



# The West Virginia Chapter of The American Chestnut Foundation NEWSLETTER



*In the heart of American chestnut's natural range*

January 2022

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## Architect of the U.S. Capitol

WV Chapter member, **Robert Sypolt**, received the following letter (in italics below). Robert sent the letter to me and I forwarded it to **Lisa Thomson**, President and CEO of TACF. Lisa stated that because of TACF's interest in increasing our government relations functions, she took this on as a follow-up. Our newest national board member, **Ambassador Catherine Novelli**, has suggested that doing a planting on the Hill would generate great interest and media coverage. Lisa hopes to get some big seedlings and see if we can get some splash on this and coverage with some members of Congress to be a part of a ceremony of sorts. Lisa said, 'Stay tuned'.

*The Capitol Grounds and Arboretum was given a Hybrid American Chestnut in 2014 by TACF, which is currently thriving on the east front of the US Capitol. We writing to inquire about the possibility of purchasing a few seedlings to support the research and conservation efforts of TACF by caring for and monitoring trees in our landscape ex situ. I am not sure if this is a possibility, or if this inquiry should be directed elsewhere. Any information or guidance you could provide would be greatly appreci-*

*ated.*

Many thanks,  
Melissa Westbrook  
Urban Forester  
Architect of the Capitol  
Capitol Grounds and Arboretum  
U. S. Capitol, SB-16  
Washington, DC 20515  
www.aoc.gov

## Legacy Tree in Honor of Garold Thumm

In November, 2021, **Lisa Thomson** sent **Mark Double** a wonderful card related to a **Legacy Tree** in remembrance of **Garold Thumm**. The **Legacy Tree Orchard Program** was created to symbolize the permanency and endurance of the research trees TACF has nurtured at the Meadowview Farm in southwest Virginia. The sentiment behind the program is to honor those individuals or families who have a deep abiding commitment to American chestnut restoration and wish to support this mission during and after their lifetimes.

After inquiries of our WV chapter members, **Dr. Brian Perkins** replied that Mr. Thumm left our chapter about \$20,000 in his will. During a meeting several years ago, WV chapter members decided to use \$10,000 to sponsor a legacy tree. So, part of the nuts the WV chapter receives

each year are from that legacy tree for Mr. Thumm.



Garol Thumm, from Pinch, WV, was a man with many hats. He was a Methodist minister and served several posts during WW II in the U.S. and Panama. After obtaining a Ph.D. from the University of Pennsylvania, he was an instructor and then spent time in Europe. He was recruited by the 446th Strategic Research and Analysis Team, an army intelligence reserve unit at the University of Pennsylvania.

Thumm was assigned to duty in the Office of the Assistant Chief of Staff for Intelligence, Department of the Army, Pentagon, where he remained for two years. In 1961 Professor Thumm left the University of Pennsylvania for an appointment as professor of government and chairman of the Division of the Social Sciences at Bates College, Lewiston, Maine. He took two leaves of absence as visiting professor, first for two years (1966-1968) at the National War College, Washington, DC, and then a semester in 1985 as visiting professor at the Christian-Albrechts Universitat, Kiel, Germany, in 1985. He retired from Bates College in 1987. In Maine he became a mediocre gourmet cook, a fair bridge

player, and a terrible golfer, but he loved trying.

## Clements Tree Results

This newsletter has focused a lot over the last year on the Clements Tree Nursery in Mason County. Most WV chapter members have no working knowledge of the nursery and have little interest in stories related to the nursery. However, there are a number of WV chapter members who have purchased chestnut seedlings from the nursery and they are perplexed as to their tree's health. Some trees from Clements have no infections but poor form, while other trees have good form but are blighted.

In order to get a better understanding of the genetics of some of the chestnuts at Clements, 10 trees were chosen last April for DNA analysis. Buds were sampled and sent to **Dr. Jason Holliday** at Virginia Tech and then sent on the HudsonAlpha in Alabama. Our 10 samples were among nearly 5,000 samples from chestnut trees across the county. After 7 months, we have the data on our 10 trees.

The data was sent to **Dr. Greg Miller**, owner of the Empire Chestnut Company in Carrollton, OH. Greg's response to the data was, "No big surprises here. But I'm always a little suspect of these kinds of admixture analyses. They are dependent on having a broad marker range of the "pure" species, or at least a good representation of the "pure" ancestors of the admixtures. Mostly, the ones I've seen for hybrids that I know look pretty accurate, but other times there is a mis-match between what the markers say and what the tree and its offspring look like. My interpretation (as a non-expert in genomics) is that when the program runs into markers that it hasn't seen in "pure" species, it might mis-classify them and/or some presumed species-specific markers. The data from the analysis is in the table below.

Admixture of 10 Chestnut Trees from the Clements Nursery					
Site	Row/Name	Percentage			Type
		American	Chinese	Japanese	
Old Orchard	3, Pease	0%	100%	0%	Chinese
Old Orchard	4, Pease	54.2%	8.4%	38.4%	Backcross 1
Old Orchard	6, Carter #3	100%	0%	0%	American
Old Orchard	11, Lawrence	100%	0%	0%	American
Old Orchard	13, McD #1	51.8%	48.2%	0%	F1
Old Orchard	13 McD #2	51.9%	48.1%	0%	F1
Old Orchard	13, Gault #2	51.8%	48.2%	0%	F1
Young Orch.	1, Traugh #1	100%	0%	0%	American
Young Orch.	1, Beacher B	100%	0%	0%	American
Young Orch.	2, Graft	52.5%	47.5%	0%	F1

In examining the Excel spreadsheet, data are a real mixed bag. One tree is pure Chinese, while four trees are pure American (although I question those data, as two of the "American" trees had very large twigs with large, dark buds, indicative of European chestnut). European chestnut was part of the analysis, and our trees were negative for *C. sativa*.

The four trees labeled F1 simply mean that they are the progeny of an American X Chinese cross. The one tree labeled BC1 is not an F1 because it has a large amount of Japanese chestnut DNA.

Over the years, **Jason Huffman** and his crew at the nursery collected fallen chestnuts from the orchards and seeded them for sale the following spring. I can see why folks who purchased seedlings from the nursery have such a wide variety. The trees that were sold could have ranged from pure American to pure Chinese and everything in between.

## 'Darwin' Tree

The latest news from the State University of New York relative to the transgenic tree they developed relates to a new tree they call 'Darwin'. One of the original transgenic trees (a producer of oxalate oxidase [Oxo] that neutralizes oxalic acid produced by the chestnut blight fungus) was named 'Darling 58' after former NY-TACF chapter president, Herb Darling. 'Darling 58' produced OxO all the time under the regulation of a constitutive promoter. 'Darwin' has a wound-inducible promoter (win) that only produces

the OxO enzyme when the chestnut tree is infected by the chestnut blight fungus.

**Dr. William Powell (State University of New York)** offered a great analogy. Think of the OxO gene as a light bulb, that is the source of light. The OxO gene is the source of the enzyme that detoxifies oxalic acid. The promoter switch turns on the light much like the promoter turns on the enzyme. 'Darling 58' has a switch (i.e. the promoter) that is always on, so the OxO enzyme is always being made. The analogy is like a light bulb always being on. Even if you leave the room, the light is still on. That is the way the 35S promoter works in 'Darling 58'. The enzyme is always produced, termed constitutive. In 'Darwin', there is a different promoter, a wound inducible promoter. This switch is like a motion detector that switches on the light when there is movement. The same thing happens to the win promoter in a chestnut tree. The OxO enzyme is turned on when the chestnut blight fungus is present in a wound. The win promoter turns on the OxO gene and neutralizes the oxalic acid being produced. When the fungus is no longer actively growing, the win promoter turns off the OxO. Much like a motion detector switch saves energy by not being on when not needed, the win promoter saves energy and plant resources by turning off OxO production when not needed.

'Darwin' comes from a combination of Darling and win, from wound inducible. Clever!

## News from Other TACF Chapters

For many years, there has been a committee comprised of chapter presidents of TACF's 16 state chap-

ters. Recently, there has been little interaction among chapter presidents, partly because of the Covid pandemic. However, leadership of this group changed in November, and via Zoom on 7 December 2021, the new chair of TACF's Chapter's committee, **Bruce Levine** (president of the Maryland chapter) held the first chapter's committee meeting since he became the chair of this group. **Kathy Patrick**, president of the Georgia chapter, is vice-chair. The goal of the meeting was for Bruce and Kathy to see what other state chapters want from a meeting of chapter presidents. Many, but not all of the state chapter presidents were on the Zoom call and I thought WV members might be interested to hear a little of the goings-on of other TACF chapters.

**Vermont**--They began offering free nuts and they gained 12 new members from their free nut program. Vermont has 540 members (compared to WV's 150). Vermont also is in the process of updating their strategic plan.

**Georgia**--Their membership has remained steady over the last few years. Georgia has two Rotary groups that work with the Georgia chapter. Arborists work with the Rotary groups and the Georgia chapter gave the Rotarians 50 chestnut trees to anyone who joins TACF. The GA chapter views this as a service project.

**Maine**--They also offered free nuts to new members. Forestry classes at The University of Maine at Orono uses chestnut seedlings as part of their course work. The seedlings are grown by university students but outplanted as part of demonstration orchards. **Dr. Tom Klak** at the University of New England works closely with the transgenic trees from the State University of New York. The

Maine chapter also worked closely with organic gardeners in the state. Since the Maine chapter embraced work with the transgenic tree, a good bit of tension developed in the chapter with the organic gardeners. Tom Klak tried to ameliorate that tension when he did a spot on local television. This television segment created a good deal of interest. Klak donated non-transgenic chestnuts to local ice cream parlors for chestnut ice cream. Klak also has offered nuts for human consumption. By happenstance, the Maine chapter has found a way to make chestnuts sweeter. They had 1,300 extra Chinese chestnuts and by accident, the Maine chapter president left the nuts outdoors in a covered box. What he found was that cycling between warm and cold conditions made chestnuts sweeter. Temperatures ranged from freezing to 50 F. It was suggested that cycling from warm to cold 15-30 times will increase sweetness.

**Connecticut**-- They have experienced an increase in membership. They do a lot of outreach at flower and garden shows and fall fairs. Some chapter members have given presentations to the Department of Environmental Protection.

**Carolinas**--The president of the Carolinas chapter telephoned all of their members. The question was posed of other chapters--how many call their members whose membership has expired?

**New York**--They have been distributing chestnuts to members for years. The feeling is that members who take nuts are not just members but participants in the cause. It was stated that retention of members is important. The New York chapter president telephones every member and they have over

1,000 members. The overall response was very positive. New York held a joint fundraising event with Vermont/New Hampshire and Maine. This venture led to a new member donating \$10,000.

**Maryland**--They take seedlings to fall fairs and festivals.

**Kentucky**--They are heavy into social media. They do not pressure members but they find that lots of pictures and stories equals action. When Kentucky puts out calls for volunteers, they are often overwhelmed with people.

It remains to be seen how often the Chapters committee will meet. The consensus was at least quarterly, but the meetings may be as often as monthly. The next scheduled meeting is in January.

## Chestnut Song

**Dr. John Hempel** from the PA chapter sent a link to a new song.

At last, a song that makes reference to chestnuts, and the blight! I could not get the song video to play directly from the link below. I had to copy and paste into a search engine and it worked.

<https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DcJs-VIPXmObk&data=04%7C01%7C-TACF-GROWERS%40lists.psu.edu%7Cdddf1e62ee3c4e19823208d-9c8e11091%7C7cf48d453ddb4389a9c-1c115526eb52e%7C0%7C0%7C637761691230020682%7CUnknown%7CTWFpbGZsb3d8eyJWlloiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IjEkaWwiiLCJXVCi6Mn0%3D%7C3000&data=w-fE8EMzV%2FJNDcjBTiCG9PeNqA%2FTS-ItJ%2Btg%2BPAGxiwb4%3D&reserved=0>



## Spotlight on WV-TACF Board Member, Linda Coyle



I was born in Kentucky where I spent most of my life. I went to high school at Ohio County, and later attended Murray State University earning a BS degree.

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**I have always loved trees and plants. I remember my dad talking about American chestnuts, telling how the blight killed them, and him eating the chestnuts.**

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Marrying a forester (Bernie) who breaths and thrives in the woods helped me to grow and bloom. We became TACF members ten years ago joining the Kentucky chapter. Moving to West Virginia and having 25 acres gave us opportunities to start growing and planting American chestnuts. We have learned much about American chestnuts by getting our hands dirty. Belonging to WV TACF and gathering with other members has been an education. We have pur-

chased an additional 40 acres to plant more American chestnuts and to have a diverse forest.

I am excited in helping to establish American chestnuts back to the forest again.

## March Potting of Chestnuts

For those chapter members interested, we will pot chestnuts at the WVU greenhouse on the Evansdale Campus in Morgantown on **Saturday, March 12**. The address of the greenhouse is 1201 Evansdale Drive, Morgantown. We have about 1,000 nuts to pot. We will begin at 10:00 am in the plastic house, at the far left-hand side of the greenhouse. Use the dark green door at the plastic house. Bring an apron if you desire as the potting mix can be a little dirty. We label each pot, fill the pots with potting mix, apply the nut, and water. We work in teams and it can be a very enjoyable time of conversation while working. Let Mark Double know if you plan to come so he can plan accordingly (mdouble122@gmail.com).



Potting mix in 4" pots.

## WV Spring Chapter Meeting

With thanks from WV-TACF board member, **Dr. Brian Perkins**, the spring meeting will be offered both in-person and virtually. The meeting will be held on Saturday, **April 16, 2022 at 1:00 pm** at the Waco Center on the campus of Glenville State College. A classroom on the second floor of the Waco Center will serve as our meeting room. Facemasks will be required and we will social distance as best as possible.

For those unable to attend in person, we will offer a Zoom link. The link will be provided at a later time, nearer to April 16.

### Directions to the Waco Center

- Take I-79 to the Burnsville Exit (Exit #79) off ramp.
- If you are coming from the north, turn right at the end of the ramp and head toward Glenville on Route 5.
- If you are coming from the south, turn left at the end of the ramp onto Route 5.
- Go about 15 miles until you come to a "T" at Highway 33/119. There is a McDonald's restaurant on the right at the intersection.
- Turn left on Highway 33/119.
- Proceed to the top of the hill and take a sharp right onto Mineral Road. Continue about 1/2 mile. The Waco Center and Morris Stadium will be on the left.
- Proceed behind the Waco Center on the left-hand side of the building and park in spaces available in the rear of the building. An open door will lead to the second-floor classroom.

For those interested, following the chapter meeting, **Rick Sypolt**, WV chapter board member and former

faculty member at Glenville State College, will provide a tour of the 2011 sawtooth oak plantation and talk about procedures and problems associated with the planting.

## New TACF Website in the Works

The national office of The American Chestnut Foundation is located in Asheville, North Carolina, and two staff members, **Cherin Marmon-Saxe**, Operations Manager, and **Jules Smith**, Director of Communications are working hard toward the development of a new website for TACF.



Cherin Marmon-Saxe



Jules Smith

All state chapter pages will have a similar format and a brand new look. The roll out of the new website is planned for March, 2022.