



The West Virginia Chapter of The American Chestnut Foundation NEWSLETTER



In the heart of American chestnut's natural range

November 2024

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New TACF Logo

For those WV chapter members who receive information from the national office in Asheville, you have already seen the new TACF logo. However, the WV chapter has a number of members who receive information via snail mail, so this is their first glimpse of the new logo.



TACF has developed a new brand to match its 40+ years of commitment to American chestnut restoration. This new brand has been a multi-year journey filled with creative collaborations from across TACF's network with diligent attention to detail. Although the old logo served us well for more than three decades, TACF has never had a complete and comprehensive brand. Staff at TACF knew creating a new brand will allow the national office and state chapters to display a cohesive, consistent presence and increase recognition. In today's digital world, which did not exist when TACF was founded in 1983, the development of a streamlined look will stand out on social media and other digital platforms. These changes will assist us in expanding our outreach and more effectively tell the story of American chestnut and the efforts of all those helping to restore it.

The story is not complete. Those who have worked on the logo are still working on logos for each individual state chapter. So, stay tuned for more graphic work relative to the state chapters.

The following was written by TACF Board member, **Anna Sproul-Latimer**, who is a member of the VA chapter. Anna has a way with words. I think you will enjoy her prose as she describes our efforts of restoration.

We are the resolute. We are the hopeful. We are a group of wildly different people: old and young, black and white and brown, indigenous and immigrant, alive on Earth and alive only in memory. Through the decades—

from all kinds of different backgrounds, beliefs, and abilities—we've found each other in our shared reverence for eastern forests and our grief at the loss of the American chestnut, a once-foundational species here. We're on a mission to restore this species—and people's faith in each other.

We do this work to honor our predecessors and the tree they held sacred—a source of food, fuel, and shelter for millennia. We do it to protect this region's most vulnerable animals and people today. We do it to shelter and sustain our descendants long after we're gone. We do it to honor callings we've felt in our hearts: intellectual, emotional, moral, scientific. Chestnut restoration is personal; it's generational; it's exhilarating. And it's fun.

At The American Chestnut Foundation, we believe we're lucky to be here in this moment, standing at a precipice between delicate hope and wild, impossible joy. Through decades of scientific study, research, innovation, creativity, and applied love, we've developed a plan for returning the iconic American chestnut to its native range—and we're moving forward into the era of its execution. This is cathedral-building work whose completion we likely won't live to see, but we are so excited to lay the foundations and raise the buttresses. What a meaningful way to spend a life.

In chestnut restoration, we have an opportunity to mend not just one tree species, but human hearts. We can show the world that yes, people can pull themselves and their planet back from the brink; yes, humanity can heal and not just destroy the environment; yes, we all do have a crucial role to play in surrounding ecosystems. As long as tiny embers still smolder in the ashes of our world, neither life nor hope has been extinguished.

That's why we say we're rooted in restoration. Our goal is the restoration of the American chestnut, of course, but our dream is of everything that might grow from the achievement of that goal. This tree is not the only species facing an existential threat; the work of world-mending is enormous and ongoing, requiring help from all human beings alive today and then some, forever.

Still: imagine the renewed vigor with which other people might put themselves to the task once they see what's possible. Imagine what new growth could pho-

tosynthesize in the light of our hope.

Whoever you are, if you share our commitment to mending this place, please join us. If you're heartbroken, too—or if you're hopeful, angry, strong, weak, rich, poor, well-organized, or a mess—please join us. This world is all of those things, too. But by working together, we can build sanctuaries that last.

Waddell Orchard Filming

Robert Sypolt initiated the 100-tree Waddell orchard behind Preston High School (Kingwood) in 2013. Robert has planted American, backcross, Dunstan and Chinese chestnuts to provide an outdoor laboratory for students at Preston High and Central Preston Middle Schools (see page 4). Robert has conducted field trips for more than a decade, but he is looking to the future when circumstances may limited his ability to teach. On 26 Sep, Robert, **Mark Double** and **Amy Metheny** (WVU) met with videographer, **Angela Smith** at the orchard to tape a 35-minute lecture that can be used for decades to come. Robert talked about the role Duane Waddell had in promoting the chestnut planting. Amy talked about the history of American chestnut while Mark discussed the goals of The American Chestnut Foundation. Angela was able to film active chestnut blight cankers, nuts within burs, and we showed students the differences between American and Chinese leaves and twigs. Angela is a superb videographer, so the final product should be something biology classes in Preston County can view for years to come.



Videographer, Angela Smith, filmed Mark and Robert.

Chestnut Harvest in Mason County

On a very humid, late-September day, chestnuts were harvested at the now-closed Clements state tree nursery in Mason County. WV chapter member, **Brian Smith** from Friendly in Tyler County, heeded the call for help, and he made the 1.5 hour drive to Mason County to assist with the harvest. The chestnut orchard at Clements has about 200 trees, most of which do not bear nuts. Only a relatively few trees have burs and many of those are 15'-20' high requiring the use of a pole pruner. Brian was a trooper, and his assistance was greatly appreciated.

Chestnut blight is widespread among the trees in the orchard. There are a few trees that are 6"-8" in diameter that seem to have sufficient resistance to fight off the fungus and continue to grow. Many of these larger trees are the ones that are bearing nuts.

The trees from which we chose to harvest were those that had 'American' morphology--red twigs, pointed buds, no hairs on the twigs or undersurface of the leaves and leaves that were dull and not shiny. However, many of the trees have larger nuts, a characteristic that is not American. Thus, some of these trees have a mixed genotype and are not pure American chestnut. More than 900 nuts were harvested.

As has been reported in previous editions of this newsletter that, **Fidelis**, a Houston-based carbon-capture company, has leased the land to build a sizable plant. As of 2024, there has been no movement to begin building. The former hardwood seed beds are leased to a local farmer who raises soybeans in that fertile soil.



Brian Smith using a pole pruner to harvest chestnuts.



Mark Double and Brian Smith with buckets of burs.



One of the larger trees at Clements that seems to have sufficient resistance to the chestnut blight fungus and is growing well.

WVU Conservation Biology Class

For the third consecutive year, **Dr. Kevin Barry**, Teaching Associate Professor at West Virginia University's Department of Biology, invited **Mark Double** to talk to his Conservation Biology class about the American chestnut story. For the three-hour class, Mark talked for 90 minutes and informed the students about American chestnut's history, the importance of the tree and our efforts for restoration. Following the lecture, the students spent the remainder of the class at WVU's Agronomy Farm, looking at one of the 150-tree blocks of chestnut trees. The blocks of chestnuts were planted in 2006. Each

block contained 30 American, 30 European, 30 Chinese and 60 backcross trees. In this living laboratory, Mark showed the students how to differentiate American from Chinese chestnuts, with both leaves and twigs. The prolific sprouting ability of chestnuts was evident on many of the trees. Some of the American chestnut sprouts had active chestnut blight cankers so the students were able to see first-hand the destruction of the chestnut blight fungus. Several of the backcross trees had sufficient resistance and, despite having multiple cankers, they are able to continue to grow and produce copious burs.



Conservation biology students at the WVU Agronomy Farm chestnut orchard

Preston High School Biology Classes

During a week in October, seven biology classes at Preston High School were provided a tour of the Waddell orchard in Kingwood. Assisting **Robert Sybolt** were **Bernie and Linda Coyle**, and **Amy Metheny**. The students heard about the history of this magnificent tree, introduction of the chestnut blight fungus, the establishment of The American Chestnut Festival, and they were able to see pure American chestnuts, Dunstan hybrids, Chinese and backcross trees. More than 200 students were educated that week.



Bernie and Linda Coyle, Amy Metheny and Robert Sybolt



Some of the Preston High School biology class members in the Waddell orchard.



Amy Metheny, Robert Sybolt and Bernie Coyle leading a class at the Waddell orchard in the rain.

Chapter's Committee Report

TACF's Chapter's zoom meeting was held 27 Sep 2024. The chapter's meeting is conducted with presidents or representatives from all 16 state chapters. The meeting began with the statement that TACF's central challenge with American/Chinese chestnut hybrids is two-fold. The first challenge is to capture enough disease resistance from Chinese chestnut to provide hybrid trees with sufficient resistance for long-term forest survival. The second challenge is to retain forest competitiveness. TACF personnel have been assessing trees for blight resistance for many years using the following criteria: (1) is the main stem alive?; (2) are cankers >15 cm in size; (3) are the cankers sunken; (4) what % of the canopy is dead?; (5) is there any exposed wood?; (6) is there any

sporulation on the cankers?; and, (7) are there stump sprouts? The question that cannot be answered is, 'how much blight resistance is needed'? We really need to know the minimal amount of resistance that is necessary for trees to survive and thrive in the wild. As of 2024, TACF's goal is blight resistance that is >65%. Using the average blight index, we hope to have: 15-year-old trees that have been inoculated with the chestnut blight fungus; the main stem is alive; there is no exposed wood; cankers are swollen or flat; there is no evidence of fungal sporulation; there are no stump sprouts; and more than 90% of the crown is alive.

Chinese X American hybrids (F1s) were planted in the 1970s at Lesesne State Forest in Virginia. Those trees, now 50 years old, are surviving and thriving.

The selection workflow is as follows. Parental trees are selected that meet the standards of blight resistance (>65%) and have >70% American ancestry. Pollen from select trees is frozen. Best X Best crosses are made using controlled pollinations. That is followed by genomic selection of the best progeny. Finally, 10% of the best progeny will be planted in seed orchards. TACF wants at a minimum 3 seed orchards (northern range, mid-Atlantic and southern range). Hopefully, six orchards can be established, three in each of the above areas.

At the University of New England in Maine, genomic selection is being conducted under high-light. It is now possible to go from seed to seed in 2 years. Flowers can be produced under high light in less than a year and those flowers can then be used for controlled pollinations to produce a nut crop in year 2. The first selection of progeny will have blight resistance of 55%-65%. The second generation will be 65%-75%, and the third generation will have blight resistance of 75%-85%. This all sounds good on paper, but the real test will come with field testing. At each of the above steps, American ancestry >70% will be selected. The proposed lifespan of the seed orchards will be as follows: Year 0 planning; Year 1, seed genotyping; Year 2, nursery growth; Year 3 field planting; and Years 4-13 data collection.

Rowlesburg Chestnut Festival

The 16th annual Rowlesburg Chestnut Festival was held on 13 October 2024 at the Szilagyi Center in Rowlesburg. The WV chapter held its fall meeting in a sec-

ond-floor classroom from noon until 2:00 pm. WV chapter president, **Bernie Coyle**, led the meeting. A group of 35 gathered for the chapter meeting; visitors from OH, MD and PA were in attendance. **Catherine Martini**, TACF's northern regional outreach coordinator, joined the meeting via zoom. She noted that the Asheville, NC office still had no electricity, phone or water service as of the day of the meeting. Catherine talked about TACF's new logo, and she highlighted some of TACF's educational outreach programs. Learning boxes for K-12 are now available through a Berglund Foundation grant. TACF's documentary film is being shortened for educational uses; it is only 25 minutes long. She highlighted a new tool for TACF, "I want American chestnuts". The website for those wanting trees is: <https://taf.org/get-chestnuts>. New volunteer tracking software will roll out soon. This software will aid in keeping a running tally of volunteers and their volunteer hours. A new standard presentation is now available for those who would like to make a chestnut presentation to high school students, master gardener clubs, etc. There is also a unit for elementary students. The presentation has 35-40 slides, and it can be edited for specific chapters.

Cassie Stark, TACF's regional science coordinator for the four mid-Atlantic states gave a science update. She talked about the Best X Best program, also referred to as recurrent genomic selection. Selections are based on both phenology and genotyping, using the criteria listed on Page 4. Genotyping helps in determining the best candidate genes that are potential responsible for resistance.



Cassie Stark at the WV chapter meeting.
The gains from genotyping are obtaining more

accurate predictions. In the Best X Best pipeline, 90% of the nuts will be used in progeny tests with the goal of evaluating resistance and growth. The remaining 10% of the nuts will be used for seed orchards with the goal of production. TACF's goal is to locate and plant progeny tests at three-to-six sites in the northern, mid-Atlantic and southern regions. Trees in the progeny tests will be planted on a 7' X 15' spacing and involve 300 trees planted over an acre. The goal is to have these sites planted in the next 1-3 years. Common garden studies also are in the pipeline. These studies compare growth, survival and resistance of hybrid and wild-type trees across all three regions of TACF. These studies also will be monitored for local adaptation; each study utilizes about 800 trees (>2 acres). TACF is still involved with oxalate oxidase (genetic engineering) as it can have additive levels of resistance. Large, surviving American chestnuts (LSAs) remain important. A LSA is an American chestnut that has cankers >10 cm, has had chestnut blight for more than 5 years and is still surviving. Cassie closed her presentation stating that genetic diversity can be conserved via: seeds; pollen; and grafting. Chinese chestnut can be used as rootstock for grafting. TACF sent 90 grafts to the KY chapter this year.

WV chapter agenda. WV chapter president, **Bernie Coyle**, gave a financial report; the WV chapter has \$71,696.61 in its treasury.



WV chapter president, Bernie Coyle, led the chapter meeting

The following action items were approved.

- (1) \$1000 was appropriated for a videographer who filmed the Waddell orchard;
- (2) The WV grant program increased its award from \$1000 to \$2000 with a maximum of two awards/year.
- (3) **Linda Coyle, Carla Kesling,**

Jeff Kochenderfer and **Sam Muncy** were elected to another 3-year term on the WV chapter board of directors. The WV chapter 2023 documentary film, "**American Chestnut, The Once and Future Tree**" is now on the WV chapter website. To view the film, go to: TACF.org, 'find a chapter', select WV and then scroll down to view the film. Thanks to **Jeff Kochenderfer** (WV) and **Hal Brindley** (Asheville office) for making this possible.

The afternoon technical session featured two USDA Forest Service employees. **Jeff Kochenderfer**, silviculturist at the Petersburg office, talked about establishing a germplasm conservation orchard (GCO) in central WV. Jeff stated the importance of GCOs are: the conservation of genetics; a source of seed; and a source of pollen. His GCO sits on 5-acres at the old nursery bottom in Parsons (Tucker County) that was established by the CCC in the 1930s. The nursery was shut down in 1985 after a flood, leaving a site with good-growing soil. In addition to the chestnut GCO, two other hardwood species are also grown.



Jeff Kochenderfer talked about his GCO in Parsons.

The chestnuts were initially planted on a 25' X 25' spacing that was later reduced to 25' X 15' to allow for more trees. Jeff has used both direct seeding and seedlings that he dug up in the forest. He sprays twice a year with Roundup® and Oust® for weed/grass control, and the area is mowed. Trees were initially protected with 5' wire cages but a 8' woven wire fence was installed at the cost of \$3/linear foot.

He assesses the trees annually and he has 60% survival with direct seeding and 70-80% survival with seedlings. There are currently 130 trees in the orchard with space for 54 additional trees.

Dr. Melissa Thomas-Van Gundy, project leader, research forester at the Parsons office, presented data on a decade of growth at two hybrid American chestnut plant-

ings in WV, in the Cheat and Gauley districts.



Dr. Thomas-Van Gundy discussed her two chestnut plantings.

The Cheat site near St. George has an elevation of 3300' with a NW aspect. The Gauley site near Cowen is at 2500' with a SW aspect. Both sites were clearcut, and they had American chestnut sprouts as part of the understory. Trees at both sites were planted in 2011 with 23 B3F3 families, 2 B3F2 families and pure American and Chinese chestnuts with 25 replicates of each. Measurements are taken in the early spring (March) that includes mortality, DBH, form, and a composite ranking. There is extensive mortality at the Gauley site that has resulted in several families with only a few individual stems remaining. There were 877 trees analyzed for mortality that is listed in the following table.

Tree Mortality at the Two WV Hybrid Plantings

Species/Hybrid	Cheat Planting	Gauley Planting
American	62.7%	66.2%
B3F2	63.3%	79.6%
B3F3	59.7%	71.9%
Chinese	51%	28%

In terms of DBH, there was no statistical difference between tree types at the Cheat site, but American chestnut grew better than the other three types at the Gauley site. Twenty trees from seven families (1 B3F2 and 6 B3F3 families) were removed from the DBH analysis. There were a few hybrid lots that did well at both sites: D5-26-54 and D4-20-65. D5-17-130 has shown relatively high blight resistance.

A gala banquet followed the talks, and guests were welcomed by the festival director, **Robert Sybolt**. The Preston High Madrigal singers performed prior to the crowning of Mr. and Mrs. Chestnut, **Dr. Lewis and Vicki Miles Cook** of Fayetteville.



Dr. Lewis and Vicki Miles Cook, Mr. and Mrs. Chestnut for 2024.

Lewis, a Fayetteville physician for 40 years, also was a visiting clinical professor at WVU. Lewis is a renaissance man. In addition to his medical practice, Lewis holds a master's degree in physical anthropology from University College in London, and a Ph.D. in geology from WVU. Lewis is responsible for the chestnut plantings at Oak Hill High School and three Fayette County chestnut plantings. He also helps out regularly at the Summit Bechtel reserve chestnut plantings in Glen Jean. The WV chapter provides chestnut seedlings to its members free of charge, but members have to travel to Morgantown to pick up their seedlings. To help out members in the southern part of WV, Lewis built a greenhouse at his house where he raises seedlings, so our chapter members do not have to travel all the way to Morgantown to pick up their seedlings in the spring.

Vicki was a nurse practitioner where she helped her husband in his medical office. She is a spectacular fine-arts painter with interests in the Historic Fayette Theater, and the Community Chorus. Together, they are wonderful ambassadors of the WV chapter.

The Rowlesburg Chestnut Festival had a variety of activities. There was music at the park that is adjacent to the school and the Cheat River. There were a number of vendors who sold a variety of items such as quilts, honey and books. One of the more popular booths was the hand-crafted chestnut items sold by Charlie

Wotring. Charley is a master craftsman, and his pieces are highly sought after.



Some of the hand-crafted items made by Charlie Wotring.

First and foremost at the festival were the hot, roasted chestnuts at the Rowlesburg park. Thousands of chestnuts were scored by volunteers the day before the festival as chestnuts will 'explode' when roasted if they are not scored.



Chestnuts roasted at the festival by volunteers.

In addition, chestnut seedlings were sold by the festival chair, **Robert Sybolt**. He had American and Chinese chestnuts for sale. His booth was quite busy during the day. Many of his sales were from visitors who traveled specifically to Rowlesburg to purchase chestnut seedlings. If the festival's success was based on sales, it was highly successful as both the chestnut seedlings and the roasted chestnuts were sold out.



Chestnut seedlings were sold out at the festival.

After dinner, **Mark Double** gave a presentation on some of the many chestnut orchards in the State of WV. There are nearly 80 sites of hybrid chestnuts and 28 American chestnut plantings.

Fort New Salem

Sam Muncy, Sharon Cottrill and **Carla Kesling**, all members of the WV chapter, volunteer at the *Fort New Salem Spirit of Christmas in the Mountains*. Fort New Salem is a representative frontier log house settlement of nineteenth-century North Central West(ern) Virginia/West Virginia. The village of 17 relocated log structures opened in 1974 to the public, and was created as an extension of the Salem College campus. Among the numerous seasonal activities held at the fort is "The Spirit of Christmas in the Mountains". This nationally recognized event is a joyous celebration of the traditional folkways found in observance of Christmas in West Virginia. Dressed in period costumes, Sam and Sharon share roasted chestnuts for visitors. Dates in 2024 are Nov 30/Dec 1 and Dec 7/8. Admission is charged for this event at 81 settlers Lane, Salem, WV, just off Route 50.



Sam Muncy and Sharon Cottrill, chestnut roasters.