PA-TACF

Dedicated to restoring the American

Chestnut Tree

VOLUME 24, ISSUE 1 FEBRUARY 2019

Featured Speakers

David R. Jackson

Extension Educator, Renewable Natural Resources Penn State University

Identifying and Controlling Common Non-Native Invasive Plants

Invasive plants grow rapidly, spread aggressively, and displace our native plants. They can cause a decline in species diversity, inhibit regeneration success, slow natural succession, and degrade wildlife habitats, directly impacting food webs. This presentation will discuss why we should all be concerned about invasive plants, particularly if we are interested in song birds. An integrated vegetation control approach will be examined. The presentation will teach you how to identify some of the most common invasive plants and introduce you to various control measures used for each.

Gregory Turner

Endangered and Non-Game Mammal Section Supervisor

Pennsylvania Game Commission

Distribution and Declines of the Threatened Allegheny Woodrat.

The PA Chapter has provided nuts and TACF has provided B3F3 seedlings from TACF. He will discuss the impacts of forest fragmentation and role the American chestnut might play in the survival of this animal.

Marlin Graham

Riparian Forest Buffer Technician PA-DCNR

Riparian buffers and Special projects. Marlin a former Leffel Center intern will speak about his current work with riparian buffers and other special projects including an initiative to engage veterans in the planting of trees. Stay for our special presentation on behalf of the chapter.

Spring Growers Meeting

Date: Saturday, **April 6, 2019**

Time: 8:30 a.m. to 2:30 p.m.

Cost: $10 at door for lunch/coffee

Location:

Dauphin County Conservation District

1451 Peters Mountain Rd., Dauphin, PA

Please RSVP by 4/4/2019

mail@patacf.org or 814-863-7192

8:30 – 9:15 AM	**Coffee and Donuts**
9:15 — 9:30 AM	**Welcome:** Mary Ayres, Pres.
9:30—10:30 AM	**Gregory Turner / Q & A**
10:30–11:00 AM	*Break*
11:00—12:00 PM	**David R. Jackson** / Q & A
12:00 —1:00 PM	*Lunch* (Please RSVP)
1:00 – 2:00 PM	**Marlin Graham** / Q & A + Special Presentation
2:00 – 2:30 PM	**Nut Distribution**

President's Corner

As the new president of the PA/NJ Chapter of The American Chestnut Foundation (TACF), I'm excited to be working with you during a period of tremendous change and progress. As individuals, we join TACF for many reasons, with the common goal of seeing the American chestnut thrive once again. Some of us love to grow things and want the challenge of planting and caring for chestnut trees. Some of us are science-oriented, enjoying understanding the biology of backcross breeding and biotech. Some of us emotionally connect to the cultural history of the chestnut—the nut harvests, timbering and woodworking of the past. Some of us love forests and trees, and seek to undo the ecological disaster wrought by the chestnut blight.

I fall in the "lover of forests and trees" group. I see our transformed landscape—cities, towns, roads, farms and structures everywhere, and reflect on the clearcutting of our forests since the arrival of Europeans. Yes, many of the Eastern forests have regrown, but they're still young compared with the two or three hundred year old trees found in old growth forests.

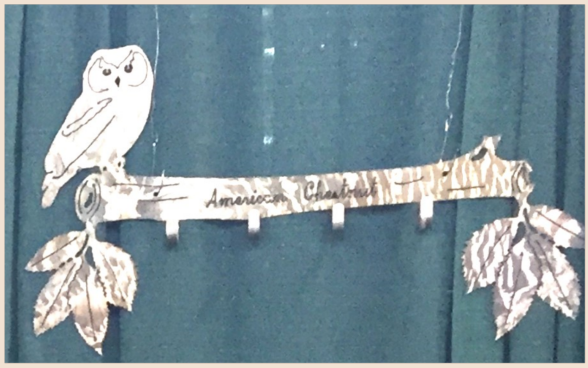
One thing sadly missing from today's forests is the chestnut tree. In this case, we didn't decimate it through timber harvests, but by the introduction of exotic species–which was all the craze in the 18th and 19th centuries. With the Asian chestnut species that were introduced came the chestnut blight, which almost wiped out our native chestnut population.

I'm an optimist: I dream of forests with hundred year old chestnuts reaching the canopy. In the reality of everyday life, we go step-by-step, year-by-year, undertaking the hard work of chestnut breeding, understanding genetics, and applying our research findings in the field. Every effort we make–volunteering at orchards, planting new trees, outreach efforts, and writing checks to both our chapter and the national organization helps us move towards our goal. The mission is taking longer, and the science is far more complicated than most thought it would be, yet we persevere, work hard and take the long view. Together, we are going to realize our dreams and goals.
I want to thank Clark Beebe (President 2017-2018) for all the work he has done as our president for the past two years. He has dedicated innumerable hours to outreach efforts, as well as tending to the business of PA/NJ-TACF. And I thank you, our members, for your persistence and determination to make a difference.

Sincerely,
Mary Ayres,
President

Metal craft donated by High-school Students

Thanks once again to to the Upper Dauphin Area High School's FFA along with a newly established the High School Agriculture Enrichment Group who have once again crafted these American chestnut themed, metal coat coat racks as a fundraiser for the Chapter.



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Wynnewood, PA

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Jim Searing
New Hope, PA

Past President
Clark Beebe
Highland Lake, NJ

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Replacement Pending

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Chapter Administrator
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Chapter News

Volunteer Spotlight: Eagle Scout William Lamm

By Rick Hartlieb, Assistan District Forester DCNR Bureau of Forestry/ William Penn Forest District

William Lamm along with his friends from Boy Scout Troop 423, built this kiosk for his Eagle Scout Project on the Wertz Tract of the William Penn State Forest in Wernersville, Berks County. Cushion Peak Rod and Gun club and the William Penn Forest District provided funding to support this project. This site is one of the new additions to the PA's State Forest System. Formally managed by the adjoining state hospital, it became state forest land in 2015. One of the first activities on site was to salvage the ash timber, as it was killed by the emerald ash borer. As a component of the regeneration plan for the 40-acre site, chestnuts were planted as a demonstration area, wildlife habitat, and increased diversity on the site.

From left: Seth Noecker, Owen McMahon, Nathan Lamm, William Lamm, Garrett Kerns, Brent Cullen

This planting pays homage to Berks County native, John Rick (1880-1964). Rick was a local orchard grower and was an integral part of the historic battle in Pennsylvania against the chestnut blight. Rick attended the 1912 conference, where the PA Blight Commission presented its findings on this devastating disease. The hope is that these 500 B3F3 trees grow to prosperity and serve as a small piece of the puzzle in restoring the chestnut to our forests.

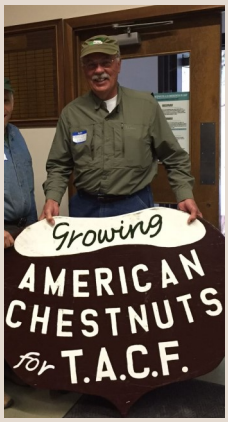
Thank you, Scouts!

Members Remembered

Eric "Ric" Ulrich

It was with a little shock and a deep sense of loss that we learned of the passing of Ric Ulrich this past December. Just weeks before, he had signed up as usual to help with our outreach at the PA Farm Show in Harrisburg.

A member since 1993, Ric has been a an active volunteer. A regular at the PA Farm Show, he would often sign up to help set up or pack up our display as well as doing outreach. He has helped with activities here at our research orchard, joining in greenhouse plantings and shucking. A forester by training and a Christmas tree grower by trade, he was a dedicated supporter of our mission to restore the American chestnut.



Hugh Phythyon

Our chapter lost another loyal member this past January. Hugh Phythyon of Hermitage, PA, was a teacher and principal. Though, he was not familiar to the youngish staff of the Leffel center he had been a loyal member since 1999 and in his memorial statement directed loved ones to send donations to TACF in lieu of flowers. Thank you, Hugh.

William B. Sordoni *(no photo was available)*

We also want to remember William Sordoni of Kingston PA who past away last May. The American Chestnut Foundation greatly appreciates the Sordoni Foundation's support of our work in Pennsylvania. As a result of the foundation's generosity, the Pennsylvania chapter was able to sustain its part-time Chapter Administrator and Penn State Orchard Manager positions. This helped the chapter expand its outreach and volunteer network. Also, support for Sara Fitzsimmons position ensures that TACF has experienced science staff available for our chestnut restoration work in the Pennsylvania.

Establishing cooperative marketing opportunities for chestnut (Castanea spp.)

By Sara Fitzsimmons, Director of Restoration TACF

In 2018, the PA/NJ Chapter became a part of two grants which seek to review, research, and document the potential for establishing a chestnut production cooperative in Pennsylvania. These two grants, one from SARE (Sustainable Agriculture Research and Education Program) and the other from the SCBG (Specialty Crop Block Grant), see a partnership between TACF, PA DCNR, the USFS Center for Agroforestry, and private producers including Windswept Farms (Centre County, PA) and the Carversville Farm Foundation (Bucks County, PA).

The chestnut industry was flourishing in the early 1900s, when American chestnuts began dying from a blight introduced on Asian varietals. Since it's been over 100 years since there was a thriving market for American chestnut nuts, what is the potential now for revitalizing that industry? How can American chestnut nuts compete with larger, exotic hybrids and cultivars?

At present, there are currently no chestnut cooperatives marketing Pennsylvania-produced nuts to the general public. Existing Midwest co-ops have indicated that there is a strong market for chestnuts, both domestic and international, but documentation on how to establish these co-ops is limited. Further, Pennsylvania is well-positioned for distribution to high population urban centers and additional ethnic markets where chestnuts are a seasonal and cultural tradition.

Lastly, there have been no known research trials on the niche marketing opportunities available for Pennsylvania-grown chestnuts, or on the differences between marketing native American species versus non-native varietals. This project will provide current and would-be Pennsylvania chestnut growers with resources to implement chestnut aggregation models, and determine niche market potential for the native American chestnut.

From left: Mac Heebner and Steve Hoy prepare raw nuts for sampling.

Penn State Huddle with the Faculty

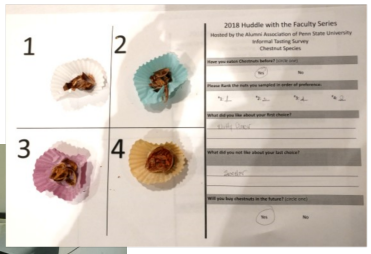
Our first event at which we had a taste-test and survey was at the PSU Huddle with the Faculty ahead of the PSU vs. Wisconsin football game. By all accounts the event was a success! We had somewhere between 150 – 175 attendees. Of the questionnaires distributed, 91 were filled out in some way. The results can be found in the attached spreadsheet.

From left: Tom Pugel, Sara Fitzsimmons

I thought that the Chinese chestnuts would come out as ranked #1, but that was not the case, it was the European! Followed by American, then the hybrid, and finally the Chinese chestnut, ranked dead last.

Most of the attendees say they had tried chestnuts before (55%), but several specified that referred to water chestnuts. I believe we'll need to specify that those are not "true" or "actual" chestnuts during any subsequent trial. 50% of those returning surveys suggested that they would buy chestnuts, but most of those were folks who had already tried them (78%) vs those who had not tried them before (42%).

Several of the comments suggested that they prefer the nuts roasted and/or would have like to try them roasted. Raw chestnuts, it seems, may be an acquired taste? Other frequent comments suggested the difficulty people had with either shelling/peeling or even eating (dentures/false teeth/too crunchy).



Sampling Questionnaire

On the positive side, commenters liked the sweetness of their preferred type (25% of those commenting), and also mentioned pleasing flavor (nutty), texture (crunchy), or ease of peeling.

These tastings and surveys will continue through 2020, and a final report will be completed in 2021.

European	American	Hybrid	Chinese
2.29	2.37	2.56	2.68

Table 1. Average preference ranking for each chestnut type. The difference in average ranking between European and Chinese chestnut is statistically significant (p=0.05)

Picking the Proper Container

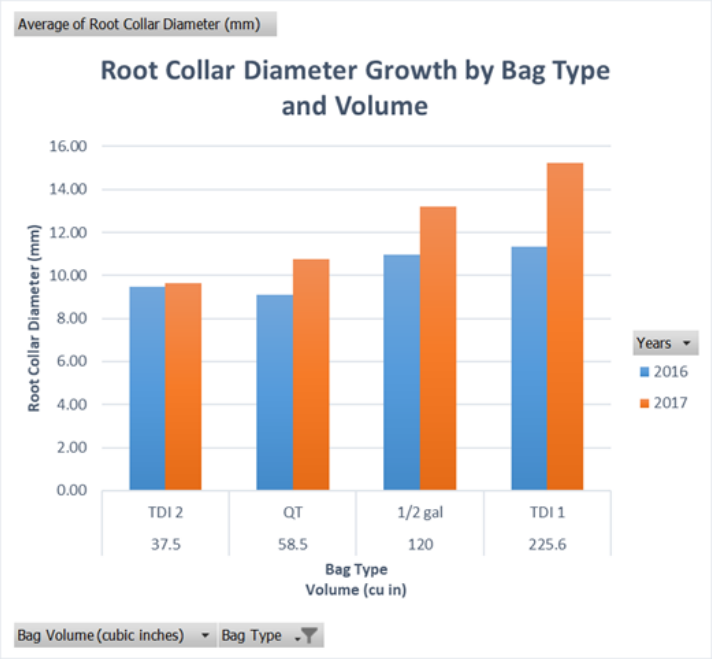
By Stephen Hoy, Orchard Manager

The Steuwe & Son's D40H has been the standard pot for starting chestnut seedlings well before I came into the realm of TACF. After becoming familiar with the pots over the past 5 growing seasons I can not think of a better product for healthy seedlings, a well-defined taproot, and efficiently air pruning roots. The D40H has been reliable for many seasons of reuse with proper care. Over the winter pots are either steam sterilized at 160 degrees for 30 minutes or scrubbed in a bleach solution. Many thin walled pots will not tolerate steaming. Scrubbing with bleach is effective but VERY slow.

Seedling from a D40H pot

The D40H does have limitations, specifically if seedlings will be grown for more than one growing season. I have over-wintered seedlings and found diminished growth in the second growing season. This is due to multiple factors, the lack of pot volume to allow additional root growth and a depletion of available nutrients in the potting media being key. The latter may be managed with the use of fertilizers. The only way to increase volume is to start seeds in a larger pot or transplant seedlings into a larger pot.

When purchasing supplies for a home orchard cost is inevitably a concern to some degree. The D40H is not a cheap pot when compared to others on the market, and unless you're placing a large order the shipping easily exceeds the actual pot and rack cost. These are not the only pots available, simply the pot I have most experience with.



The search for other suitable containers can be tricky, pots may be labelled for nursery use or perennials but are not the best option for chestnuts. This is where I've been impressed to see and hear growers creating their own pots from various materials. I have seen pots made from Solo Cups, plastic bottles, ½ gallon cartons, garden totes, and even custom-made wooden boxes. Regardless of your preferred material, there are a few keys components that will help produce a healthy seedling.

The first is size. The larger a pot chestnut are started in, the longer the seedling will be able to remain in that container before planting. While a deeper pot is preferred for development of a healthy taproot it is not essential. In a 2016-2017 experiment with several different sized bag pots a noticeable result was an increase in root collar diameter. The bags ranged in volume from those similar to the D40H (40 cu in.) up to a 1-gallon size (225cu in.) During the experiment the root collar diameter was measured, and the pots removed to check root condition. A significant increase in root collar diameter corresponded to increased pot volume. Root collar diameter did not appear to be affected solely by pot depth. (See fig. 1).

J-rooted" seedling from a 1 quart homemade pot

The taproot is important for stability as the tree grows, it can also access water and nutrients deeper in the soil, critical during a drought year. This leads us to the next feature for a pot, drainage holes/air pruning openings. The D40H has a center drainage hole as well as 4 oblong slots near the bottom that the roots are channeled into.Without adequate openings in the bottom of the pot a root will continue to grow around the floor of the pot until the seedling is planted or the root hits one of the openings and is air pruned. These roots at the bottom of the pot often become intertwined and deformed. When the seedling is removed from the pot the root retains a shape similar to a "J" leading to the term J-root. If making your own pots from repurposed materials, consider putting many small holes in

Continued on page 7

Volunteers

Outreach Events

Our mission moves forward with the help of volunteers. Volunteers at outreach at big events like Penn State Ag Progress Days, NJ Wild Outdoor Expo, and PA Farm Show reach thousands of folks. Having a presence at these and smaller events in Pennsylvania and New Jersey, help to educate the public about American chestnut and the importance

Our interpretive display and FAQs make volunteering for these events easy, for even our newest members.

Greenhouse/Orchard

The greenhouse and orchard at the Leffel Center, here at Penn State also depend on volunteers to keep things moving.

Each year volunteers join us in the greenhouse for planting seed nuts for our orchards and small stem assays to check on resistance. Later in the season, volunteers join us in the orchard to plant out seedlings and harvest.

And in the fall volunteers join us to help shuck nuts and prepare them for storage.

From Left: Alisha Nailor and Margot Kimmick share the story of the American chestnut at the PA Farm Show

Leffel Center Office

The newsletter, you hold in your hands was printed at no charge by our friends at NPC (see ad on page 8) and prepared for post with the help of volunteers in our office.

We also have volunteers who work remotely from home on projects that include maintenance of our Dentatabase , creating an index for our newsletter archive, and making phone calls to welcome members.

Leadership

Lastly, we owe a great deal to those volunteers who serve on our Board and related advisory committees and task forces. These volunteers guide our work in a variety of areas including, operations, outreach, and science.

They provide expertise and guidance in addition to being some of our greatest advocates. The Spring Growers Meeting is a great time to talk to current Board Members to learn more about these opportunities. Or call our office with your questions.

Stay up to date with events in our chapter: Sign up for our monthly e-Newsletter calling our office—(814)863-7192

From the left: Stephanie Perles, Vicky Mazur, Larry Yozwiak, Zack Sparks, Lake Graboski, Brosi Bradley, Olivia Pieklo, Ralph Mumma,

Chestnut Grower Certification Workshop

The PA/NJ Chapter is organizing the first annual Chestnut Growers Certification Workshop this fall to help new growers, members, and others learn the best practices for growing and maintaining chestnut trees. Now, scheduled for Sunday, October 20th in Gettysburg, PA, this workshop will be required for anyone interested in starting a Chestnut orchard in partnership with the PA Chapter in 2020.

The workshop will include an introduction to our research mission, the basics of starting and maintaining an orchard, and a review of orchard record keeping and reporting. This first workshop will follow the TACF Annual Meeting in Gettysburg, on October 18-19th. We encourage you to register for both, but dual registration is not required. **More information will be posted on our website as it becomes available: www.patacf.org**

Chapter News

Chestnut Bowls for Pennsylvania Chapter of the American Chestnut Foundation

By Jim Finley

Back in August a forester friend showed up with three American chestnut logs in his pick-up. "Would I like to have them?" The response was quick, "Well, YES!" In the past, when I had American chestnut, I'd turned and donated bowls to PA-TACF. One time a PA-TACF member Clark Beebe from New Jersey had shared an old post from a cellar that became bowls. Another time, Sara Fitzsimmons had provided a well-rotted stump, and it became bowls. Here was another opportunity. These three logs cut over near Philipsburg, Pennsylvania, had only recently died. The largest one had a butt diameter of about 13 inches. One had clear indications of the canker that caused its death. As a bowl turner, I saw lots of potential.

I had enjoyed turning the previous chestnut; however, these new logs were special. The wood was still "green," and the tool cut long ribbons of fragrant wood and the shop took on a certain ambience as the shavings piled around the lathe. Over the next several days, I roughed out 41 pieces and set them aside for the first drying. When they stopped losing weight, I finished turning them. In the end, I lost one to a large crack, and I gave one to the "log-donor."

While I've not been active with the PA-TACF, I've been aware of its work. For 42 years, I worked at Penn State as a professor of forest resources and extension forester and toward the end the Director of the Center for Private Forests. As well, I oversaw the PA Forest Stewards volunteer program and several of these folks were deeply involved with the foundation. During my tenure, I interacted with faculty working on American chestnut restoration. My passion for forests and trees and the people who work in the forests has been a big part of my life and I champion those who share a commitment to the health and vitality of forests. I've always enjoyed wood working and woodturning and I especially look for opportunities to use my avocation to help others.

THE AMERICAN CHESTNUT FOUNDATION®

TACF Annual Meeting Update October 18th and 19th, 2019

We're counting on PA/NJ members to attend in big numbers. **So mark your calendars to attend!**

Attention Educators: This meeting will be a great opportunity to engage young curious minds in our mission. Once again, there will be a poster session that will include a student poster competition and a session of student research flash talks during the meeting's general session. Any researcher can participate in the poster session, and students (current or recent graduates presenting on student work) are eligible to participate in the poster competition and flash talks. Look for the RFP to posted in June.

Following the lead of the Maine Chapter, we're planning to organize some displays of Chapter spirit. Have ideas? We'd love to hear from you.

If you would like to volunteer to help with planning our Chapter presence at this event, call the office(814)863-7192.

Picking the Proper Container
Continued from page 5.

the bottom to increase the chances of roots hitting the hole and air pruning. If the sides can be angled toward a center hole this will guide the roots to a common point for air pruning. Elevate the pots slightly to ensure good airflow under the bottom. Even with holes through the bottom a lack of airflow will permit roots to grow beyond the pot, either into other pots or become intertwined in the catch tray.

Regardless of the container used a good potting medium, adequate water, and vigilance have a large impact on the success of your seedlings. Remember: "There are 2 ways to kill a chestnut, too much water or too little water." – Greg Miller Route 9 Chestnut Cooperative

The Chestnut Newsletter

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EVENT CALENDAR

March 22—23: 4th Biennial Forest Landowner's Conference, State College, PA

April 6, 2019: Spring Growers Meeting, Dauphin PA

April 27: Lancaster Native Plant and Wildlife Festival, Lancaster PA

May 4, Central PA Native Plant Festival and Sale, Boalsburg, PA

June 9: Earth Fair Burlington County, Eastampton. NJ

August 3-4: Festival of Wood at Grey Towers, Milford PA

August 13-15: Penn State Ag Progress Days, Pennsylvania Furnace, PA

September 7—8: New Jersey Wild Outdoor Expos, New Egypt, NJ

October18-19: TACF Annual Meeting, Gettysburg, PA

October 20: PA-TACF Chestnut Grower Certification Workshop, Gettysburg, PA

WWW.PATACF.ORG