



*Dedicated to restoring the American*

# Chestnut Tree

VOLUME 27, ISSUE

MARCH 2022

## PA/NJ Chapter Spring Growers Member Meeting

**Saturday, April 2nd  
8:30 AM—2:00 PM**

**@ the Allen Theatre,  
36 E Main St, Annville, PA 17003**

*Visit our website to purchase your tickets online or  
contact Jean Najjar to reserve your seat.*

[mail@patacf.org](mailto:mail@patacf.org) | (814)863-7192  
[www.patacf.org](http://www.patacf.org)

### FEATURED SPEAKERS



**Doug Tallamy, Ph. D.**  
TA Baker Prof. of Agric. &  
Natural Resources  
Dept. of Entomology &  
Wildlife Ecology  
University of Delaware

**Nature's Best Hope**  
Recent headlines about  
global insect declines and

three billion fewer birds in North America are a bleak reality check about how ineffective our current landscape designs have been at sustaining the plants and animals that sustain us. Such losses are not an option if we wish to continue our current standard of living on Planet Earth. The good news is that none of this is inevitable. Tallamy will discuss simple steps that each of us can and must take to reverse declining biodiversity, how the American chestnut will be a valuable tool in this regard, why we must change our adversarial relationship with nature to a collaborative one, and why we, ourselves, are nature's best hope.

Douglas Tallamy is a nationally recognized author and sought-after speaker. He is a professor of Entomology at the University of Delaware and a major advocate for

biodiversity and the role of plants in sustaining natural systems. He has established the non-profit, Home Grown National Park, a grassroots call-to-action to regenerate biodiversity and ecosystem function by planting native plants and creating new ecological networks.



**Kimberly Bohn, Ph.D.**  
Kimberly Bohn, Ph.D. Assistant  
Professor of Forestry at Penn  
State Mont Alto, and Chair - PA  
Division of the Society of  
American Foresters

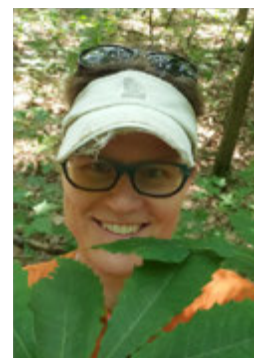
### Challenges of Artificial Regeneration of Hardwoods

Artificial hardwood regeneration has been utilized in the northeast for a variety of purposes including reforestation and restoration but can often be challenging because a number of external factors can hinder survival and growth. Some factors affecting artificial hardwood regeneration include long-term issues such as deer browsing and increasing competition from non-native plants. This presentation will cover a range of challenges to artificial hardwood regeneration as well as strategies for improving establishment in context to American chestnut restoration in a variety of landscapes.

**Sara Fitzsimmons**  
TACF Director of Restoration

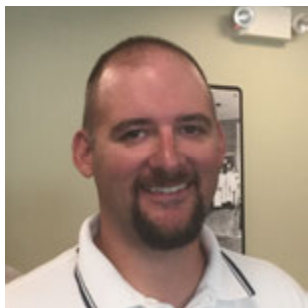
### What Will it Take to Restore the American Chestnut?

The Appalachian forest ecosystem is vastly different now than it was over 100 years ago when American chestnut was often the dominant species of a stand. Invasive and exotic vegetation, introduced diseases and pests, ravenous and excessive deer herds, overdevelopment, and threats of climate change, add to the challenges facing a species made effectively dormant by introduced disease.



*Read about our SGM Silent Auction on page 7.*

## President's Corner



**G**reetings fellow chestnut enthusiasts. I must share with you that Jim Searing stepped down as President of our Chapter last month and so I will begin my role as President a year early. I would like to take the time to thank Jim Searing, for his mentorship and efforts of the last few years to guide the chapter towards the future. As my first column to you as chapter president, I would like to offer gratitude, remembrance, and optimism for our chapter.

My journey with the chapter began about eighteen years ago as my wife Jen and I attended a meeting in Hershey. One of the volunteers, Violet Klinger, offered a sympathetic ear to Jen as her husband Chandis was also a chestnut enthusiast leading them to various corners of PA. As I learned of their passing this past year, I remembered how she mentioned that once they started to engage with chestnuts, it never stopped. Well, that turned out to be true! Today, this column is brought to you from the snow-covered fields at Castanea Farms located in Robesonia, Berks County. Jen and I are raising 3 kids on a small, diversified farm where we grow seasonal produce, woody floral cut stems, market lambs, and chestnuts! While the trees that we have in commercial production are Chinese, they provide a great launching point to educate consumers on the story of the American Chestnut as well as introduce them to our organization. I hope someday we can incorporate Americans into the production line.

As a farmer and forester, I find myself often saying, "Next year will be better". I'm pretty sure we all have said that in 2020 and 2021. 2022 is looking to meet that goal. We are planning on an in-person spring meeting to hear some fantastic speakers, and engage with fellow members. 2021 was a great crop of chestnuts, and the planting of those nuts will start in just a few weeks. Those seeds that we plant, cultivate the optimism that supports our efforts. Whether those trees end up in the arboretum orchard, small stem assay project, ceremonial or wildlife plantings, they allow us to carry our mission forward, and I look forward to doing that with you all.

Rick Hartlieb  
President  
PA/NJ Chapter of TACF

## Board Leadership — Special Election

**A**s Rick Hartlieb alluded to in the President's Corner above, Jim Searing submitted his resignation to the PA/NJ Chapter and TACF Boards last month, in order to take some time to focus on

his health. Jim plans to maintain his membership in our Chapter and continue his support of our mission however he is able. It has been a privilege to work with Jim who's dedication and generosity to our Chapter has been amazing. He and our Past President, Mary Ayres have put in tremendous

*Continued on page 3*

## Board of Directors

### President

Rick Hartlieb  
Robesonia, PA

### Vice President-Interim

Pending special Election

### Past President

Mary Ayres  
Wynnewood, PA

### Treasurer

Peter Reinhart  
Allentown, PA

### Board Members

Mike Aucott  
Edward Buchak  
Tim Eck  
Ronald Farr  
Lake Graboski  
Steve Johnstonbaugh  
Daniel O'Keefe  
Philip Peterson  
Edward Regina  
James Walizer  
John Wenderoth

---

### Non-Voting Members

#### PA-DCNR

#### Representative

Annetta Ayers

#### US-ACE Representative

Jeff Krause

---

### Staff

Director of Restoration  
Sara Fern Fitzsimmons  
[sff3@psu.edu](mailto:sff3@psu.edu)  
(814) 404-6013

Orchard Manager  
Stephen Hoy  
[sdh177@psu.edu](mailto:sdh177@psu.edu)  
(814) 424-0022

Chapter Administrator  
Jean Najjar  
[jmn173@psu.edu](mailto:jmn173@psu.edu)  
(814)863-7192

## Chapter News

### **Remembering Chandis and Violet Klinger** By Sara Fitzsimmons, TACF Director of Restoration

Chandis was a long-time volunteer with the PA/NJ Chapter of TACF. He did controlled pollinations of chestnuts, planted many trees at his property and that of others, donated trucks and other equipment to the TACF Farms at Meadowview, VA, served on the board and as president of PA/NJ Chapter of TACF, among other activities. Violet attended a great many meetings, both for the PA/NJ Chapter and for the national Annual Meetings.

Both Chandis and Violet were a consistent presence at TACF activities. Even as Chandis' health began to fail, Violet would bring him to as many meetings as they could make. Then, through 2020 and 2021, they would attend our virtual meetings.



Left: Hans, Violet, Chandis, and Kristy Klinger

The Klinger's daughter, Kristy, shared their family's American chestnut story on a recent episode of "This is Love", published the day Chandis passed and just weeks prior to Violet's passing in December.

<https://thisislovepodcast.com/episode-40-grandfather-of-the-forest/>

I had the joy of spending a lovely fall day a couple of months ago with the Klinger family. I traveled with my husband and two kids to enjoy a cookout, lovingly prepared by Violet and her sister, with the extended family. Kristy came in from New Mexico, and Hans, the Klinger's son, traveled up from Virginia for the day. We planted 4 advanced backcross American chestnuts around the house, so that Chandis could

see the trees from his living room. I am grateful to have shared that special day with them. I've attached a picture of the Klingers and those trees from that day.

*Continued from page 2* amounts of work into strengthening our financial stability and Board management to ensure we are prepared to continue our restoration mission.

Please join me in thanking Rick Hartieb for stepping up to take the reigns from Jim and Daniel O'Keefe for agreeing to put his name forward in a Special Election as Interim Vice President. Daniel O'Keefe was elected to the Board for the 21-22 term has agreed to finish Rick's term as Vice President. He may choose to run for the 23-24 term or we may be seeking another candidate for that role.

#### ***Candidate for Special Election as Vice President***



**Dan O'Keefe** is a current Board member on the PA/NJ Chapter Board of Directors. He is an active volunteer in the chestnut orchard at the Tyler Arboretum in Media, PA. He is a retired Senior Research Fellow from DuPont Central Research & Development, with

expertise in plant biochemistry/biotechnology, xenobiotic metabolism, and protein engineering. He has a BS from SUNY Brockport, a PhD in biological sciences from Purdue University, and was a postdoctoral fellow at the University of Pennsylvania.

#### ***Special Election Ballot***

##### **PA/NJ Chapter By-Laws Article III, Section 5:**

If a vacancy occurs in the office of President, the Vice President automatically shall assume the presidency until the next election, and a new Vice President shall be elected at an early date by the full membership to serve the unexpired term.

Cast your vote for interim Vice President 2021-22 term.

☐ Daniel O'Keefe

☐ Write in \_\_\_\_\_

#### **Submit your ballot:**

**US mail:** PA/NJ TACF  
108 Business Services Building  
206 Forest Resources Lab  
University Park, PA 16802

**Email:** [mail@patacf.org](mailto:mail@patacf.org)

**Online Form:** <https://forms.gle/dgRJ1NnNLsu6oCVn8>



## 2022 PA/NJ Chapter Field Season in a Nut Shell by Steve Hoy, Orchard Manager

**Already Growing:** Steve Hoy led two rounds of greenhouse planting this past January. The first greenhouse planting for the 2022 season was composed of nearly 3,200 seeds from controlled pollinations made in the arboretum with transgenic pollen from Syracuse University of New York (SUNY) & University of New England (UNE). Prior to the 2021 holiday break staff at the Leffel Center at Penn State spent a week testing all 3,200 seeds for the presence of the oxalic oxidase (OxO) gene. The seed was separated based on testing results before being planted on the 21<sup>st</sup>. Staff will monitor germination and maintain the seedlings until they are planted in their permanent location in 2023.

Round two of planting was much smaller, consisting of potting up 140 OxO (+/-) seeds provided by Meadowview and replicated at Meadowview & SUNY ESF (Environmental Science and Forestry). The purpose of this planting is to attempt to observe seedling injury caused by irrigation frequency. Sara Fitzsimmons secured Penn State funding to purchase materials to install an irrigation system in the greenhouse to allow semi-automated watering for approximately 2,400 seedlings, as well as grow lights for a rudimentary growth chamber.

There is a parallel project underway to observe the effects of high doses of hydrogen peroxide on young seedlings. A crew from Meadowview joined

us here at Penn State to assemble the irrigation system and complete the planting.

### Seeking Volunteers for 2022 Restoration Work Depends on Volunteers

#### **Testing 27,000 Nuts PSU:**

On March 3rd and 4th, volunteers will help staff with testing open-pollinated seeds for oxalic oxidase (OxO) activity. If transgenic pollen is applied to a non-transgenic tree, that tree is now considered a "regulated organism" (the entire tree), and any "vegetative propagule" (in this case, chestnut seeds) obtained from it must either be "devitalized" (destroyed) or be proven to not be transgenic so that it can be planted outside of permitting. Our goal in early March will be to test as many open-pollinated seeds as possible so that they can be used for further out-planting and research.

**To Volunteer Contact: Sara Fitzsimmon**  
[sff3@psu.edu](mailto:sff3@psu.edu) | 814-863-7192

#### **Planting in the field:**

We are planting the second portion of last year's Resmap Trial in late May of 2022. This planting of approximately 500 seedlings will include advanced backcross lines from the PSU-Arboretum orchard & Meadowview, large surviving Americans (LSAs), American, Chinese, & F1 controls, and additional backcross generation lines (B4F2, B2F2) that were inoculated using the modified small stem assay technique in July of 2021.

These seedlings will be planted in a portion of the converted GCO (Germplasm Conservation Orchards) in the Arboretum at Penn State and will be reinoculated in ~3 years 2024-2025. Results will be compared to the modified small stem assay data as well as the data collected at Meadowview, Georgia, Tennessee, and

*Continued on page 5*



# Science in the Orchard

Continued from page 4

Maryland where this project is being replicated.

## ***Inoculations in the shade house at Penn State:***

We are seeking volunteers to help with inoculations in late June. Using the modified small stem assay method, we will be inoculating approximately 400 seedlings from the stacked resistance planting in February.

## ***Inoculations in the field at Penn State:***

Just before pollination in June we expect to inoculate approximately 15 plots (2,000 trees) with SG (weaker strain) and approximately 12 plots (650 trees) with EP (strongest strain) or the Weekly (moderate strain). This is a continuation of the screening of material in our B3F2 seed orchard at the Arboretum at Penn State to refine our inventory of hybrid trees with elevated levels of blight resistance from various American parents.

## ***Inoculations in the field at Raystown:***

We will also be inoculating approximately 5 plots (750 trees) with SG at the Raystown Lake orchard in Entriken, PA. This is another B3F2 seed orchard planted in Huntingdon County containing Graves lines of blight resistance. Army Corp of Engineers (ACE) maintains the site and will be doing a lot of removal of poor-performing trees.

## ***Rating trees for rogueing at the Arboretum at Penn State and at the Raystown Orchard:***

We will be rating trees for at the Arboretum after pollination starting in mid-July. Volunteers work in pair with one person taking measurements and the other recording. Similarly, we will be rating trees at the Raystown Orchard, but this is a much bigger job with approximately 2,250 trees in 15 plots.

**To Volunteer Contact: Orchard Manager, Steve Hoy** [sdh177@psu.edu](mailto:sdh177@psu.edu) | (814) 424-0022.

## ***Pollinations in the field at Penn State:*** No volunteers permitted.

We are anticipating another round of controlled pollinations in the Arboretum orchards in 2022 with Transgenic pollen from UNE or ESF SUNY. Maximum bagging will be 1,000 as in 2021 but to improve efficiency of staff time fewer mother trees will be used. Considerable time in 2021 went to the creation of screen bags to prevent predation, initial bagging of flowers, & actual pollinations. In 2022, the Chapter will focus pollination efforts on 10-15 mother trees (max).

## ***Summer Interns 2022***

### ***Orchard Intern***

We are in the process of confirming another great candidate for our Orchard intern for the summer of 2022. The Orchard Intern works closely with our Orchard Manager, here at Penn State and will be involved with all aspects of our Orchard and Greenhouse management.

### ***Outreach Intern***

Remember our fundraiser last year for an outreach Intern? We are getting close to filling this position with a great candidate who has been actively engaged as a volunteer the past year. The

intern's primary role will be to connect with the dedicated orchard owners and volunteers across our two states, assess orchard conditions and help us find the best trees for the future.

### ***Why is this important now?***

There are over 15,000 hybrid and wild-type American chestnut trees growing in over 100 orchards, restoration projects, and woodland locations. We are seeing great advances in both genomics and breeding for resistance. Now more than ever is the right time to reach out to growers, assess conditions, and find the best trees.

We will be following with more information about this internship

directly on our website and sharing updates via our e-Newsletter and social media/ We expect the intern to start in May and they will be sharing their journey in real-time via social media in addition to producing a full report at its completion.

Sara Fitzsimmons, TACF Director of Restoration will be working closely with the Outreach Intern to map out and schedule visits with growers. And if you attend the SGM you may get a chance to meet them. Contact Sara about scheduling a visit of your chestnuts..

**Contact: Sara Fitzsimmons**  
[sff3@psu.edu](mailto:sff3@psu.edu) | 814-863-7192

### **Hunting American Chestnut** by John Wenderoth, PA/NJ TACF Board Member

Early in November 2019, Bret Lanam made a discovery while searching for suitable deer-hunting sites in the countryside north of Wilmington, DE.

He was visiting a property managed by the Delaware Nature Society, when he found a mature tree that he recognized as a chestnut — an American survivor. He informed David Pro, a DNS Land Steward, who then called me to arrange a time to meet with Bret and others to examine the tree later that month.

In the past decade, I've been called with requests like this more often than you might imagine. I don't want to pass up an opportunity to find a surviving tree, but I don't want to meet folks to tell them that the tree is not an American chestnut. Often, I have to tell them that it appears to be a Chinese or hybrid tree. However, it helps to take measurements and create a record of the tree with [TreeSnap](#) to credit their discoveries.

In this particular instance I was shown a tree that was more than 18 inches DBH and over 60 feet tall. Growing in a stand of oaks its branches and buds



*Above: Bret Lanam standing by the American chestnut tree he discovered.*

were out of reach. Dead brown leaves on the ground suggested it might be a surviving American. What I couldn't find was significant evidence of the blight, which unfortunately is often the best evidence that it could be American. However, this tree is isolated, perhaps allowing it to escape contact with the blight fungus. Some empty burs were also lying about without nuts, but provided evidence that it had flowered. The fact that Bret had noticed the tree and recognized the species was very impressive.

Later in April of 2020 during the early months of the COVID pandemic, Dan O'Keefe and I joined

David Pro to find our way back to the tree to collect some emerging leaves that were dried and sent to Virginia Tech for genetic analysis.

After months of delay due to the pandemic, we finally received an email from Sara on December 7, 2021, telling us genomic sequencing and subsequent statistical analysis confirmed that this tree is what Bret had suggested: a surviving species of *Castanea dentata*.

### **Join the Hunt for Wild Americans**

The PA/NJ Chapter has increased efforts to find surviving American chestnuts and to increase the diversity of our germplasm conservation orchards by planting more pure American chestnuts. We are looking to hear about your experience finding trees, collecting nuts/scion, and planting pure American chestnuts in conservation orchards. Any comments you have about our current methods, ideas to improve our progress, stories from the field and orchard are appreciated. Please send reply to Lake Graboski, PA/NJ Chapter board member, at [lake.graboski@gmail.com](mailto:lake.graboski@gmail.com). Your responses will be used to help guide the board, and may be presented to members in a summary of our progress at a future meeting.

**Learn more about reporting a chestnut here:**

<https://patacf.org/report-a-tree/>





# Chapter News

## PA/NJ Chapter Board Committee Reports

### Chapter Membership Report

Peter Rienhart, Chair of Membership Committee

The PA/NJ chapter has over 800 members and is the second largest of all the national chapters working with TACF on restoration. Membership is the lifeblood of any organization, but this is particularly the case for an organization like ours which relies on members to support its mission on many fronts. Whether it is helping with the science efforts at PSU, staffing our booth at the PA Farm Show, participating as a lecturer, or even serving on the Board of Directors, all these activities begin with our membership. So, if you're a member, or a volunteer, or both? Thank you! You're helping to restore the American chestnut.

Beyond the satisfaction of helping in the restoration mission, members of TACF will be among the first to get resistant nuts when they become available. There are several volunteer opportunities described in this newsletter. If these don't fit, you can contact our office to find a volunteer activity that works for you.

Learn more: [www.panjtacf.org](http://www.panjtacf.org) | (814)863-7192

### Wild American Update

Lake Graboski, Chair of Wild American Committee

We are making good progress identifying trees and getting people interested in American chestnuts in the process, with 100s of new trees identified in the past 2 years. It is still too early to determine the success of getting these trees into conservation orchards so that we can use them in breeding programs due to orchard establishment and growing times.

Three new GCOs were established in those same 2 years adding to our network of GCOs across the state. Shout out to Mike Manes and Mike Aucott for sheer numbers of trees identified. Also new seekers Colton Moyer and Mike Manning among the many who have reached out to the chapter and volunteered their time to start searching for chestnuts.

Going forward, we are considering targeted chestnut challenges, distributing maps of high-interest areas. District liaisons could play an important role in finding trees in their area and assisting with GCO establishment and longevity.

### PA/NJ Chapter Spring Growers Meeting (SGM) 4/1/22 Restore the American Chestnut Auction



This fundraiser will be a fun feature of our 2022 Spring Growers Meeting (SGM) featuring a variety of items including an Antique Dresser constructed of American chestnut, American chestnut bowls hand-turned by Jim Finley, and of course chestnuts and more!

Funds raised through this Auction will support the 2022 Outreach Intern position. You may recall that we started a Spring Appeal in 2021 for this position, with a \$5,000 match from an anonymous donor.

Unfortunately, due to the late start of appeal and the intern search we were unable to get the project off the ground and stopped the campaign mid-way with hope that we could revive it in 2022.

We are now in the process of confirming a candidate and hope to kick off the outreach season by introducing our 2022 Outreach Intern at the SGM.

**To complete the match we need to raise \$2,593.**

Bidding Starts on 3/18/22 | Bidding Ends on 4/2/22

Learn More: <https://patacf.org/2022-sgm-auction/>



*On the  
National Scene:*

**SAVE THE DATE!**  
**2022**  
**TACF Annual Meeting**  
Asheville, NC | September  
28th — October 1st

For more on this event:  
Visit [acf.org](http://acf.org)

PA/NJ Chapter of The American Chestnut Foundation  
**The Chestnut Newsletter**



Nonprofit Org.  
U.S. Postage  
Paid  
State College, PA  
Permit No. 234

**Pennsylvania State University**

108 Business Services Building  
206 Forest Resources Lab  
University Park, PA 16802  
mail@patacf.org  
Phone: 814-863-7192

**RETURN SERVICE REQUESTED**

**OUTREACH DATES**

**PA/NJ Chapter Spring Growers Meeting**

April 2, 2022 | 8:3 AM — 2:00 PM  
Annville, PA

**2022 Earth Day Event at Core Creek Park**

Saturday, April 23 | 11:00am – 2:00pm  
Langhorne, PA

**Lancaster Native Plant & Wildlife Festival**

Saturday, April 30 | 8:00am – 1:00pm  
Lancaster, PA

**PA Native Plant Festival**

Saturday, May 7 | 9 :00 AM—2:00 PM  
Boalsburg, PA

**PSU Ag Progress Days**

August 9th — 11th  
Pennsylvania Furnace, PA

**Joint Meeting of CGA and NGA**

August 7th — 11th  
PSU Berks Campus | Reading, PA

.....

**For updates: [www.panjtacf.org](http://www.panjtacf.org)**



**CRITICAL CUSTOMER  
COMMUNICATIONS,  
SIMPLIFIED.**



Printing compliments of NPC, Inc.

*The PA/NJ Chapter of TACF is grateful for the continued support of NPC through their pro bono printing of this newsletter. NPC has freely printed every issue of The Chestnut Tree.*