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*The Newsletter of the Virginia Chapter of
The American Chestnut Foundation*



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Chestnuts Thrive at VA State Arboretum

The American Chestnut Foundation and the State Arboretum of Virginia are partners in a project to breed blight-resistant, locally grown American chestnut trees to begin the restoration of American chestnut to the forests of Northern Virginia.

There are two pure American chestnuts producing nuts at the State Arboretum (Blandy). The partnership between TACF and Blandy began in 2008 when volunteers hand-pollinated those two trees with pollen from the TACF research farms in southwest Virginia. These two “mother trees” bore the fruit we harvested that fall to start the breeding program at Blandy.

In 2009, volunteers planted nearly 500 seed in two orchards. The smaller orchard is behind the Quarters on Tuleyries Lane. The larger one is inside a tall chain link fence along Wilkins Loop Drive. Most of the seed were crosses from the mother trees; a few pure American, pure Chinese, and 50-50 Chinese and American hybrid trees were planted among the crosses to provide a statistical baseline for assessing the growth and blight-resistance of the crosses.

Blandy staff and volunteers nurtured the trees for seven years, watering them when thirsty, keeping grass and weeds under control, and taking annual growth measurements.



Planting chestnuts at Blandy Farm

The trees were inoculated with chestnut blight in 2016. They were left to battle the blight for about six months; then TACF scientists selected which trees seemed to have inherited blight resistance. Blandy staff removed the rest. Next year, the trees left in the orchards will produce seed—we hope hundreds of them. The orchard on Loop Drive will become the location of a new orchard, the second generation orchard of the Virginia breeding program. Statistically, very few trees inherit the ideal combination of American traits and Chinese blight-resistance. So, many trees are planted with the hope that we will get several trees with the strongest genetics. Then those trees will produce chestnut seed to be planted in a second generation orchard—a seed orchard that will eventually produce the nuts that will be used to restore chestnut to the forests surrounding Blandy.

Fall 2017 President's Letter

By Cathy Mayes, Virginia Chapter President

The most common question I get is, "Where can I buy American chestnut?" Of course, "Go to Walmart," isn't the answer. Like so many things in life, the answer is a bit complicated.

First, we ask, "Why do you want chestnut trees?" If you like the idea of planting the original American tree to keep the genetics alive, you will prefer the native American tree. If you want to put chestnuts back in your diet, or in the diet of wildlife on your property, you may prefer the food varieties that are commercially available. If you want to plant our advanced hybrids, then you can't buy them, but you may be able to get a few.

Volunteers with the Virginia Chapter collect and germinate seed from wild, surviving American chestnut and from trees in the two orchards where we are growing the native tree. These trees will get blight: in the past 100 years, no one has found a native American chestnut that is not susceptible to chestnut blight. But properly cared for, some native American trees grow long enough to produce new chestnut burs, keeping the species alive. The Virginia Chapter sells small quantities of American seedlings for \$10, to cover the cost of materials and a small donation to the chapter.

With respect to food varieties, there are several commercial outlets for chestnuts. They are usually crosses between Chinese and American trees. The Chinese heritage tree brings some resistance to the blight and the American heritage brings a sweeter nut. These hybrids can be prolific nut producers, and they have the same nutrient value as the original American and Chinese trees. VATACF does not recommend any particular vendor. Several repu-

table growers can be found on the Internet along with growing and harvesting instructions.

The advanced hybrid chestnut we are breeding at The American Chestnut Foundation are not made commercially available because they are not fully tested and because our mission is to restore the Eastern forest, not to sell trees. That being said, we have several different programs for giving our trees away.

First, members of The American Chestnut Foundation are given four chestnuts in exchange for a donation of \$300. Give more, get more nuts. TACF ships seed once a year, in late winter. Virginia residents who are eligible for TACF seed can swap their seed eligibility for young chestnut seedlings raised by the Virginia chapter. Some people prefer to plant seedlings: it's immediate gratification and you're less likely to lose track of them in your yard.

TACF will donate its advanced hybrids for planting in a public place. These plantings are ceremonial events which gives us an opportunity to tell the public about our work. The trees need to be planted where there is foot traffic and a dedicated steward to care for them, and the facility must agree to erect a sign identifying the tree to passersby.

The Chapter is also currently open to planting new orchards of pure American seed because our supply of wild survivors for breeding is constantly shrinking,



2017 Virginia Chapter Annual Meeting November 4 at Blandy Experimental Farm

The Virginia State Arboretum and Blandy Experimental Farm (“Blandy”) is the site of the annual membership meeting of Virginia Chapter of The American Chestnut Foundation (VATACF) Saturday November 4th. The meeting will begin at 1:00 in the Library and continue with a tour of Blandy’s breeding orchards and the site of its future seed orchard.

Arboretum Director Dr. David E. Carr will address us on the mission of Blandy and how chestnut restoration supports that mission. There will also be reports on the status of the Virginia breeding program and a tour of the chestnut orchards at Blandy. Members of VATACF are encouraged to attend; the general public is welcome. There is no admission fee.

The Arboretum is located on US 50 just east of Winchester. The purpose of Blandy Experimental Farm is to increase understanding of the natural environment through research and education. Natural systems support is increasingly affected by humans and ecological and environmental literacy, so understanding them is a fundamental requirement for citizens, policy-makers, and society as a whole. Blandy exists to promote this understanding through education and research on plants, plant biology, ecology, evolution, the environmental sciences, and the manner in which these are used and affected by humans.

SW Virginia Restoration Branch 2017

One of the satisfying aspects of volunteering with the Chapter is to listen to older folks recall picking and shucking chestnuts and watch younger kids as they hear about this mighty tree. The Branch developed a Chestnut Survival Game to help engage students in learning more about growing chestnuts. Players start

with a few chestnuts and move around a game board to lose or gain more chestnuts. They encounter events such as “Raccoon found nuts, lose 2 nuts” or “ATV ran over seedling, lose 1 nut” or “Volunteer to plant chestnuts, earn 1 nut.” It’s fun and gives players a chance to learn about the hazards and joys of growing chestnuts.

The Branch supports the Chapter restoration program through organizing work parties, education and outreach events and holding an annual chestnut celebration. We monitor progeny plantings in SW Virginia and help mark and plant progeny tests. The Branch sponsored a public talk by Dr. Jared Westbrook, TACF Director of Science, on how genome sequencing technology is being used to accelerate restoration of the American chestnut.

Outreach events provided a way to describe the Chestnut Story and the TACF restoration program. Events included: Mid Atlantic Garden Faire, Abingdon Arbor Day/Earth Day, Trail Days including Mega-Transect training, Virginia Highlands Festival, School Teacher In-Service Training, Master Naturalist training, Abingdon Garden Club tour of the orchards and rain garden, and Washington County Fair School Days. We partnered with the Upper Tennessee River Roundtable to organize a Rain Barrel Workshop held at the Glenn C. Price Research Farm. In addition to the workshop, there was a talk describing the Farm activities and a tour of the rain garden with its native plants.

We look forward to meeting Chapter members at our 8th Chestnut Celebration in Meadowview on Saturday, October 14!



Virginia Chapter Hosts Garden Party to Raise Funds for Chestnut Research

Ladies in lawn dresses, gentlemen in straw hats, a captivating designer, beautiful gardens, live jazz in the background—is there a better way to enjoy the longest day of the year?

This is an image of the garden party hosted by the Virginia Chapter at Marshfield in Warrenton to support The American Chestnut Foundation.

The gardens at Marshfield were designed by C. Colston Burrell, an acclaimed lecturer, garden designer, award-winning author and photographer. Trees, ferns, heliobores and bulbs flank the drive. A rocky rill bordered by white azaleas spills down to the road. The old lawn with majestic trees has been rejuvenated into a series of rooms, each with a decided personality. Mr. Burrell is a certified chlorophyll addict, an avid and lifelong plantsman, gardener and naturalist. He has twice won the American Horticulture Society Book Award as well as the Award of Distinction from the Association of Professional Landscape Designers for his work promoting sustainable gardening practices. After tending a city lot alive with



Candace and Rick Faulk with Cathy Mayes, president of the VA Chapter of The American Chestnut Foundation

birds and butterflies in Minneapolis, he now gardens at Bird Hill, 10 wild acres in the Blue Ridge Mountains near Charlottesville.

The TACF President and C.E.O. Lisa Thomson, Mid-Atlantic Regional Science Coordinator Tom Saielli, and Science Director Dr. Jared Westbrook were on hand to tell people why it is important to support our cause. They were convincing: the party was a financial success and introduced about 50 new people to TACF membership.

8th Annual Chestnut Restoration Celebration in Meadowview, VA

The 8th Annual Chestnut Restoration Celebration will be held Saturday, October 14, 1:00-5:00 pm at the Glenn C. Price Research Laboratory in Meadowview, Virginia. “The Celebration provides a rare opportunity to see the expansion of resources at the Research Farm where blight resistant trees are being developed for restoration of the American chestnut to our forests,” said Stan Tucker, president of SWVA Restoration Branch.

Learn about restoration efforts while taking a hayride through the orchard or listening to talks on genomics selection methods. Sample fresh-roasted chestnuts and foods made with chestnuts, taste freshly pressed apple cider, and try locally brewed chestnut beer. Enjoy live music with a variety of activities for kids.

Restoration Chestnut 1.0 seedlings will be raffled along with merchandise contributed by local merchants and door prizes will be presented. In addition, T-shirts celebrating the Meadowview facilities and hand-crafted chestnut walking sticks will be available.

The Celebration is sponsored by the Southwest Virginia Restoration Branch of the Virginia Chapter of TACF. For more information email SWVABranch@acf.org or call (276) 944-4631. Admission is free.

The American Chestnut Fieldtrip

By Adam Day

Before taking Ms. Butler's Plant Life of Virginia course at Virginia Western Community College, I had very limited knowledge about the American chestnut and the fact that it had been wiped out several decades ago. The only interaction I've had regarding the American chestnut would be the song we sing every Christmas about roasting chestnuts on an open fire. So, to learn about its history, and the steps the TACF has been taking was astounding, and sparked something within me to continue learning about them.

The Plant Life of Virginia class has been one of the best experiences I have been fortunate enough to experience in my time at Western. It is unlike any class you will ever take, simply because there is so much interesting, hands-on field work involved. Half the time I catch myself thinking "Oh yeah, I'm doing all this cool stuff but I'm also getting college credits for it." Although the class is small, with only eight students enrolled, all those taking it have some interest in it and most of us wish to pursue careers involved with the environment. As a result, we are surrounded with likeminded individuals who all share an enthusiasm for it and enjoy the work. A lot of what Ms. Butler focuses on is plant and tree identification within different forest communities across the Appalachian region. Thanks to her previous work in forestry, Ms. Butler has a wealth of knowledge about the topics and is a constant source of inspiration for learning more thanks to her unending enthusiasm.

Our interest in the American chestnut was first sparked on a field trip to the Dragon's Tooth trail. She had been telling us how the American chestnut suffered a blight known as *Cryphonectria parasitica*. This epidemic meant the near total extinction of the American chestnut tree, which is why we no longer have any naturally in our for-

est communities. That was until we happened to discover an American chestnut tree growing midway through the trail up to the peak of Dragon's Tooth. This was a genuine shock to us, but mainly to Ms. Butler, who had been told she would never in her lifetime see any American chestnuts growing naturally. This is what started our research to learn more about the tree and led us to contact Carl Absher of the Virginia Chapter of The American Chestnut Foundation.

After a cold call and a few emails, we set a date with Mr. Absher to visit the Virginia Chapter's chestnut tree farm in Catawba, VA. Mr. Absher quickly extinguished all doubts once he began speaking about his experiences with The American Chestnut Foundation. He gave each of us an enormous packet filled with a range of information regarding the history of the American chestnut, down to a diagram of the six different breeding cycles they have executed throughout his time with the TACF. He covered a lot of ground in his lecture and Mr. Absher's passion for this work became quite clear.

After his discussion, it was time to visit the tree farm itself. We piled into three vehicles and took off up the mountain to the logging road that leads to the plot of land where the trees grow. Turning onto the road, it looked like any old logging road you would see in the mountains, but once you crest the hill, the entire valley of Catawba stretched below you like a painted landscape. Mind you, we still needed to drive down a steep incline to reach the chestnuts, but after a few minutes of careful navigation we arrived.

The tree farm was impressive. Covering a few hundred square feet, there were numerous rows of American chestnut trees, all at different life cycles and generations. The first rows were the smallest, most recently planted trees. Many of the trees in the first

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row accomplished had very little growth, so there wasn't much of them other than their piping cover and designated mark tied to the pipe. However, further back, progression in height was noticeable. The tallest trees stood a little over six feet and made an incredible sight. Standing next to an "extinct" species that had died out nearly a century ago evoked a feeling of astonishment and awe. Not only were we standing next to one, but dozens of trees that would build towards the beginning of the reintroduction of this once dead species. It was an amazing feeling being at the rebirth of this tree, seeing the several stages of this process, and being able to reach out and touch it. All the years of hard work and research cultivating in this one moment was truly inspiring.

Mr. Absher then took us to a private residence where a naturally growing American chestnut had been spotted. We hiked up a gravel road for a little over half a mile until we came to the tree. The tree had several cankers on its trunk, all varying in size. The interesting thing about this tree, however, was that it was still growing despite its encounter with the blight. This is important because this told us and the TACF that this tree held a natural resistance to the blight that was not created using the method conducted by the TACF. Mr. Absher explained that this tree had been spotted by the resident who contacted them about it. Since then a good amount of care and monitoring has been put into this tree.

All in all, the field trip proved not only to be a great learning experience about the American chestnut but also a significant insight into the potential of passion. Mr. Absher showed through his work with the TACF and his boundless knowledge about the American chestnut that with enough passion, you can achieve many great things. Life presents us with many different experi-



Virginia Western Community College students at the Catawba chestnut orchard

ences and opportunities that we can invest in and nurture to yield equally or even greater results. It is up to us to spot these opportunities, envision what sort of result we wish for, and finally build towards that outcome. On behalf of Ms. Butler's Plant Life of Virginia class and Virginia Western Community College, I wanted to thank Mr. Absher and the Virginia Chapter of The American Chestnut Foundation for providing us this incredible experience.



Pressing apples for cider at the 2014 Restoration Festival

Taylor Adkins's Story

From my point of view, the American chestnut stands as a symbol of North America's dwindling wilderness. However, unlike the grizzly bear and bald eagle, I never thought I would be able to see the American chestnut rule the forests of the East Coast, as it had before.

When I was younger, I, like many, thought the American chestnut was completely extinct. As I got older, however, I learned there were some hanging on to life against the destructive blight which ruined the native population. Coming across any variety of chestnut while hiking became a joy.

I couldn't always distinguish the Chinese chestnut from the American until I took Heather Butler's Plant Life of Virginia course at Virginia Western Community College, where I started to get a grasp of the difference between the two. The Plant Life of Virginia class is a summer course that focuses on the different plant communities or associations found in Virginia. We have been using Timothy Spira's "Wildflowers and Plant Communities of the Southern Appalachian Mountains and Piedmont," which groups plants by their associations and describes the abiotic factors that make those associations. We were on a field trip to Dragon's Tooth on the Appalachian Trail when we stumbled upon several American chestnut seedlings, which started the class's interest in this lost species.

Although it wasn't until I visited The American Chestnut Foundation, where I was shown a Chinese chestnut and American chestnut side by side, that the difference in the way each leaf curls and the difference of the colors made it hard to ever be confused again. It also made seeing the catkins of the chestnut flower on the side of a trail or peaking above a forest a little more exciting.

After learning the difference between

the Chinese and American chestnut, I also saw how brutal of a fungus the blight can be, what the damage looks like, and how prolonged a death it can be.

While I always dreamed of coming across an American chestnut in its full glory, I eventually came to believe that it would not be possible. However, this changed when I moved to Roanoke and encountered the hybrid chestnuts at the top of Mill Mountain and how well they were doing compared to the little sprouts I had come across in the forests. I found The American Chestnut Foundation and learned how much effort they've put into restoring this magnificent species, which gave me hope that this wasn't just a dream but a possibility. At that time in my life, I wasn't able to offer much for volunteering so it fell to the back of my mind. A year and a half later, I received the opportunity to listen to a member of TACF, Carl Absher, explain the effort and passion that went into creating a blight-resistant hybrid. He discussed how tedious the selective breeding was to keep the resistance but also not lose anything that made the American chestnut unique. The amount of time and heartache it must have taken to create what is now known as the B3F3 hybrid is truly amazing. Since it takes years for each generation to be able to breed, plus how rigorous the selection process is, the progress made over these selected generations is astounding and now gives me hope I might possibly see the American chestnut rule these forests once again.



Volunteer Profile—Carl Absher

As a youngster roaming the woods, Carl Absher saw many old, gray chestnut snags. The line fences on two borders of the family property were made of chestnut rails. Carl's father was a teenager when the blight hit and had stories both of chestnuts before the blight and the logging to salvage them. Carl started forestry school at Virginia Tech when the USDA breeding program was just ending and there was little hope the American chestnut could be revived. His pathology professor had a long list of reasons why the American chestnut would never again be a contributing part of our forests. Even though Carl had been exposed to American chestnut for a while and knew its story, it had never registered how important it had been.

In 1987, Carl's parents cut some timber from a portion of their woods and in only a couple of years there were chestnut



Carl Absher with students

sprouts coming up everywhere. Carl managed some of them according to Dr. Gary Griffin's plan for aging clearcuts, and a couple of them are now represented at the Catawba Breeding Orchard.

Carl has served on the Board of Directors for several years and as the Director of Science for two. He is also the steward for the Catawba Breeding Orchard. One of his favorite accomplishments is getting others interested finding wild trees in the forest.



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