THE American Chestnut FOUNDATION | MD CHAPTER

Maryland Chapter of The American Chestnut Foundation
The Sweltering Summer of 2025 Newsletter

Jeff White is President of the Maryland Chapter of the American Chestnut Foundation

Officers:

President: Jeff White
Vice Presidents: Trey Belew
Secretary: Lara Hause
Treasurer: Ted Zegers

Board of Directors:

Gary Carver
Jim Curtis
David Gordon
Ron Kuipers
Bruce Levine
Karl Mech
Susan Proper
Chuck Selden
Tony Sutton
Tom Vegella
Dean Yap
Jeffrey Strathern
Scott Stewart

Email: mdchapter@tacf.org

Website: tacf.org/md

Find us on Facebook

Table of Contents:

Orchard News 1
Black Hills Orchard 5
Volunteer Spotlight 6
Short Stem Assays 7
TACF Breeding Program 8
Breeding Program Quiz 8
Chestnut Festival 9

Hello, Maryland, DC, and Delaware chestnut enthusiasts! Welcome to mid summer. It's time for a newsletter. When I was writing the spring newsletter I was soaking up the wonderful spring weather. Now I am soaked daily from the heat and humidity of a typical summer around here. Our young chestnut trees don't seem to mind. With abundant rainfall many of the young trees in our orchards have grown two or more feet this spring. The two seedlings i'm holding are close to two feet tall. I started these seedlings from one of Cassie Stark's, our regional science coordinator, favorite trees. These seedlings have been planted in the ground and are growing like weeds.

After starting all those seedlings, which I am happy to share, summer field season was on us. We started by collected leaf samples from trees that are candidates for the TACF breeding program.

A topic I spend a lot of time thinking about is if members and anyone interested understands the current TACF breeding program. How can we make sure folks understand what new tools have been added to the breeding program. In response I came up with a simple quiz (below) to hopefully entice your interest. Let me know how you do and as always I can be reached at chapter email

Orchard News

Phytophthora Spreads at the WSSC Seed Orchard

Phytophthora report by Bruce Levine

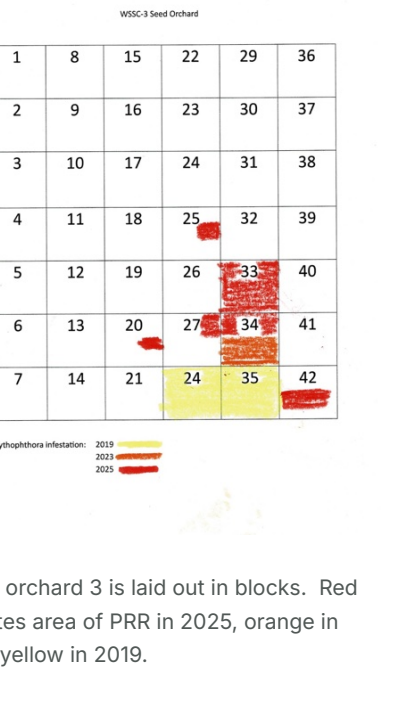
Phytophthora root rot (PRR) is on the move at our WSSC3 seed orchard. First discovered there in 2019, and confirmed by the University of Maryland extension service, PRR adds a wrinkle to the Maryland chapter's breeding program.

Like chestnut blight, P. cinnamomi is an invasive pathogen to which the American chestnut is highly susceptible, but Chinese chestnut is highly resistant. The discovery of PRR at one of our two seed orchards in 2019 was an unwelcome discovery, especially since most of the Chapter's trees are descended from the Clapper hybrid line, which does not carry PRR resistance from its Chinese progenitor. P. cinnamomi can remain in the soil for many years, even without a host, but is a slow moving pathogen. It has spores that can swim in moist soil, but they do not typically move great distances unless the soil is so saturated that they flow along with water between soil grains. As a result, it can stay on one place for years, but will expand when the opportunity presents itself.

In 2023, PRR killed several trees in plot 34 and the chapter extended its Agrofos treatment to the trees neighboring the infected area. The summer of 2025 has been unusually rainy, and trees in 5 more lots, including one about 100 feet from the infected area, are dying of PRR. Once again, we are removing the dying trees and treating the trees around them with Agrofos.

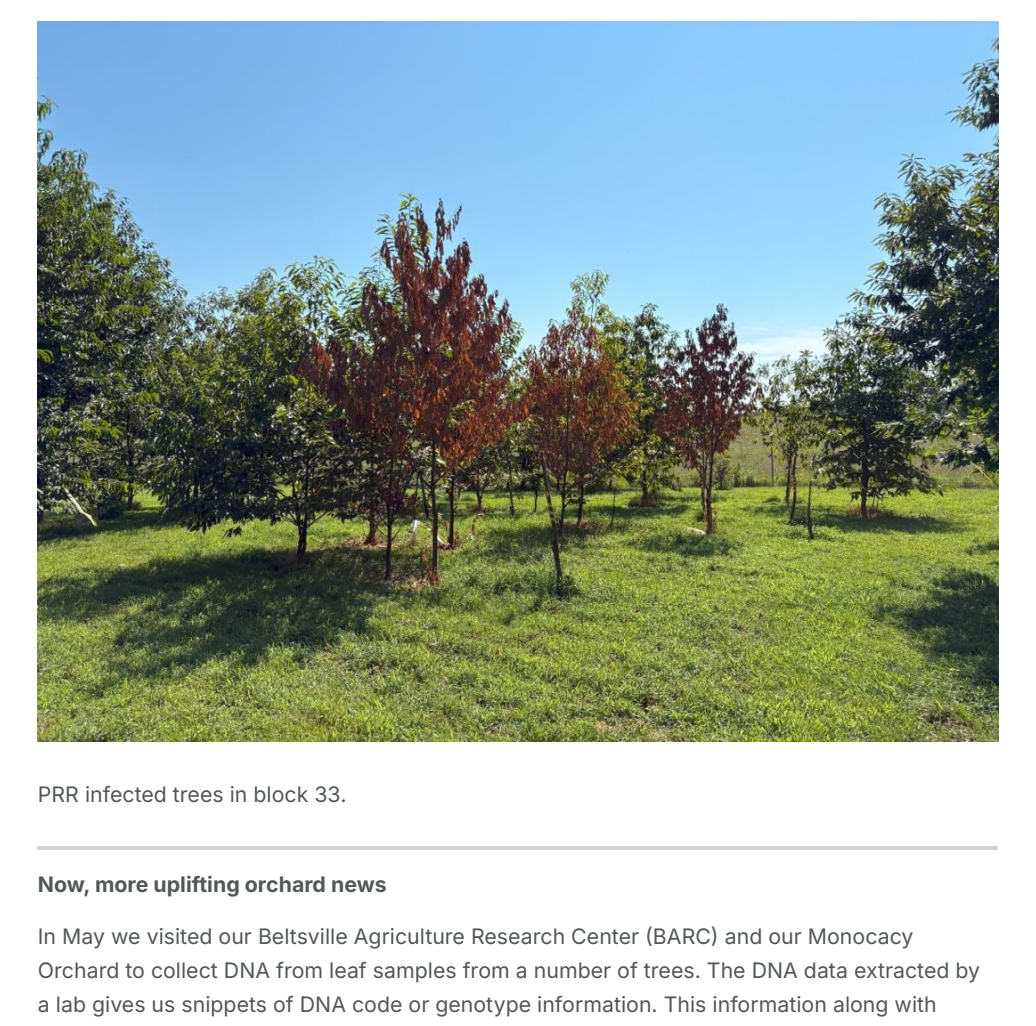
Years of work went into producing and caring for these now-dead trees, some of which showed decent resistance to chestnut blight, and it is obvious that future rainy years will bring more problems. At least it has at least alerted us to the necessity of breeding with PRR-resistant parents. Since 2019, the chapter has been careful to only make crosses in which at least one parent has the potential to be PRR-resistant. This means crossing with trees from neighboring chapters that have been evaluated for PRR resistance, or crossing with Chinese-American F1 trees to potentially reintroduce PRR resistance into our breeding lines

PRR in Block 27, trees rapidly die once infected. PPR kill both the roots and top growth.



1	8	15	22	29	36
2	9	16	23	30	37
3	10	17	24	31	38
4	11	18	25	32	39
5	12	19	26	33	40
6	13	20	27	34	41
7	14	21	24	35	42

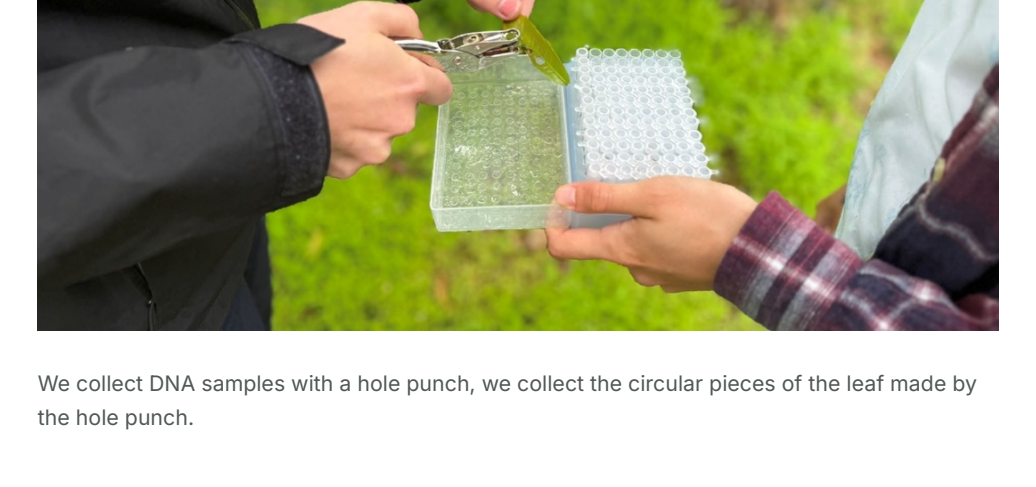
WSSC orchard 3 is laid out in blocks. Red indicates area of PRR in 2025, orange in 2023, yellow in 2019.



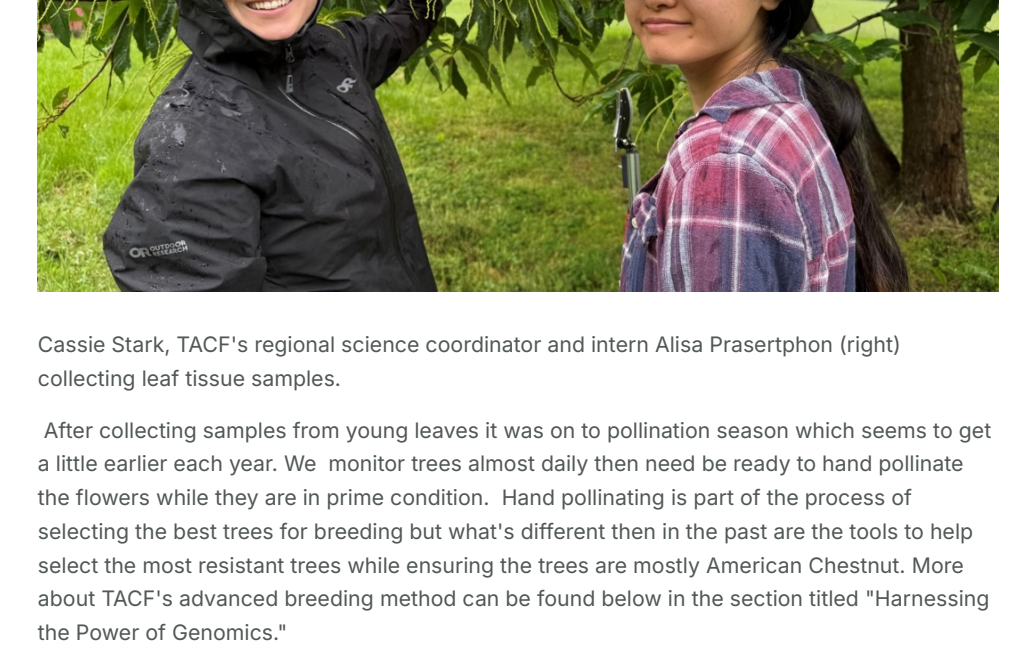
PRR infected trees in block 33.

Now, more uplifting orchard news

In May we visited our Beltsville Agriculture Research Center (BARC) and our Monocacy Orchard to collect DNA from leaf samples from a number of trees. The DNA data extracted by a lab gives us snippets of DNA code or genotype information. This information along with phenotype (physical characteristics) information gets entered into a computer model. We use the computer model to figure out which of our thousands of trees have the highest disease resistance based on their genotype. Those trees go into our breeding program.



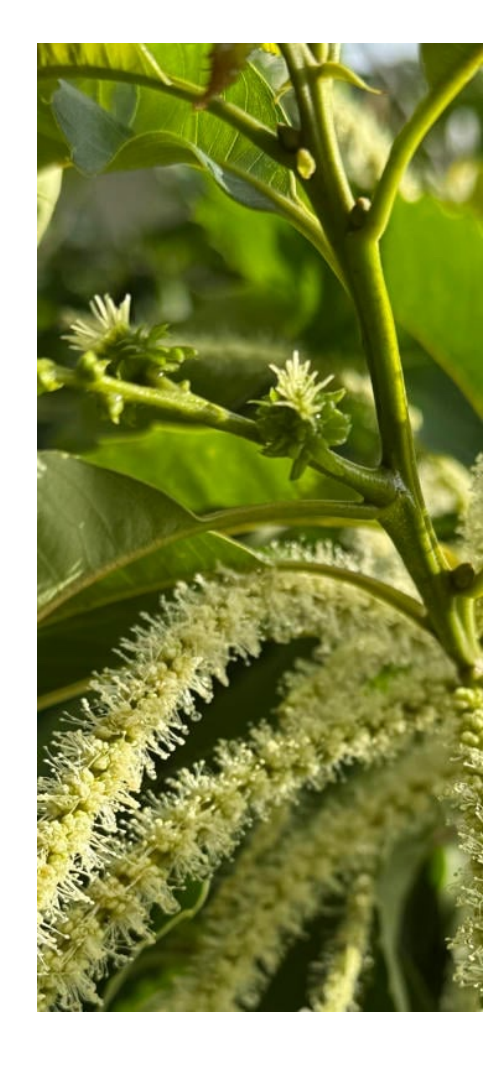
We collect DNA samples with a hole punch, we collect the circular pieces of the leaf made by the hole punch.



Cassie Stark, TACF's regional science coordinator and intern Alisa Prasertphon (right) collecting leaf tissue samples.

After collecting samples from young leaves it was on to pollination season which seems to get a little earlier each year. We monitor trees almost daily then need be ready to hand pollinate the flowers while they are in prime condition. Hand pollinating is part of the process of selecting the best trees for breeding but what's different then in the past are the tools to help select the most resistant trees while ensuring the trees are mostly American Chestnut. More about TACF's advanced breeding method can be found below in the section titled "Harnessing the Power of Genomics."

In between these activities we need to keep grass mowed in all the orchards and pull weeds that are competing with our youngest trees. We try to accomplish all this between the beneficial rains and the not so enjoyable heat and humidity. At least we have not had to water since May. Thank you to all the volunteers for helping with these chores, it takes time and work.



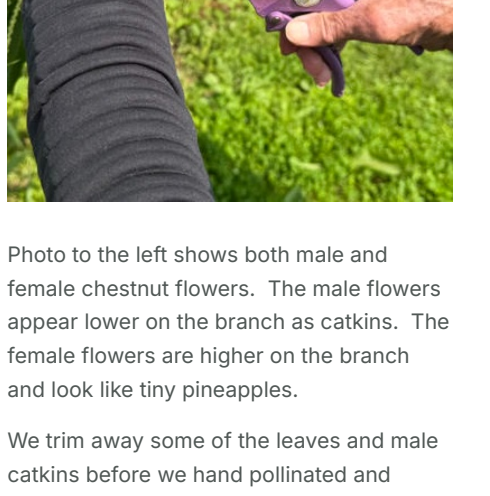
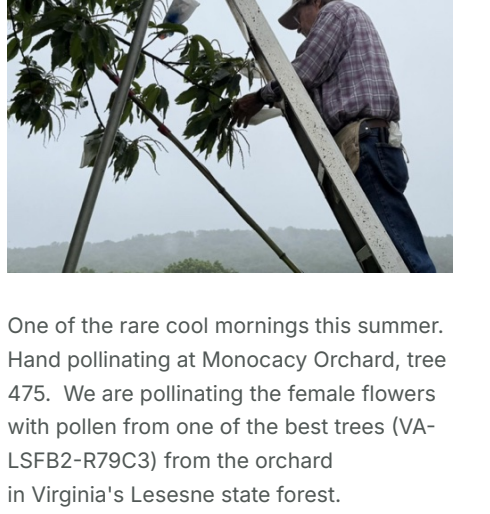


Photo to the left shows both male and female chestnut flowers. The male flowers appear lower on the branch as catkins. The female flowers are higher on the branch and look like tiny pineapples.

We trim away some of the leaves and male catkins before we hand pollinated and bagged the female flower (photo above and below).



One of the rare cool mornings this summer. Hand pollinating at Monocacy Orchard, tree 475. We are pollinating the female flowers with pollen from one of the best trees (VA-LSFB2-R79C3) from the orchard in Virginia's Lesesne state forest.

Hand Pollinating and Bagging the flowers at WSSC Orchard 1

Story by Dave Gill, from MD Chapter Facebook Page

When it's 94 degrees with 96% humidity outside, what's a dedicated chestnut enthusiast to do? Why, climb into a hybrid American Chestnut tree to hand pollinate female flowers, of course! Who needs a pool when you can have a full-body sweat session for a noble cause? We finally received the precious pollen from the Meadowview Research Center, and there was no time to waste on WSSC tree #43! A truly *hearty* (and by the end, very *moist*) team of six jumped into action. We made quick work of the 70 bagged flowers, though not before we were all completely drenched in sweat! Here's hoping this sweat equity pays off with a huge harvest of healthy chestnuts and big future dividends for the restoration effort!A massive THANK YOU to the incredible crew who showed up and braved the heat for this vital event! You guys are champions!

Highlighting Black Hill Regional Park Orchard

Story by Tony Sutton

With each newsletter we plan to highlight one of our Orchards. First up is our Black Hill Regional Park Orchard. The following information was provided by Tony Sutton, a current steward of the Black Hill Orchard along with Stan Fisher and Montgomery County Parks staff.

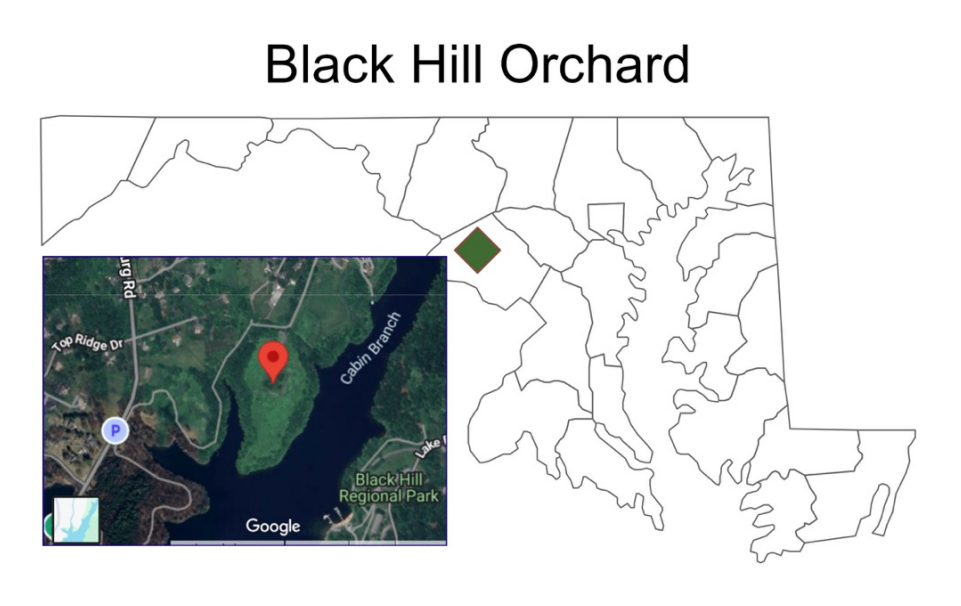


Photo above is of the Orchard around 2015. Taken recently, photo to the left is an excellent specimen of an America Chestnut, tree 91.

Most trees in Black Hill orchard are pure American chestnuts. MDTACF members gathered seeds and pollen from 22 wild American trees across the state, sometimes hand-pollinating trees too isolated to procreate naturally.

Collecting these family lines in one location aids our hybridization program. For example, last year we created new F1 hybrids using American trees at Black Hill and pollen from a favorably shaped Chinese chestnut discovered in Jones Mill park. With those crosses, we aimed to broaden the number of Chinese ancestor trees contributing blight resistance to our gene pool of hybrid trees.

The orchard also helps conserve genes that are disappearing in the wild. By representing and reproducing American chestnuts from many Maryland ecosystems, we hope the trees we eventually restore to our forests will be well suited to local conditions.

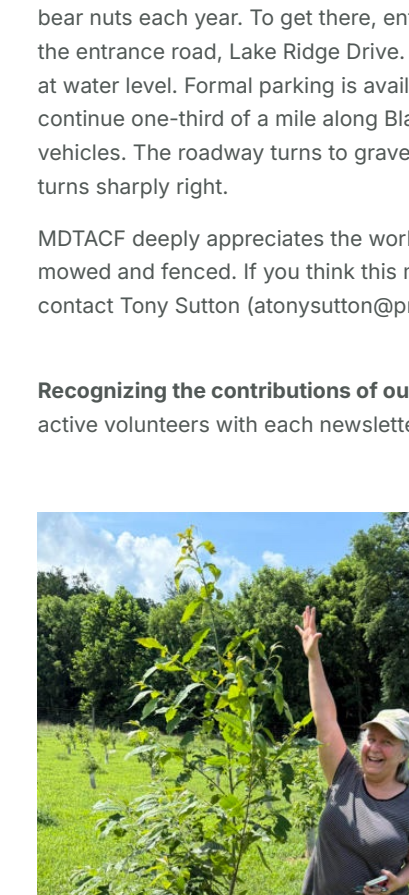
MDTACF first planted Black Hill in 2010. Initially, we planted ten Chinese chestnuts and ten trees from each of several levels of hybridization, ranging from half American (F1) to thirty-one thirty-seconds American (B4). We used the hybrid and Chinese trees as control groups to compare the early health of the many neighboring American trees.

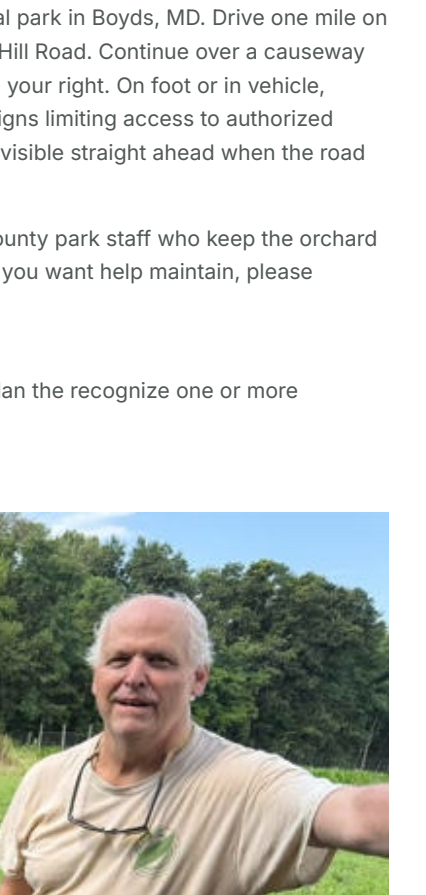
We took advantage of the side-by-side hybrids to engage the public, installing signs that invite visitors to compare the traits of trees with differing percentages of American ancestry.

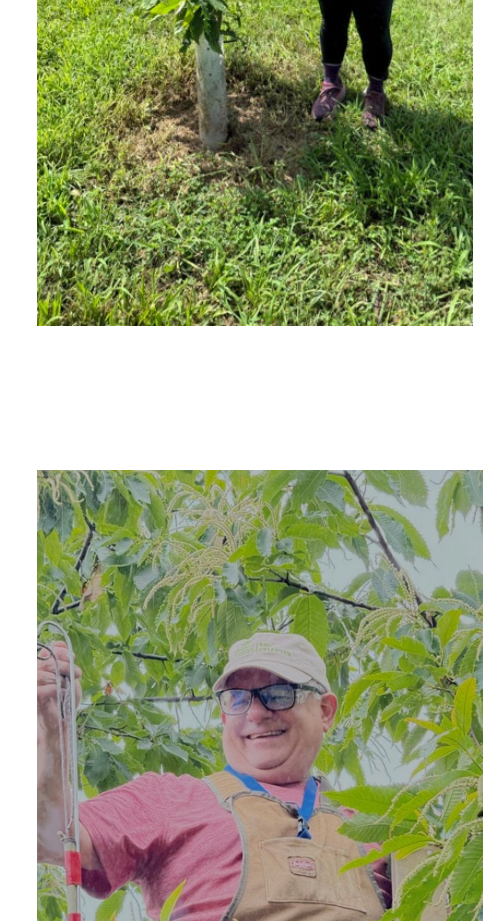
MDTACF members are welcome to visit the 142 trees in Black Hill, most of which flower and bear nuts each year. To get there, enter Black Hill regional park in Boyds, MD. Drive one mile on the entrance road, Lake Ridge Drive. Turn right on Black Hill Road. Continue over a causeway at water level. Formal parking is available immediately on your right. On foot or in vehicle, continue one-third of a mile along Black Hill Road, past signs limiting access to authorized vehicles. The roadway turns to gravel and the orchard is visible straight ahead when the road turns sharply right.

MDTACF deeply appreciates the work of Montgomery County park staff who keep the orchard mowed and fenced. If you think this might be an orchard you want help maintain, please contact Tony Sutton (atonysutton@protonmail.com).

Recognizing the contributions of our Volunteers. We plan the recognize one or more active volunteers with each newsletter.







Mark Verna says he found out about TACF thru my neighbor Gary Neubaum and he invited me to a meeting in the fall of 2024. I was always enamored by the pictures of forests of giant chestnut trees in the late 1800's. I went into barns throughout PA. and was impressed by the chestnut beams that were cut from chestnut trees harvested before the blight. I read articles on how TACF is developing blight resistant trees and wanted to learn and help in bringing back The American Chestnut. My hobbies include woodworking woodturning and metal work.

Volunteer photos from left to right starting above. Cindy Stevens has been assisting Ron Kuipers, our master orchard steward for years. Cindy can do it all whether it is weeding, watering, trimming or pollinating. Cindy also good at record keeping and is regularly sharing a spreadsheet with useful information she has collected.

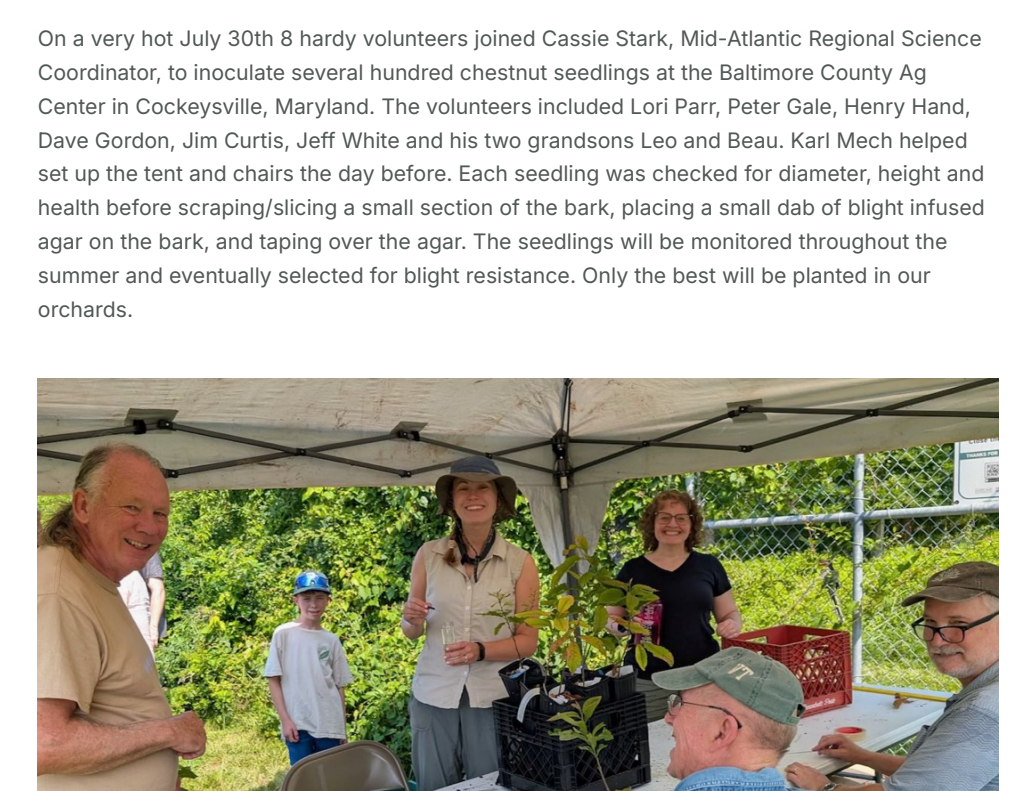
Gary Neubaum is a regular with the group, in Gary's own words... In the early fall 2023 I was trying to get involved in the IWL Chestnut program after seeing the orchard signs for a few years . I was given Ron's contact info and we spoke a bit. I then went to the fall meeting and found quite a few like minded people . I had found my group. After learning the trees demise story and what we are trying to do, it was an easy choice to be part of all of it. I learn something new every time I am with Ron and some of the other experienced guys . Dr. Gary Carver recently shared some ID work so I am a bit better at that . Bruce Levine has shared more science than I can absorb. I really enjoy the science and nature aspect. I have always been an avid gardener. I start chestnut seeds each year now just to give away. I know I probably won't live to see the dream realized of a blight proof chestnut but its worth all the help I can give.

Come find your group!

Short Stem Assays to Evaluate Blight Resistance

Story by Jim Curtis, originally posted in Facebook

On a very hot July 30th 8 hardy volunteers joined Cassie Stark, Mid-Atlantic Regional Science Coordinator, to inoculate several hundred chestnut seedlings at the Baltimore County Ag Center in Cockeysville, Maryland. The volunteers included Lori Parr, Peter Gale, Henry Hand, Dave Gordon, Jim Curtis, Jeff White and his two grandsons Leo and Beau. Karl Mech helped set up the tent and chairs the day before. Each seedling was checked for diameter, height and health before scraping/slicing a small section of the bark, placing a small dab of blight infused agar on the bark, and taping over the agar. The seedlings will be monitored throughout the summer and eventually selected for blight resistance. Only the best will be planted in our orchards.



The process of inoculating seedlings is underway. Clockwise from left, Jeff, Leo, Cassie, Lori, Henry, Peter, and Beau's red hat.

Clockwise from the top left, our production line, Karl and Dave are in the background. Dave, Leo, and Beau kept supplying seedlings. The blight is grown in petri dishes and applied to a small wound on the stem of the seedlings. Dave learning about the process from Cassie.

Harnessing the Power of Genomics

The American Chestnut Foundation is using an advanced breeding method to speed the development of blight and disease resistant American Chestnuts. Do you know the name of this method? Take the quiz below to see if you know. You can find the answer by visiting this TACF page, scroll down to locate and watch the very informative short video "Saving the American Chestnut with...". You can also watch the same video on YouTube . You will gain knowledge into TACF's latest advanced breeding method and be able to impress all your friends. Plus, you will get the answer to the quiz and by taking the quiz I get a count of how many people are reading this newsletter. Thanks for taking a moment to participate,

Quiz results

0%

0 out of 0 correct answers

Show results

Start again

Maryland Chapter of TACF first Annual Chestnut Festival

Save the Date, Sunday October 19, 2025, 1 pm to 5 pm.

Our first Maryland Chestnut festival will be held at Milkhouse Brewery at Stillpoint Farm on Sunday Oct 19, 2025, from 1 to 5 pm. Let me know if you have a favorite Chestnut recipe. We will be roasting fresh chestnuts and selling chestnuts to take home for eating or planting. **Watch your email, many more details will be coming as we get closer.**

Milkhouse Brewery

8253 Dollyhyde Rd, Mt Airy, MD 21771

https://www.milkhousebrewery.com

https://www.facebook.com/MilkhouseBrewery

I would like to thank our new members that have joined in May and June this year, Let me know if I missed you, and I am only using first names to respect privacy.

New Members and Donors: Charles, Carolynn, Judy, David, Robin, Jeff, James, Thomas, Luke, John, Thierry

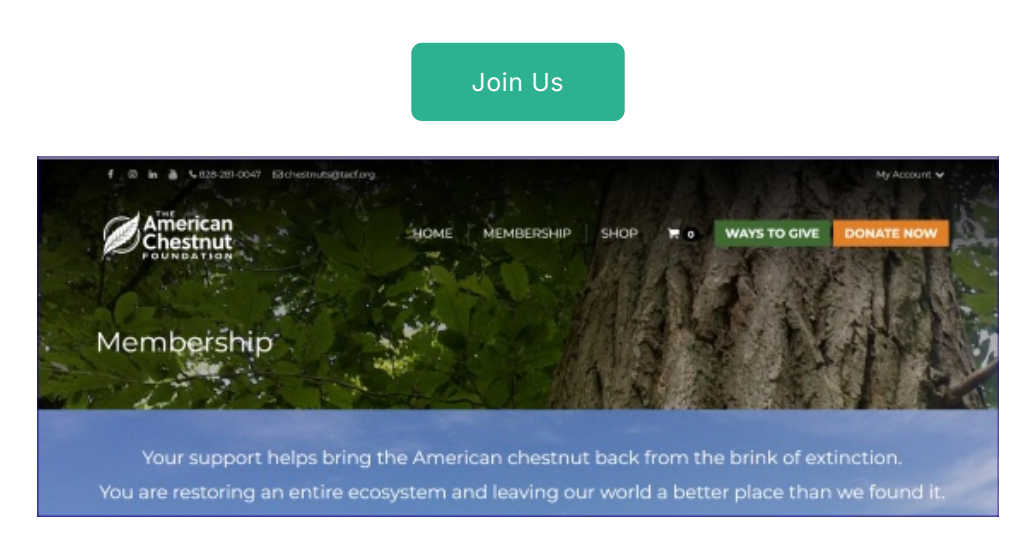
Plus there have been dozens of renewing members. Thank you for your continued support.

In closing, if not currently a member, please consider joining TACF and selecting Maryland as your Chapter. Your membership helps the national organization and Maryland Chapter in bringing back the American Chestnut. Your donation helps your Maryland Chapter establish and maintain local seed and research orchards. As the words in the image below says...

Your support helps bring the American chestnut back from the brink of extinction.

You are restoring an entire ecosystem and leaving our world a better place than we found it.

Join Us



Membership

Your support helps bring the American chestnut back from the brink of extinction.
You are restoring an entire ecosystem and leaving our world a better place than we found it.

Maryland Chapter of the American Chestnut Foundation

You received this email because you are a member or friend of the Maryland Chapter of the American Chestnut Foundation

Unsubscribe

SENT BY mailerlite