

THE BUR

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Newsletter of the New York State Chapter of The American Chestnut Foundation

Fall 2023

Patience and Fortitude Needed (Again)

by John Neumann, NY-TACF Secretary & Vice President for Education

New York State Chapter members may recall reading my article about Patience and Fortitude in the Spring 2021 issue of *The Bur*. That was a time of national uncertainty, stress, and turbulence. We were in the midst of the Covid 19 Pandemic. I related in the story that during the Great Depression of the 1930s, New York City Mayor Fiorello La Guardia dubbed the famous pair of marble lions who guard the entrance to the New York City Public Library, "Patience" and "Fortitude". La Guardia felt that people needed those qualities to get through those dreadful times.

While the pandemic is over, people are still catching the coronavirus. National events are still turbulent. For members of our New York State Chapter, for our partners, the ESF American Chestnut Research and Restoration Project, and for anyone in The American Chestnut Foundation committed to the restoration of the American chestnut through transgenic Darling 58 blighttolerant trees, patience and fortitude are qualities much needed now and into the future. For many of us, after working and waiting for decades, the changing uncertainties and difficulties dealing with the regulatory status at this late stage, and the delay in the distribution of Darling 58 trees is testing our patience and fortitude.

The noble effort of American chestnut restoration, beginning with deregulation by the three federal agencies, and the initial distribution of the Darling 58 trees has been so close for some time. A year ago, ESF received indications from one of the federal agencies that the regulatory process may be completed by August 2022. Later, we learned the agency had pushed back final approval to the spring of this year,



Darling 58 transgenic American chestnut seedlings being acclimatized in a field shade tent

then the fall. Plans were underway at ESF and our chapter to distribute the Darling 58 trees to our eligible long-term members at our 33rd Annual Meeting, on September 15 and 16 in Syracuse, NY (For details, please see pages 6 and 7.) This was to be a celebration that culminated 33 years of focused, dedicated, science guided effort. Despite any communications you may have received to the contrary, there will NOT be any distribution of Darling 58 trees at this annual meeting.

Unfortunately, some of our Chapter members (not having email) received an undated and erroneous paper letter around August 2, that indicated the Darling 58 trees would be distributed at our Chapter's annual meeting this fall. However, this was an old, outdated letter sent out by mistake. Recipients of the letter were elated by the news, and then disappointed when the truth became known.

We must be determined to keep our eyes on the prize. Remember what our productive partnership with ESF has accomplished: the world's first blight-tolerant American chestnut trees, developed through transgenic science. The recent disappointments will mean little when the Darling 58 distribution does occur. We have gratitude for all those who made this possible. Many of them have passed on to the great forest above and never got to see the Darling 58. Others, such as Herb and Jane Darling, Chuck Maynard, and Bill Powell are still with us. They inspire us, and we cherish them. We are fortunate to have Allen Nichols, John Dougherty, Andy Newhouse and others, who will certainly bring the Darling 58 across the finish line. We can do no less. Onward, with patience and fortitude!

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THE AMERICAN CHESTNUT FOUNDATION



New York State Chapter
The American Chestnut Foundation
302 Bateman Road
Laurens, NY 13796

www.acf.org/ny

Founded in 1990, the New York State Chapter (NY-TACF) is the oldest chapter of The American Chestnut Foundation, Inc., a non-profit 501(c)(3) membership organization. NY-TACF, in partnership with the State University of New York College of Environmental Science and Forestry (ESF), is working to restore the American chestnut tree to our eastern forests by developing truly blight-tolerant American chestnut trees through biotechnology. Membership information may be found on the back page of *The Bur*.

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(Terms end at the 2023 annual meeting)

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Linda McGuigan - The Bur Editor



President's Message

WOW, it seems like I just got off a roller coaster. From our anticipation of distributing Darling 58 seedlings at our annual meeting this year to finding out that as of August, we don't have USDA approval yet. And, the EPA still has not given us unrestricted approval for distribution, with little information on what restrictions to expect or when.

Also, for nut production and hand pollinating, we were hit with an extremely damaging late frost. All the local American chestnut trees were impacted along with ash, oak, and

American beech. Most of the American chestnuts appear to have recovered from the frost, but there were few female flowers to hand pollinate, and we expect there to be few nuts harvested from our other orchards.

Despite these setbacks, I can say that NY-TACF and ESF have still been working hard for future restoration. I distributed over 3,500 wild-type American chestnut seeds to 316 people to plant mother tree orchards and ESF has Darling 58 seedlings ready to distribute to our long-time members once we have permission.

I know these setbacks are disappointing to all the members, including myself. But we are not giving up and we are still making progress towards our ultimate goal, restoration. Even though we cannot place a seedling in our member's hands at our annual meeting this year, we are still producing more Darling 58 seedlings and pollen in anticipation of government approval. Hopefully, by next year we will have the approval for distribution.

When our annual meeting is held at the ESF campus in Syracuse, it is always special. If you have never attended an annual meeting, I would encourage you to attend. I would love to meet more of the NY-TACF members in person and it is a great chance to meet the ESF scientists that developed the blight-tolerant Darling 58 American chestnut. See pages 6 and 7 for details.



District Director Reports

Niko Nantsis, District 1

Hi everyone, I hope you are having a happy and healthy summer. After I returned from my long-awaited Grand Canyon Broski hiking adventure in early July, I got started with pollinating as many American chestnut trees as I could. Although most of the male flowers were spent by the time I got to them, the trees were so close to one another and full of native pollinators that the job of pollinating was already done by mother nature.

Unfortunately, I am sad to announce that the large American chestnut tree I called Big Bertha, from Old Bethpage Restoration Village, has succumbed to chestnut blight. Although she is back at square one and regrowing from the root collar, it gives me hope seeing the resilience of this species and its will to fight to stay alive, even when the odds are stacked against them.

I will be attending this year's annual fall meeting and look forward to seeing all of you soon.

Allen Nichols, District 4

I have been maintaining my orchard, which is an ongoing job, with most of the trees dying from the blight, resprouting, and

then flowering again in three to four years. I finally lost my oldest 20-year-old tree to the blight and had to cut the main trunk off (see photo), but it is sprouting and hopefully will flower again. When this tree was six to seven years old, it grew around 1" DBH per year until it got the blight.

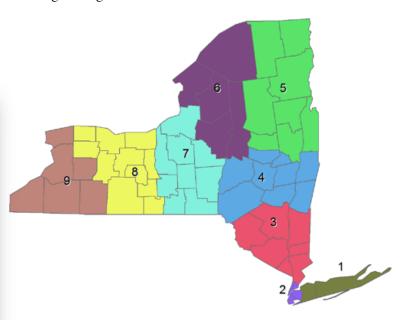
We had a very hard frost this spring, which set back all my chestnut trees about

two weeks for flowering. Because of the frost, I placed less than half the number of pollination bags than I placed last year, as most of the trees produced lots of male catkins but few female catkins.

I offered pollination training to anyone who was interested, and covered identifying bisexual catkins, removing male catkins, and placing pollination bags. Then two weeks later, I covered how to remove the pollination bags and hand pollinate the female flowers.

Tim Russell, District 7

We saw defoliation across a few species of trees from the late frost, and in our case, the chestnut trees got hit pretty hard. They lost their leaves early on and as a result, flowering has been somewhat poor at the Chenango County site. As of May, we weren't sure how to expect things to rebound at all. Roy Hopke and I gave it a walk in late June and found that many trees had bounced back in terms of leaf-out, and just a couple had male flowers, but no female flowers at that time. A week and a half later, just before Independence Day, I returned and found that just one tree had female flowers, and only a couple of flowers at that. Most surviving trees did not flower this year. Although this year I don't expect the site to provide the nut crop we've had in past years, I do feel the recovery has been adequate to feel optimistic about future years. Apart from this, we have continued our grass roots efforts to educate the public about the chestnut restoration and the new hope offered by the Darling 58 blight-tolerant trees.



District 1 – Niko Nantsis, nikolaos.nantsis@gmail.com and Frank Piccininni, Frank@savethegreatsouthbay.org

District 2 - Dale L. Travis, dale@daletravis.com

District 3 – Tim Termini, ttermini@gmail.com

District 4 – Allen Nichols, fajknichols.75@gmail.com

District 5 - Emmett Hoops, emmett.hoops@gmail.com

District 6 – Tom Bryant, tbryantny@gmail.com

District 7 – Roy Hopke, <u>SnowHawke1@gmail.com</u>
Tim Russell, tim@GreenFireForester.com

District 8 – Paul Ackerman, trapnman1@netzero.net

District 9 – William A. Snyder, wasnyderhort@gmail.com

Correction: In the Spring 2023 edition of *The Bur*, Tim Russell of District 7 was erroneously given credit for the report written by Tim Termini of District 3.

Bill Powell Retires from ESF After 33 Years

By Linda McGuigan, ESF Tissue Culture Lab Manager



Retirement gifts given to Bill, (left) an American chestnut bald eagle, carved by Gary Carver, (inset) an American chestnut spoon, carved by Jody Nebesnik, Allen and Fran Nichols' daughter. The plaque on the eagle reads:

"It was very exciting at that season to roam the then boundless [blight-tolerant] chestnut woods of Lincoln" - Henry David Thoreau In recognition of Dr. William Powell's humble stewardship of ESF's American Chestnut Project, 1989-2022

Dr. William (Bill) Powell began his work at the State University of New York College of Environmental Science and Forestry (ESF) in 1989. Soon afterward, he and his colleague, Dr. Charles Maynard, were asked by the New York Chapter of The American Chestnut Foundation to help save the American chestnut tree from a blight fungus using a new tool at the time – genetic engineering. They began their collaboration and founded the American Chestnut Research and Restoration Project, with Bill concentrating on the molecular research and Chuck concentrating on the plant tissue culture research. Over the years, Bill has worked with many students, employees, and colleagues who will say that he is one of the nicest guys they know. His mild manner and good nature make him a great mentor, boss, and friend.

Bill received his B.S. with honors in Biology at Salisbury State University in Salisbury, MD and his PhD in Biology at Utah State University in Logan, UT. He is the recipient of many awards and honors, including ESF's Outstanding Service to the Faculty Award in 1995, USDA CSREES Group Honor Award for Excellence, NE140 project in 1997, State University of New York Chancellor's Award for Research & Scholarship in 2005, NY-TACF Board of Directors Award in 2006, Forest Biotechnologist of the Year (from the Institute of Forest Biotechnology) in 2013, ESF's Exemplary Researcher Award in 2014, and State University of New York Chancellor's Award for Research & Scholarship in 2019. He authored and co-authored many publications and book chapters, presented to both the scientific and general communities, and presented for a TEDx Talk in 2013.

Thank you, Bill, you will be missed.

American Chestnut Coffee Table to be Raffled at the NY-TACF Meeting this Fall



An American chestnut coffee table made and donated by NY-TACF member Richard Kirgan, will be raffled off at this year's annual meeting on September 16th. Richard was a caretaker on a farm in West Hurley, NY several years ago and discovered a few wormy American chestnut boards in a barn. He used them to build the coffee table shown above. The chestnut top dimensions are 22 ½" X 44" with a height of 15". The legs are solid black walnut.

Tickets are \$10 each and will only be sold at the meeting. You must be present to win and be able to take the table with you after the raffle.

Articles Wanted

If you have an article that you would like to contribute to *The Bur* Newsletter, please contact Linda McGuigan at lpolin@esf.edu or mail it to:



The American Chestnut Research and Restoration Project

Natalie Bianchi

Undergrad Student



I am an undergrad student at ESF, conducting research on and maintaining the Grape Co-Cultivar Plot. This plot was originally designed and developed by grad

student Elizabeth Mae Kehas-Dewaghe with research advisor Dr. Stewart Diemont. The plot contains both replicas of trellised conventional orchards and agroforestry systems at densities of 1, 3, or 5 vines per American chestnut tree. I am collecting data on the height and diameter of the American chestnut trees and the grape vines, as well as the pH of the soil from each planting.

My research objective is to compare American chestnut and hybrid wine grape growth between agroforestry and conventional systems, and at different planting densities within agroforestry. If co-planting has neutral or positive impacts on growth, I am hopeful that vineyards may eventually adopt similar agroforestry planting styles to increase agritourism and crop output, in turn increasing the American chestnut range and public awareness about the tree.

Patrícia Fernandes, PhD

Assistant Director



The development of Darling 58 resulted from decades of research, and we now have several laboratory and field techniques that will help us bring back the

American chestnut. With the deregulation of Darling 58 by the U.S. regulatory agencies close, the next logical step is to apply the knowledge from American chestnut to other species impacted by the chestnut blight, such as the closely related Ozark chinquapin (*Castanea ozarkensis*). We are using two approaches: backcross breeding and genetic transformation.

We pollinated Ozark chinquapins with Darling 58 pollen to breed in the OxO gene and obtained transgenic Ozark chinquapin x American chestnut hybrids. These seedlings, under high-light for rapid pollen production, will be used to pollinate Ozark chinquapin mother trees. The new generation will have fewer American chestnut characteristics than the hybrids. We will continue producing pollen for new generations and crossing it with Ozark chinquapins to recover the species' traits. The final goal is to obtain a transgenic tree with enhanced blight tolerance and vestigial American chestnut genetics. In parallel, we are doing direct genetic transformations of Ozark chinquapin with the OxO gene. We obtained transgenic lines and are currently propagating them to test for blight tolerance. The results obtained so far show great potential for meeting the challenge of developing an Ozark chinquapin with enhanced blight tolerance. The results obtained so far show great potential for developing an Ozark chinquapin with enhanced blight tolerance, and possibly addressing other threatened tree species.

Maya Niesz-Kutsch

Master's Student



I am a new master's student currently planning my research project. It will focus on understanding the natural dispersal and pollination capabilities of American chestnut.

as well as the ecological interactions of American chestnut with fire management, to maximize restoration efforts. What we learn should be insightful for when we begin restoration on a larger scale.

The pollination experiment will help determine the maximum distance pollen can reliably move between chestnut trees. I also hope to explore the wind vs. insect pollination debate, by measuring the distance airborne pollen can travel while remaining viable for successful pollination.

There has been little research on the effects of fire on chestnut trees, but much of their

historical habitat likely saw seasonal fire. Chestnuts may be more tolerant of fire than certain aggressive tree species that crowd out chestnuts but are sensitive to fire, such as maples. If so, using fire management strategies could help chestnuts establish themselves in large-scale restoration efforts. We are collaborating with ESF's Dr. Andrew Vander Yacht, Professor of forest ecosystem management.

Sophia Suriano

Master's Student



Darling 58 blighttolerant American chestnut trees have the potential to return a functionally extinct species to its natural role in forest ecosystems. However, before a

comprehensive restoration program can begin, we need to evaluate the rootassociated microbial communities with transgenic trees in a forest ecosystem, to determine how they affect the establishment and persistence of saplings. My objective is to compare the microbial communities of transgenic and non-transgenic American chestnuts in research forest plots and proposed restoration sites such as abandoned farmland. We will also evaluate potential species, either beneficial or antagonistic, that could influence the establishment and longevity of chestnut seedlings. To assess these microbial communities, bacteria and fungi from the soil will be identified and the influential species will be evaluated in more detail. This research could help us understand whether other forest species are affected by the microbial communities cultured by Darling 58 blight-tolerant American chestnut trees and clarify the environmental and ecological impacts of genetically engineered trees in restoration settings.

For more information about the American Chestnut Project, visit:

www.esf.edu/chestnut

or join our Facebook group: www.facebook.com/groups/esfchestnut

New York State Chapter of

The American Chestnut Foundation, Inc.

Meeting: ESF Gateway Center, 1 Forestry Drive, Syracuse, NY 13210

Hotel: Parkview Hotel · 713 East Genesee Street · Syracuse, NY 13210

https://theparkviewhotel.com/reservations/ · 315-701-2600



Meeting Agenda

Friday, September 15

Parkview Hotel

6:00 pm *Dinner* – On your own

Meet in lobby to discuss dining options at Salt City Market (https://saltcitymarket.com)

7:30 pm Chestnut Harvest Exchange (Parkview Hotel Lobby)

Saturday, September 16

ESF Gateway Center

8:00 am Registration / Coffee, Tea, Donuts / Silent Auction

Chestnut Harvest Exchange Continues

6 Tom Bryant

7 Roy Hopke

Tim Russell

8 Paul Ackerman

9 William Snyder

9:00 am Welcome & President's Report by Allen Nichols

9:15 am District Director's Reports

1 Niko Nantsis

Frank Piccininni

2 Dale Travis

3 Tim Termini

4 Allen Nichols

5 Emmett Hoops

Science Reports – ESF Staff & Students

10:30 am Coffee and Roasted Chestnut Break

11:00 am Science Reports (cont.) – ESF Staff & Students

12:00 pm Lunch at the Gateway Center

Business Meeting

Required for Board Members, Recommended for Attendees

1:00 pm President's Report by Allen Nichols, President

1:10 pm **Annual Meeting Minutes**

by John Neumann, Secretary

1:20 pm Treasurer's Report by Fran Nichols

1:25 pm Election of Directors and Officers

by John Neumann, Nominating Committee Chair

1:30 pm Open Discussions, Q&A, and Proposals

Announce Winners to Silent Auction, 50:50, and 1:45 pm

American Chestnut Coffee Table Raffle

2:00 pm Tour – ESF Lafayette Road Experiment Station

4:00 pm Afternoon session closes

6:00 pm Dinner at Gateway Center – Catered by Pastabilities

After Dinner Closing Remarks by Allen Nichols, President





NEW YORK STATE CHAPTER



Hotel Reservations:

ParkView Hotel in Syracuse, (315) 701-2600, tell them you are part of the "American Chestnut Foundation" block. **Please make reservations by Tuesday, August 23, 2023.**

Booking: https://res.windsurfercrs.com/ibe/details.aspx?propertyid=14918&nights=1&checkin=9/15/2023&group=2309AMERIC&lang=en-us (Make sure to edit Arrival/Departure dates if room is needed until Sunday - valid September 15-17, 2023).

Meeting Registration:

By Credit Card: https://cvent.me/XvMaAk

By Check:		
Name(s):	Address:	
Cell phone:		
E-mail:	Ctata	Zip:

	<u>Cost</u>	# Attending	Total Cost
Friday			
Chestnut Harvest Exchange	Free		Free
Saturday			
Regular Registration Rate	\$30 each		\$
Student Registration Rate	\$10 each		\$
ESF Staff Registration Rate	Free		Free
Dinner - Catered by Pastabilities	\$30 each		\$
Dietary Needs:			
Do you need a Parking Pass?			
		Total Registration:	\$

Checks should be made payable to "SUNY ESF"

Please mail to:

SUNY ESF ATTN: Katherina Searing

ESF Open Academy

1 Forestry Drive, 228 Gateway Center

Syracuse, NY 13210





THE BUR New York State Chapter The American Chestnut Foundation C/O Fran Nichols 302 Bateman Road, Laurens, NY 13796

Cut here ≅



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Visit www.acf.org, call 828-281-0047, or mail the form (below) to:

The American Chestnut Foundation Inc. 50 North Merrimon Avenue, Suite 115, Asheville, NC 28804

Enclosed please find my \$40 membership in support of NY-TACF.

I also make an additional gift of \$ ______ to the New York State Chapter.

A total of \$ _____ is enclosed.

All memberships to TACF include TACF publications, a car decal, membership to one of the state chapters as well as opportunities to participate in local chestnut activities. Visit www.acf.org or call (828) 281-0047 for more information.

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☐ Check enclosed	☐ Please bill my credit card (Visa/MasterCard/Amex/Discover)	☐ This is a gift				
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