



The West Virginia Chapter of The American Chestnut Foundation NEWSLETTER



In the heart of American chestnut's natural range

December 2022

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Find us on Facebook: @WVTACF
National Office: 50 N. Merrimon
Street, Asheville, NC 28804
Phone: 828-281-0047

Email: WVchestnut@acf.org
Newsletter Editor: Mark Double

Table of Contents

Meadowview Farm Tour.....Page 1
History of WV Chapter.....Page 5
Allegheny Chinquapins to AR.....Page 6
A Wonderful Monetary Gift.....Page 6
Scholarship Gift by Board Member.....Page 7
New TACF Webpage.....Page 7
Fall WV Chapter Meeting Minutes..Page 7
New Mid-Atlantic RSC.....Page 8



Meadowview Research Farms

The Meadowview Research Farms are located off Exit #24 on I-81 in south-western Virginia. Meadowview is 25 miles northeast of Bristol, TN, home to the historic NASCAR speedway. The story about how TACF chose this site for the farm goes back to the beginnings of TACF in the 1980s. TACF was founded in 1983 in Minneapolis, MN by a few Minnesotans who wanted to test the hypothesis of **Dr. Charles Burnham** that his backcross breeding method used in corn also might work with chestnut. Dr. Burnham's idea was to cross resistant Chinese chestnut with susceptible American chestnut and then backcross repeatedly to American chestnut. The goal of the backcross breeding method was to create a tree that had American form and also genes for resistance to the chestnut blight fungus.

TACF started with just a few individuals, **Dr. Charles Burnham**, **Dr. David French** (forest pathologist at the University of Minnesota) and **Phillip Rutter**, a graduate student at UM. Supporters at that time were mostly individuals in the Minneapolis/St. Paul area and membership dues were \$25. By 1988, the foundation expanded to roughly 400 members. At that point, Dr. French's only help was the secretary in his department at UM. The secretary indicated that she could no longer keep up with departmental duties and also function as the TACF secretary/database keeper, so Dr. French reached out to **Dr. William MacDonald** at West Virginia University. In 1988, WVU became the official mailing address for TACF.



Storage shed and greenhouses at the Meadowview Price Farm.

During the mid 1980s, seedlings were started in the greenhouse at the UM, but there was no place to outplant the seedlings. Enter an arrangement with graduate student, Phillip Rutter. Without a large membership base, funds at TACF were minimal, certainly not sufficient to hire a full-time employee. An agreement was struck in 1987 that Rutter would become the President of TACF and would be paid only quarter-time. Rutter was tasked with growing membership and fundraising. To this end, Rutter spoke to groups all across the eastern U.S. One of Rutter's information/fundraising events occurred at Scientists' Cliffs, MD, a private community first established in 1935 as a summer colony for scientists by **Flippo and Annie Gravatt**. The founders of Scientists' Cliffs chose this land because the population of American chestnut trees showed a particular resistance to the blight. Original cabins in the area were built from felled American chestnut trees that died from the blight.

Attending that 1987 meeting at Scientists' Cliffs were two sisters, **Jennifer and Cheri Wagner**. The Wagner sisters were particularly interested in Rutter's presentation and after the meeting, they indicated that their late mother had a home and property in Meadowview, VA. Long story short, TACF leased the house and about 20 acres from the Wagner sisters and thus, TACF found a home to not only plant trees but to house its first Chief Scientist, **Dr. Fred Hebard** who lived with his family in the Wagner house.

In 1995, another Meadowview resident, **Mary Belle Price**, donated her farm to TACF in memory of her late husband. The Price farm was 88 acres and became an enormous asset to TACF as by 1995, the Wagner farm was nearly full of trees. Later on, TACF purchase the 15-acre Duncan farm, also in Meadowview.

A lot of trees (in excess of 100,000) have been planted, removed, and replanted since 1989. Keeping data on this number of trees is challenging. Currently, all trees are tagged and plans are in place to barcode trees on all three farms.

In early November, my wife and I stopped at Meadowview and met with **Dr. Vasilij Lakoba** (Director of Research) and **Cassie Stark** (Laboratory Manager). Cassie started just last year and she is excited to be part of the Meadowview farm team. She is tasked with all laboratory duties such as maintaining cultures of the chestnut blight fungus that are used in inoculation studies. She has been working hard on producing pollen from the transgenic 'Darling 58' tree in their new high-light facility. She has 5-month-old seedlings that are now beginning to produce catkins with transgenic

pollen that can be supplied to chapter members if 'Darling 58' is deregulated by the USDA-APHIS.



Cassie Stark inside the high-light facility.



Catkins produced on 5-month-old chestnut seedlings in the high-light chamber at Meadowview.

Vasilij was kind enough to give us a tour of the Price and Duncan farms and show us orchards of some advance backcross trees (B3-F2) and a Legacy tree orchard at the Duncan farm. What is a Legacy tree orchard?

In 2017, Meadowview staff performed 8 crosses between 16 American chestnut BC3-F2 trees that were most resistant to the chestnut blight fungus. The progeny of these crosses were planted at orchard locations away from other susceptible American chestnut backcross trees. One of these orchards is a Legacy tree orchard that commemorates donors who have supported TACF's mission. The Legacy tree orchard eventually will be composed of approximately 500 progeny from 16 controlled crosses conducted in 2015 and 2016. The dona-

tion for a Legacy tree is \$10,000, and the WV chapter has one of the many Legacy trees. Each Legacy tree is identified with a signpost indicating the donor. I was unable to locate the WV chapter tree, but it is similar to the one pictured below.



Several Legacy trees in an orchard at the Duncan farm.

Trees at all three Meadowview farms are in constant flux with poor-quality trees rogued and new trees planted. Hence the need for bar-coding.



Signage for the Duncan Research farm.

Also on the Duncan farm are B3-F2 orchards. The trees have a lot of cankers but they do not appear to be lethal cankers as there is no evidence of the fruiting bodies of the chestnut blight fungus, typical of lethal, killing cankers. A few pictures of one B3-F2 orchard are seen below.



B3-F2 tree with non-lethal cankers.

Deer pose problems in any chestnut area and the Meadowview farms are no exception. To keep deer out, fencing has been installed on the Price and Duncan farms. Fencing was one of the goals proposed by the national board in the fall of 2021. The projected cost of fencing the two farms was \$150,000. While this amount would tax TACF's general revenue budget, long-time TACF supporter, **Brad Standback** of North Carolina, covered the entire cost to install the fencing. Some of the 9' fencing is shown below.



The cost of the fencing is about \$15/linear foot. It has been installed by a local Meadowview company.

Some sections of the Price farm have been cut and replanted. This is a common practice as trees that have provided sufficient data are removed from the planting to allow for new material to be examined. The photo below shows an area that was replanted in 2021.



Some of their potted trees have been moved indoors to one of the barns on the Price farm. In the photo below, Vasiliy displays a 1-gallon pot. The decision was made to go to larger gallon pots, hence the Meadowview staff was willing to donate D-40 pots and stands to chapters. The WV chapter took about 1,500 pots for use in our greenhouses in 2023.



Some of the year-old seedlings moved indoors for the winter.

A special thank you to both Vasiliy and Cassie for taking time out of their schedule to provide us with a tour of the farm and the laboratory. It is exciting to see the progress that is being made in Meadowview, both in the field plantings but also in the laboratory high-light facility. We were informed that Meadowview has acquired a second bucket truck for 2023 to help with the ever-increasing pollinations that are planned.

History of the WV Chapter

The American Chestnut Foundation is comprised of 16 state chapters. West Virginia was the last state chapter to be incorporated. We became an official state chapter in 2009.

The first organizational meeting took place at the Day's Inn in Flatwoods, convened by Massey Energy in early 2008. The impetus for the meeting was that WV was the only state in the native range of American chestnut without a state chapter. **Thomas Cook**, Vice President for Environmental Affairs for Massey Energy, led the meeting in Flatwoods where 15-25 people attended. **Rick Sybolt** was kind enough to forward the agenda for the 2nd Organizational Meeting, held 5 Oct 2008 at the Embassy Suites in Charleston. Those in attendance were: **Thomas Cook**, Massey Energy; **Clark Haynes** (WV Dept. Agriculture); **Larry May**; **Dan Dunmire**; **Travis Keene** (WVU graduate student); **Dr. Don Kines** (chestnut breeder from Barbour County); **Will Oliver** (Boone County); **John Lindberg**; and **Marty White**.

The October 2008 meeting began with Travis Keene giving a presentation on planting chestnuts on strip mines. His presentation was followed by Dr. Don Kines who spoke about chestnut breeding and cultivation in Barbour County. That was followed by the Organization of the Chapter (draft constitution; draft by-laws; incorporation of chapter; 501(c)3 status; goals of the chapter; funding mechanisms; and agreements with the national office). Board members were then selected as well as standing committees. Thomas Cook was selected to serve as the first chapter president. At the time, Cook oversaw environmental compliance, permitting and reclamation activities across Massey Energy. **Jimmy Jenkins** was elected Vice President and **Dr. William MacDonald** (WVU) was elected Treasurer.

The third meeting was held on 25 Jan 2009 at Glenville State College in Glenville.

Prior to the formation of the WV chapter, chestnut was being planted on reclaimed strip mines in WV and it was determined that chestnuts could not be planted directly into overburden; the material had to be ripped, organic material added and drainage provided. Interestingly, **Dr. Jeff Skousen**, soil scientist from WVU, recently visited the strip mine plantings and found that most of the surviving trees were either fully Chinese or backcross trees with a high percentage of Chinese chestnut DNA.



Dr. Jeff Skousen examining 20-year old chestnut trees on a strip mine planting.

By the time WV was incorporated as a state chapter, there already were several chestnut plantings in the state. A 900-tree planting was installed at the WVU Agronomy Farm in Morgantown in 2006. Several of the farm members from Meadowview assisted with the planting as all 900 trees were caged individually. **Dr. William MacDonald** is pictured below installing fiberglass poles for cages around direct-seeded nuts.



Another already established orchard was at Glenville State College. Below is a photo that appeared in the 17 Jun 2009 edition of the *Charleston Gazette* featuring **Rick Sybolt**. The article stated that in May 2009, **Dr. Bob Paris**, plant geneticist from TACF, joined with Glenville's faculty and planted the first chestnut orchard at Glenville just behind the tennis courts.



The article reported that well over 100 hours were needed to establish the orchard, one of two orchards on Glenville's campus. One orchard contained 55 trees that included pure American as well as backcross trees. The smaller 10-tree research orchard was to be expanded annually with chestnut trees from other states.

Another site planted prior to 2009 was the DuPont site at the Washington Works in Parkersburg. Three hundred trees were planted in 1998. As of a few years ago, only 6 trees survived. Many early trees were killed by buck rub. Those surviving trees have a lot of very thick callus tissue as seen in the photo below.



WV Chapter Presidents

Thomas Cook (2009-2010)
Jimmy Jenkins (2010-2013)
Dr. Brian Perkins (2013-2015)
Robert Sybolt (2015-2017)
Mark Double (2017-2023)

Allegheny Chinquapin Seed Sent to Arkansas

The WV chapter send a bag of about 40 germinating Allegheny chinquapins to **Susan Adkins**, Park Superintendent, Prairie Gove Battlefield State Park in Prairie Grove, Arkansas. WV chapter members, **Libby Wilson and Bill Guthrie** of Bruce-ton Mills provided the contact and stated that the Battlefield site has plenty of Ozark chinquapins but no Allegheny chinquapin trees. Chinquapins are fall-germinating nuts, like white oak acorns. The nuts had already germinated with radicals 1-2" long in late November as seen below.



Authentic, expansive, and well preserved, Prairie Grove is known as one of America's most intact Civil War battlefields. With more than 900 acres, this park commemorates the site of the Battle of Prairie Grove, where on December 7, 1862, Confederate and Union forces clashed in a fierce day of fighting that resulted in 2,700 casualties. This battle marked the last major Civil War engagement in Northwest Arkansas. The park offers walking and driving tours, programs, and weekend events. At the Hindman Hall Museum, artifacts recovered from the battle are displayed. Admission to the museum is free. Arkansas's largest Civil War battle re-enactment takes place here.

A Wonderful Monetary Gift

The Waddell orchard at Preston County High School is dedicated to the late **Duane Waddell**. Duane is a Preston County native but lived in California most of his adult life. Over the years, Duane donated tens of thousands of dollars to the WV chapter. Duane's philanthropic spirit lives on in his daughter, **Kyla Waddell Grafton** who lives in Cayucos, California. Kyla sent a sizeable donation to the WV chapter and stated that she hopes to visit the Waddell orchard sometime in the fall of 2023. Many thanks to Kyla for her generosity.

Scholarship Gift Made by WV Chapter Board Member

West Virginia University's School of Public Health graduate students will benefit from a scholarship gift made by a WV chapter board member, **Dr. Joe Golden**, and his wife **Dr. Margaret Burkhardt**. Joe and Margaret established the Golden-Burkhardt Scholarship for Public Health which goes to students from WVU pursuing a master's degree in public health. Each recipient will intend to serve West Virginia in a public health role for at least two years after graduation as part of the scholarship review process. Joe noted that the scholarship is timely, as Covid-19 and other recent public health challenges have demonstrated the need to strengthen the public health workforce. "Given what the world is going through with climate change and with pandemics, we need people who are sophisticated and knowledgeable working in public health."

Just like Kyla Waddell Graton's gift, we all give thanks for philanthropic donors who brighten the world with their gifts.

New TACF Webpage

The national office of TACF is updating their webpage. The casual user will not notice any changes, but those who manage their chapter's webpage had a training session by **Boomer Strassmann** of Big Boom Designs in Asheville, NC. Those who participated in the on-line workshop learned how to manage their chapter's webpage on the back-end (i.e. how to upload information on events, news, etc).

WV Chapter Meeting Minutes October 9, 2022 Rowlesburg, WV

- The chapter meeting was called to order by President Mark Double.
- Roll call for the Board of directors was done.
- The minutes from the April 2, 2022 meeting were reviewed. A motion to approve the minutes was made and passed by a voice vote.

Treasurer's Report

- The Treasurer's report was distributed and read. The chapter has a balance of \$69,991.15, as of September 30, 2022. The Treasurer's report was approved as read by a voice vote.

Regional Coordinator's Report

- Brianna Heath, the new Mid-Atlantic regional science coordinator, was unable to attend, but Lisa Thomson, TACF President/CEO, gave an update of recent activities. The transgenic tree, 'Darling 58' developed by the State University of New York is still going through the regulatory process. There is belief that the tree will be deregulated by the spring of 2023. Lisa also gave an update on the crossbreeding program between American and Chinese chestnut; Meadowview orchards are still being culled in the hope of getting hybrid trees that are 80% American. DNA testing of hybrid trees is being monitored. TACF held their national meeting in person in 2022 in Charlottesville, VA with a field trip to the Lesesne state forest in central Virginia. Lisa Thomson reported that she will retire in 2023.

Old Business

- Dr. Lewis Cook reported on his planting in Fayetteville. He started some GCO's and he is working with the National Park Service to plant chestnuts near some trails.
- The 1,250 nuts potted in March at the WVU greenhouse have grown well and all were planted across the state.
- A pollination workshop was held at the Waddell orchard in Preston County in June.
- Mark Double is trying to collect survival information on the GCO's that have been planted in the state.

Mother Tree Report

- Melissa Thomas-Van Gundy gave an update on the progeny test on the National Forest. Survival was 69% at the Richwood site and 60% at the Parsons site. No one family stood out as being very resistant, but there are some good individual trees.

Membership Committee

- The WV chapter has about 150 members.

New Business

- There was discussion about the advantages/disadvantages of planting nuts or seedlings. Due to limited green-house space at WVU in 2023, we may have to do more direct-seeding versus planting seedlings in the future.
- A new chapter logo developed by Nora MacDonald. Sam Muncy arranged for polo shirts that had the new logo embroidered on the shirts.
- Meadowview nursery donated D40 pots and stands to the WV chapter to pot nuts. The hope is the 9"-deep pots will promote better root formation and hopefully provide better seedling survival.
- Everyone was encouraged to look for American chestnut trees producing nuts.
- Sites around the state are proposed for plantings in 2023 to look at hybrid trees that have blight resistance and American form.
- GCO's in 2023 are proposed at Cacapon Bridge, Fort Ashby, Spencer, Preston and Pocahontas Counties.
- Mark Double reported on a talk he gave to a conservation biology class at WVU.
- The chapter's Facebook page has had 3,690 visits and 259 followers. We are looking for someone to take on social media for the chapter.
- Pollen from the 'Darling 58' tree will be available this spring. TACF is planning to supply pollen, and our chapter will require help to pollinate trees. A tentative site to pollinate American chestnut is at the Clements Nursery in Mason, WV.
- A discussion about the 2023 Boy Scout Jamboree took place. The Jamboree will be held at the SBR in Fayette County. It was decided not to participate in the Jamboree since Sam Muncy is unable at this point to spearhead a chestnut booth. Also, the cost of \$3500 per booth seems prohibitive.
- Dr. Lewis Cook was elected to the WV chapter board of directors.
- The next chapter meeting is tentatively scheduled for April 15, 2023, at the Waco Center on the campus of Glenville State College.

Respectfully submitted, Jeff Kochenderfer (WV Chapter Secretary)

New Mid-Atlantic Regional Science Coordinator

Brianna Heath is the newly-appointed RSC for the Mid-Atlantic region, having been hired this summer after **Tom Saielli** stepped down to pursue other employment. Brianna was assisting the Virginia chapter with pollination on Sep 19, and she fell off a pollination ladder and sustained some significant injuries--fractured left ankle, fractured right knee, torn right meniscus, and a fractured left elbow. She spent three weeks in the hospital followed by another 4 weeks in a nursing home. She is just now easing back work, and she is working mostly on computer-related projects. We wish Brianna a complete recovery as this position requires a good deal of outdoor work. We are hopeful that Brianna can join the WV chapter at our spring meeting Glenville.

