



The West Virginia Chapter of The American Chestnut Foundation **NEWSLETTER**



In the heart of American chestnut's natural range

August 2025

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Brian Smith's Tyler County Planting

Brian Smith from Friendly in Tyler County, planted 100 trees around 2003 from the American Chestnut Cooperator's Foundation (Lucille and Gary Griffin, Blacksburg, VA). Today eight of the original 100 trees remain, and they all show signs of chestnut blight. It took 20 years for these trees to produce seed. In 2023, Brian learned how to stratify chestnut, and he planted an orchard in old 6-acre hay field. In 2025, Brian and his father, Jim, direct seeded 600 seeds and started 100 in an unheated greenhouse. After fighting frost, mice, raccoons, and squirrels, they have 200 seedlings in their orchard. Fifty of the trees were from the former WV Clements state nursery in Mason County.

Brian's goals for the next 12 months are to: (1) keep all the trees alive through the summer dry months; (2) harvest nuts in September; (3) obtain nuts with different or improved genetics (they are planning a trip to North Fork Mountain to gather wild nuts); (4) improve the germination success rate; and (5) improve his grafting skills. One of Brian's biggest problems is getting too excited and ambitious when there are 70-degree days in February or March.

Brian's original trees have been topping out around 30 feet before the blight kills the higher branches and the top of the tree dies. The chestnut orchard is a family project. Brian's parents, wife, brother, and children have dedicated much time, effort, and money into the orchard.



One of the larger American chestnuts on Brian Smith's farm.



Photo of the 2025 planting at Brian Smith's family farm in Friendly, WV in Tyler County.

Quick Pics

1. WV chapter member, **Tom Prall**, from Buckhannon gave two American chestnut seedlings to **Kelly Bowyer** in Upshur County. Below is a picture of Kelly with one of two seedlings she planted.



Kelly Bowyer with her gift from Tom Prall.

2. WV board member, **Linda Coyle** is also a member of the Daughters of the American Revolution. Linda and members of her organization helped to retire 200 American flags that had served their time as proud symbols of our country. The ceremony was

held at the old Carskadon mansion in Keyser. As part of the festivities, Linda also had a table of American chestnut displays and literature.



Linda Coyle at a TACF table at a flag retirement ceremony in Keyser.

3. **Mark Marcock** found large stumps of American chestnut at Holly River State Park in Webster county. With more than 8,000 acres, Holly River is WV's second largest state park.



Chestnuts in Bloom

Chestnuts can be spectacular when in full bloom. This is generally true during the month of June. The male catkins turn a whitish-brown color, and they diffuse a unique odor. Some people find the odor offensive, while others (including me) love the smell. In particular with Chinese chestnut, they are easily identified along the highway or around town when they are in full bloom. The only other tree in full bloom in June is the northern Catalpa (*Catalpa speciosa*), but the flowers of Catalpa and chestnut are vastly different.

My grandfather was born in 1898 outside of Uniontown, PA. When he was a teenager, he could recall the mountains outside his home as being white in June from the great number of American chestnuts in bloom. That must have been a sight to behold. While each mature American chestnut tree could produce 3-4 bushels of chestnuts each year, the forests must have teemed with wildlife.



Chinese chestnut in full bloom. The 'apple-tree' form of Chinese chestnut is very different from the straight, tall stature of American chestnut.

Clements Chestnut Orchard Update

The WV chapter has distributed chestnut seedlings to chapter members and state agencies for the last decade. We have raised about 1,000 chestnut seedlings each year at the West Virginia University greenhouse in Morgantown. The WV chapter covers the cost of the potting mix and the tree tubes and stands. The seedlings are provided free of charge to chapter members and to various state and federal agencies (WV Division of Forestry, Army Corps of Engineers and the U.S. Forest Service).

Of the 1,000 nuts that were collected in 2024, all but 50 came from the Clements nursery in Mason County. This is the former home of the WV state tree nursery that grew hardwood seedlings for sale to the public. The nursery was closed by the state about six years ago. Since then a local farmer has leased part of the 125 acres to grow corn and soybeans.

In 2023, **Jim Justice**, former WV Governor announced that Fidelis New Energy, a Houston, Texas--based company had purchased or leased about 1,000 acres from the WV Department of Natural Resources, owners of the land.

Fidelis New Energy has started development and launched permitting for a \$2-billion hydrogen production plant in West Virginia. It will power an associated data center megasite as well as industrial manufacturers, transportation companies and utilities. The energy company said the Mountaineer GigaSystem in Mason County would produce blue hydrogen from natural gas and store CO2 emissions underground on state-owned property, with its first phase to open in 2028.

Long-term over 10 years, the Brightloop facility paired with the Mountaineer GigaSystem Site could bring over 3,000 high paying technical, construction and installation jobs. "West Virginia is uniquely positioned to power America's energy resurgence," **WV Governor Patrick Morrisey** said. "With today's partnership, West Virginia is set to gain high-paying jobs and help the United States compete on a global scale to power the future of technology."

The site is anticipated to house the following projects:

- Mountaineer Coal to Hydrogen: A chemical looping process that takes West Virginia coal and generates hydrogen, steam, electricity, or syngas. The initial phase of the project will use 200 tons of coal per day, but subsequent phases could use up to 2,900 tons of coal per day with multiple phases planned.
- Monarch Compute Campus: Two sites accommodating more than 1,000 acres of buildable space for data centers.
- Mountaineer AtmosClear: A biomass power plant that can be used to assist with forestry management. By better managing the forests, West Virginia will be able to increase huntable lands for West Virginia residents.

- Mountaineer Hydrogen: Natural gas-powered reforming process that will generate blue hydrogen for use by local businesses.

The 200-tree chestnut orchard is located in West Columbia, WV between Pomeroy, OH and Point Pleasant, WV. I have attempted to find out if the chestnut orchard will fall within the domain of the Fidelis project. The following map shows the chestnut orchard (top circle) and the proposed site on both sides of the Mason County airport road (bottom circle), north of Point Pleasant.



In the upper circle, there are five squares where the hardwood seedlings were grown. The small strip of land in between the four lower squares is the location of the chestnut trees (white arrow).

In early July, I wrote to **Jeremy Jones**, Director of the WV Division of Forestry and **Larry Six**, forester for Region 5 asking if they could provide information on the fate of the chestnut trees. Larry Six's office is located on the Clements grounds, adjacent to the chestnut orchard. Jeremy Jones had the following reply:

Unfortunately I do not currently have any details on the future of the chestnut orchard. We will do our best to keep the orchard going so that you can continue your restoration work.

When asked about whom we should contact for permission, Jeremy indicated we can contact him. He does not

see any issues harvesting in 2025.

Allegheny Front Chestnuts

WV chapter president, **Bernie Coyle** and his wife, **Linda**, have been surveying American chestnut trees on the Allegheny Front near Keyser. They hiked over a mile and they saw hundreds of American chestnuts. Bernie estimates that there may be a thousand on the entire mountain top

They saw a few blooming chestnut trees. Nuts from a few of those trees have been collected in the past, but Bernie feels that he has now developed a good eye for finding trees that will potentially have flowers. If the Coyles are successful in obtaining permission to collect nuts (the trees are on private property), the WV chapter should benefit in obtaining new genetic sources of nuts this fall.

While most of the trees are sapling size, at least one tree is fairly large and appears to have 'cruddy bark'. This phenomenon refers to a rough, crumbly and sometimes reddish-brown bark texture that can develop in response to infection by the chestnut blight fungus. This bark condition is a sign of the trees' attempt to fight off the fungal infection.



Allegheny front American chestnuts.

About a decade ago, researchers at West Virginia University did extensive sampling of several cruddy bark

cankers. The hypothesis was that hypovirulent (less virulent) strains of the chestnut blight fungus would be isolated. That was not the case. No hypovirulent isolates were identified. The cruddy bark phenomenon is still not understood. The presence of antagonistic microorganisms may be responsible for the strange bark condition. Despite not understanding this complex reaction by the tree, the presence of cruddy bark indicates that tree is alive and attempting to recover from the chestnut blight infection. It may be ugly, but it is a positive response.



Cruddy bark of an American chestnut on the Allegheny front.

Resignation of Sara Fitzsimmons

For those WV chapter members who receive our newsletter by mail, you may not be aware of the news that TACF's Chief Conservation Officer, **Sara Fitzsimmons** has resigned her position with TACF. Below is the press release from TACF that details her departure.

After more than two decades with The American Chestnut Foundation (TACF), Chief Conservation Officer Sara Fern Fitzsimmons has accepted a new role as Technologies for Agriculture and Living Systems (TALiS) Coordinator with the Office of Research and Graduate Education at Penn State University (PSU).

Sara's deep institutional knowledge and unwavering dedication to American chestnut restoration have been nothing short of transformative. Over the years, she has built countless meaningful relationships—with chapter members, research partners, donors, collaborators, and her TACF colleagues—leaving a lasting impact on every corner of our organization.

Affectionately known within TACF as our “media darling,” Sara's approachable communication style and talent for making complex science accessible have played a crucial role in sharing our mission with the public and growing support for the restoration of this iconic tree species.

“I have appreciated learning from and being mentored by so many incredible TACF members, supporters, and partners,” says Sara. “While the mission centers around trees, the purpose is for people. I hope to stay connected with the amazing folks who have created such a meaningful and rewarding community around long-term forest conservation and sustainability.”

All of us at TACF extend our heartfelt thanks and best wishes to Sara as she embarks on this exciting new chapter at PSU. If you'd like to reach out to express your appreciation for her years of service or learn more about her new position, she can be reached at her longstanding PSU address: sff3@psu.edu.



A 2023 photo from the Rowlesburg Chestnut Festival of TACF staff, Cassie Stark (Mid-Atlantic Regional Science Coordinator), Sara Fitzsimmons and Catherine Martini (Northern Regional Outreach Coordinator)

On a personal note, I have known Sara for more than 25 years. She is incredibly knowledgeable concerning

all things chestnut. She knows the history of TACF's research, she understands both the breeding concept and the newer molecular findings. She started TACF's database, Dentabase, that includes information on tens of thousands of chestnut trees across the U.S. During Covid, Sara started **Chestnut Chats**, a video-streaming service that covered a myriad of topics. While this service was intended to educate people from the comfort of their home during quarantines, Chestnut Chats continued well after the pandemic ended. Sara was our contact when WV chapter members would send in photos of sick chestnut trees that no one knew how to answer. Sara was always quick with an answer.

Just as importantly, Sara knew chestnut contacts from Europeans to state chapter members. She was a good conduit between scientists and TACF's members. She was able to explain difficult concepts so people could understand the issues. In an email from Sara, she wrote the following:

I absolutely loved most of my time at The American Chestnut Foundation, and most of what made it special was getting to work and learn from incredible people. And that is what I will miss the most.

In short, Sara Fitzsimmons will be sorely missed. We wish her well in her new endeavor at Penn State University.

Chapter President's Meeting

Every month, the presidents of TACF's 16 state chapters meet via Zoom. Some of the 25 July 2025 meeting highlights are:

- **Angus McCord**, donor engagement officer at TACF's national office in Asheville, NC has put together a website that highlights photos of some of the best performing chestnut trees in our breeding program. Angus indicated that more information on this website will be forthcoming.
- **Hannah Leeper**, TACF's Southern Regional Outreach Coordinator created an application for upcoming events sponsored by state chapters. Using *Volunteer Local*, automatic postings of activities are posted and volunteers can sign up on this platform. The event coordinator can set the number of volunteers needed, and the contact information of those who volunteered is available to the event coordinator.
- The majority of the meeting was devoted to a discussion among chapter members regarding chapter activities devoted to 'Best X Best' plantings, also

referred to as recurrent genomic selection.

- **Dr. Marty Cipollini** from the Georgia chapter indicated that this is the third year for pollinating their Best X Best trees. The Georgia chapter also collected pollen for cold storage and for sharing with other state chapter members. Marty indicated that they are also conducting Small Stem Assays (SSA) of select trees. (Note SSAs use small pencil-diameter chestnut seedlings that are inoculated with a virulent strain of the chestnut blight fungus using a slit made in the bark. Developing lesions are measured. Seedlings with good resistance will develop small cankers. This test is beneficial as resistance can be tested on seedlings from seed lots early on rather than testing trees when they are 6-8 years-old).
- **Dr. Jared Westbook**, TACF's Director of Science indicated that chapters are needed to establish: (1) seed orchards of the best material available (10%-20% of the best seeds) and (2) progeny test orchards--the remaining 80-90% of the seeds, planting 1,200 trees per region per year. Both seed and progeny orchards need to be planted in areas free from *Phytophthora*.
- The Vermont/New Hampshire chapter put in a progeny test in June of this year. They planted 300 trees representing 24 sources of resistance. After one month, they have 82% survival.
- **Jack Swatt** from the Connecticut chapter indicated that they are conducting their first Best X Best pollinations this year. They also did a lot of pollen collection. Their pollen is being stored in freezers at Southern Connecticut University. Jack commented on the difficulty of obtaining bucket trucks for pollinating flowers high up in tree crowns. When calling to rent a bucket truck, most dealers had already rented their trucks for the season. For pull-behind bucket lifts, the dealers wanted exorbitant fees for insurance making it nearly impossible to rent lift trucks in Connecticut.
- The Massachusetts/Rhode Island chapter conducted more pollinations in 2025 that they have ever done. Ten-to-fifteen of their very best trees were pollinated. Hundreds of bags were hung on trees that were 25-years old.
- **Jeff White** from the Maryland chapter stated that they pollinated trees using tree ladders. They have *Phytophthora* issues in some of their orchards. The Maryland chapter is planning a Chestnut Festival on October 19 as a fundraiser. They hope to offer chestnut beer. Jeff asked if anyone knows of a source of chestnuts for beer and Mary Cipollini

suggested using chestnut chips from Michigan.

- **Dan O'Keefe** from the PA/NJ chapter reported that they made 1,200 crosses this year. He noted that after the male catkins were removed and the paper bags put in place, prior to pollination, the extreme heat in PA in June killed many of the female flowers. This was the first time they experienced extreme heat.
- A comment was made by **Mike Novack** from the Massachusetts chapter regarding the Best X Best program. Mike stated that Best X Best is a matter of statistics in an attempt to produce trees with adequate resistance to the chestnut blight fungus. TACF is striving to get as many different alleles as possible, and we need not to look at specific trees, but a populations.. For this reason, we need to plant a lot of trees.
- **Jared Westbrook** continued along those lines stating that there is a good deal of variation among Chinese chestnuts. At the first stage of recurrent genomic selection, TACF is using BC1 crosses to get more diversity from Chinese chestnut parents. Japanese chestnut resistance also is being utilized.

Rowlesburg Chestnut Festival

The 17th Annual American Chestnut Festival will be held **Sunday, October 12, 2025** in Rowlesburg. The line-up for the festival is as follows:

9:00-11:00 am. River City Cafe in the historic Rowlesburg School, Szilagyi Center. A full breakfast is served.

10:00 am-4:00 pm. Rowlesburg Community Park and Welcome Table with vendors (hot roasted chestnuts, roast beef sandwiches, chestnut-themed vendors, chestnut seedlings for sale).

Noon-2:00 pm. WV chapter fall meeting, second floor classroom in the Szilagyi Center. The meeting will be led by **Bernie Coyle**, WV chapter president.

2:00-3:00 pm. Rowlesburg Community Park, displays and vendors.

3:00-4:30 pm. Technical Session, second floor classroom in the Szilagyi Center. Speakers are: **Cassie Stark**, TACF's Mid-Atlantic Regional Science Coordinator (*The Science of Saving the American Chestnut*) and **Sam Muncy** (*A History of TACF at the Summit Bechtel Reserve Scout Camp*).

5:30-7:30 pm. Gala banquet in the Szilagyi Center Auditorium. The **Preston High School Madrigal** Singers under the direction of **Krystal McCoy** will perform. The crowning of the

17th Mr. and Mrs. Chestnut will take place. This year, **Dr. Melissa Thomas-VanGundy** and her husband, **Doug VanGundy** will be honored. The banquet speaker will be **Bernie Coyle**, WV-TACF chapter president. A gala banquet follows, featuring the Vino Novello Ritual of blessing the new wine. Banquet tickets are available at the door at \$15.

TACF Strategic Science Plan 2023-2033

During the past 100 years, chestnut blight, caused by the Asian fungus *Cryphonectria parasitica*, killed an estimated four billion American chestnut (*Castanea dentata*) trees, and pushed the iconic species into a state of functional extinction. Human interference triggered the American chestnut's demise—now scientific innovation offers us the best chance to save it. As reliable and productive as the American chestnut tree was, the species now exists in forests primarily in a state of stunted vegetative regeneration from surviving root systems, and this population continues to dwindle. The American Chestnut Foundation (TACF) is leading an unprecedented rescue mission to return the iconic American chestnut to its native range.

Resistance

To develop American chestnut trees with sufficient resistance to two deadly diseases. As a first priority, we focus on chestnut blight. Our second priority will be resistance to Phytophthora root rot (PRR) caused by the non-native and invasive soil pathogen *Phytophthora cinnamomi*.

Diversity

To characterize, preserve, and utilize the genetic diversity of existing American chestnut trees for research and to ensure that the developed disease resistance is incorporated into environmentally-adaptable, diverse populations.

Restoration

To promote forest plantings of genetically diverse and disease-resistant American chestnuts capable of sustained population growth and expansion across the broad and ever-changing landscape of our Eastern hardwood forests.

Current State of TACF's Research and Breeding Program

To achieve its mission, TACF employs a multi-pronged

and adaptive program of research and development informed by staff and volunteer scientists as well as research collaborators in universities and other organizations. TACF's Director of Science has brought the power of genomics—the study of the genetic material of an organism via molecular approaches—to support all our future efforts including breeding. Collaboration with the Hudson-Alpha Institute of Biology has resulted in the complete DNA sequencing of the genomes of one American and two Chinese chestnut trees. In the six years since our 2017 Strategic Plan, we have made extensive use of this technology and also improved methods for evaluating and rating resistance to both chestnut blight and PRR.

Breeding for resistance to disease requires methods of accurately assessing the resistance of individual trees. In the past several years, TACF has developed and tested improved methods for evaluating and rating trees for blight resistance. These include the use of small stem assays (SSAs) performed on potted seedlings, improved phenotype scoring methods for field-grown trees, and the use of genomic prediction models for scoring resistance based on genotype. Together, these approaches now allow us to screen more trees, more rapidly and more accurately than in the past. TACF and its partners have developed methods for screening seedlings for PRR resistance and we have now established a screening facility for PRR resistance in cooperation with the US Forest Service at their Bent Creek southern research station in Asheville, NC.

Thirty years of backcross breeding to capture the natural blight resistance of Chinese chestnut, involving over 50,000 trees, has resulted in approximately 500 trees that contain on average only 12% Chinese chestnut DNA but have inherited at least some blight resistance, and some of these advanced hybrids also exhibit the desired character typical of American chestnuts. However, the overall number and the degree of resistance of trees coming out of the backcross program is insufficient for use as a restoration population without further breeding efforts. Recent genetic analysis confirms that blight resistance is a complex process controlled by many more than two or three genes as previously hypothesized. This explains the modest degree of success, and points to the need for a different breeding strategy. Two have been identified as having near-term potential.

One promising approach is to build upon the back-

cross program with recurrent selection, beginning with the most resistant backcross hybrids. Computer modeling suggests that this approach can substantially increase the mean level of blight resistance in our trees, and we are already testing this prediction through the creation of 'Best x Best' crosses. We anticipate that it will take 2-3 years to generate enough data to demonstrate whether the Best x Best approach is likely to produce desired results.

Chestnut Blight Cankers

I have heard from several WV chapter members, new to TACF, that they are not familiar with chestnut blight cankers, unaware of what to look for. Below is a picture of several chestnut blight cankers on American chestnut. The chestnut blight fungus (*Cryphonectria parasitica*) is easily identified on trees as the cankers are often bright-orange, often appearing at the base of dead branches. The fungus kills the vascular cambium and eventually girdles and kills the stem.



Two American chestnut stems. The left stem is dead while the right stem has multiple orange-pigmented cankers.