to grow to saplings and then to full-fledged trees, which can live five hundred years. Current regulatory restrictions further constrain the planting and growth of transgenic chestnuts in the wild.

Tom and associates recently completed a two-year field trial of T3 - and T4-generations; four-to-five year-old transgenic and full-sibling, non-transgenic chestnut saplings. Trees were branch-inoculated with a highly-virulent strain of the fungal blight, EP-155. In both years, D54 trees (with the wheat gene) consistently demonstrated greater blight tolerance than trees without the wheat gene, and even outperformed trees with Chinese genes in some comparisons. This field trial was on relatively young trees. When trees reach the minimum size standard, they should be further tested via main stem inoculation. This early field test of transgenic chestnuts contributes to the goal of restoring this iconic species to its eastern North American native range.



Professors Matt Chatfield and Ek Han Tan measure and record the length of blight cankers at the end of the second year of an inoculation field trial.



THE American Chestnut FOUNDATION