

# The West Virginia Chapter of The American Chestnut Foundation NEWSLETTER



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

October 2022

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## **Seedling Advice from Sara Fitzsimmons**

In early September, **Sara Fitzsimmons**, TACF's Chief Conservation Officer, stopped by our small family chestnut orchard in Marion County in north-central WV. There are 65 chestnuts planted on the property and 45 are planted in an orchard setting. The remainder are strewn about in open areas of the property, along gas lines, etc. All of the trees were planted as seedlings, not nuts. Over the years, many of the seedlings died within the first two months of planting. While all seedlings were planted with forest soil (to hopefully add mycorrhizae to the roots), I attributed the seedling loss to a lack of water. Planting full-leaf seedlings puts a strain on the plant if not watered adequately during the hot summer months.

Sara conducted an autopsy on a few of the dead seedlings and she immediately knew the problem--the pots in which the seedlings were raised are too small. For many years, the WV chapter has raised seedlings in the WVU Plant and Soil Sciences greenhouse in Morgantown in 4" square pots. The diameter of the pots is fine, but the depth of the pots is the issue. The pots are 5.5" deep, and the depth does not allow for a 'straight' root system to develop. Sara pointed out the 90-degree turn of the tap root. Sara feels that many of the seedlings with a right-angle root system do not develop normally. She feels that many of the seedlings raised in 5.5"-deep pots are doomed from the start.



Sara Fitzsimmons and Mark Double assessing the orchard.

Sara said that TACF's Meadowview Research Farm used D40 pots for years. These pots are 3" wide but 9" deep. With the additional length of the pots, a stand is required. Sara indicated that the Meadowview farm is moving away from the D40 pots in favor of gallon pots. Thus, Meadowview has D40 pots that they will no longer use. Sara suggested contacting **Dr. Vasiliy Lakoba**, TACF's Director of Research, to see if the WV chapter can use some of their pots. Mark Double asked for 700-800 pots and stands and Vasiliy graciously offered whatever our chapter needs. **Lewis Cook** and **Bill Guthrie** drove to Meadowview, VA and picked up the pots and stands. Thanks to Sara for her advice and to Vasiliy for his generosity.



Sara Fitzsimmon assessing a dead seedling.

## Events with the VA-TACF Chapter

The President of the VA chapter, **Dr. John Scrivani**, reported at the August chapter's meeting of TACF about some of the events going on in Virginia. John credited the late, **Cathy Mayes**, for her leadership efforts in starting the Virginia chapter in 2008. John reported that there are 13 backcross orchards in Virginia. Since John became involved in the chapter in 2009, three seed orchards have been planted on public lands in northern Virginia. One of those orchards is planted on land owned by the Nature Conservancy. Approximately 2,000 trees have been planted in those three orchards. John talked about his involvement with the Lesesne State Forest in Roseland, VA. This forest has a variety of plantings that were initiated in 1968 with 10,000

hybrid chestnut trees from the Connecticut Agricultural Experiment Station in New Haven, CT. Those trees were planted on a 7-acre tract of land and are now about 60' tall. Another area of the forest contains trees that were begun from nuts that were irradiated with Cobalt-60 by Dr. Albert Dietz in the 1970s. Many of the irradiated trees died but those that survived were grafted with scion from large, surviving American trees from central VA. These trees were never inoculated with the chestnut blight fungus, so this helped with better growth. A dozen or so of these grafted trees remain and they too are 60' tall.



John Scrivani in front of an American chestnut in the Lesesne State Forest.

The Virginia chapter also has three germplasm conservation orchards (GCOs) near Front Royal, Lynchburg and at the Lesesne State Forest. The GCOs represent 14 different sources of American chestnut. Some of the trees are suffering from Phytophthora root rot. John commented that we cannot assume that everything that is planted will survive in each area.

The VA chapter has a very good relationship with the VA Department of Forestry in that TACF's Mid-Atlantic Regional Science Coordinator is housed at their Charlottesville office at no charge.

## Bagging Chestnut for Winter

Many of our WV chapter members collect chestnuts in the fall for planting next spring. Chestnuts require a cold period (stratification) before they germinate next February/March. Here is a quick method for winterizing your chestnuts.

- Make a storage mixture consisting of: 3 parts peat moss; 3 parts vermiculite; 3 parts perlite; and 1 part water. Other materials such as sand, etc will work but keep the ratio of dry:water at 9:1. This will provide a moist, but not wet material for the nuts. Too dry and the nuts will desiccate. Too wet and mold will become a problem.
- Wash the chestnuts in a Clorox solution. Most Clorox is now 'concentrated' so you need to make a 6% solution of Clorox. Measure 60 ml of Clorox and fill with water to 1000 ml (or 2 ounces filled to a quart). Soak the nuts for 15 minutes. Throw out any nuts that float. Only those nuts that sink are viable.
- Remove nuts from the Clorox solution and place on a dry paper towel. Allow the nuts to dry. Do not rinse with water as the residual chlorine will help protect the nuts against invading mold.
- In a Zip-lock bag, add storage mixture followed by nuts and repeat. Seal the bag as you remove excess air so the bag is sealed tight. With the tip of a pencil, punch 8-10 holes in the bag to allow for respiration of the nuts.
- Place in a refrigerator and check the bags monthly. In the event of mold, remove the nuts, clorox again and add new storage mixture.

## Daikon Radish Experiment

Our previous Mid-Atlantic Regional Science Coordinator, **Tom Saielli**, talked about the advantages of using Daikon radishes (*Raphanus sativus* var. *longipinnatus*) as a tool to break up hard-pan soils in Appalachia. Historically, I have used glyphosate (Roundup) to keep grass and weeds controlled around our family chestnut orchard, but I opted to give Daikon radishes a try.

In the spring, I hand-weeded around each chestnut tree in a 3'-4' circle, as seen the photo below. I then seeded by hand with a plentiful handful of radish seeds in an attempt to create a living mulch.



Seeds of Daikon radishes.

Daikon radishes can be found in grocery stores and they are essentially massive, white carrots. They can grow to 7"-8" in length and it's their roots that break up the soil. Ideally, seeds are planted 2"-3" apart to allow for maximum root growth. Since I hand-seeded the radishes, they were greatly over-seeded. As a result, the radishes were not able to produce large, edible roots. However, for the most part, weeds were controlled as the radishes grew quite well around each tree. Sara Fitzsimmons commented that the radishes will produce some nitrogen for the chestnut trees and she prefers radishes to weeds. But, she was unable to suggest radishes over chemical weed control. Thus, the verdict is unclear as to the advantages of Daikon radishes.



Daikon radishes around the base of a chestnut tree.



Edible Daikon radish seed pods.



Daikon radishes roots haveested in September.

One large advantage of using Daikon radishes over chemical control is the fact that the roots and the seed pods are edible. They are crunchy like the familiar red radishes. The pointy green seed pods are well worth the harvest as they are uniquely delicious. A single flower stalk can produce several dozen seed pods in various stages of maturity. Each radish is about 2" in length and tapers to a point. As the pods ripen, they will begin to dry up and turn yellow and then brown revealing the small brown seeds. The radish pods are a bit like pea pods with swollen seeds inside. The pods have a little more concentrated flavor than the roots. They are spicy and crunchy eaten straight off the plant.

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**Daikon radish seed pods can be used anywhere you normally use radishes, in salads or tacos in pitas and wraps.**

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# West Virginia Chapter of The American Chestnut Foundation

**Due: 31 Jan 2023**

We invite members of the West Virginia chapter of The American Chestnut Foundation to apply for grants up to a maximum of \$1,000 to support education, outreach and scholarly activities related to American chestnut in the State of West Virginia.

## **Purpose**

Grants are available to assist individuals with active restoration projects in the State, outreach activities, as well as with their scholarly activities. Funding may be requested for supporting a range of ideas and projects, including but not limited to: chestnut demonstration plantings; signage for new or existing planting; travel and supplies for maintenance of existing plantings; educational outreach; research and scholarship related to chestnut restoration in West Virginia. Funding for completed work is not allowed unless the project has had prior approval by the WV chapter Board of Directors. Travel funds for conferences are not available unless you/your group will be representing the West Virginia Chapter.

## **Rules and Responsibilities**

Recipients must be a current member in good standing with the West Virginia Chapter of The American Chestnut Foundation, WV-TACF (see [acf.org](http://acf.org) to join). Each recipient is expected to present a summary of the results of the funded project to the West Virginia Chapter at a chapter meeting within two years of the award. Publications, public and private presentations, and other products derived from work funded by the WV-TACF must include acknowledgment of the funding received from the Chapter. Information and products of the funded work are required to be freely disseminated by the American Chestnut Foundation unless protected by copyright.

## **Proposal Guidelines and submission**

Proposal ideas should be discussed with the President of the West Virginia Chapter and/or members of the Board of Directors prior to submitting the written proposal. Proposals should be submitted electronically to WV board member, Dr. Melissa Thomas-Van Gundy ([melissa.thomasvangundy@usda.gov](mailto:melissa.thomasvangundy@usda.gov)) and include page 2 of this document (with completed information) as a cover. The proposal should be three pages maximum (including the cover page), single-spaced, in Times New Roman (minimum 12 pt), minimum 1" margins. Proposals over the page limit will not be considered.

## **Research Grant Guidelines:**

- Brief project overview, including goals, expected impact and relevance to chestnut restoration
- Proposed activities and connections to project goals, including a project timeline
- Plans for dissemination (e.g., publications and presentations) and subsequent funding proposals (if applicable)

Attach a list of references cited, a line-item budget, evidence of cost-sharing (e.g., proposal, letter of award), and a description of special technology or infrastructure considerations (if applicable).

## **Education and Outreach Grant Guidelines**

- Brief project overview, including goals, target audience and participants
- Proposed activities, including a project timeline and detailed budget (including shared costs)
- Plans for maintaining trees (if project involves tree planting)

Proposals will be evaluated by a subcommittee of the WV-TACF Board of Directors. Proposal reviewers will not necessarily be experts in any specific field, and therefore proposals should be written clearly for the educated layperson.

**Deadline: 31 Jan 2023**

**Award announcement date: 01 March 2022**

**Submit electronically to: Dr. Melissa Thomas-Van Gundy  
(melissa.thomasvangundy@usda.gov)**

**Name(s):**

**E-mail(s):**

**Phone number(s):**

**Project Title:**

**Amount Requested:**

**Previous Grant Awardee?    \_\_\_\_ Yes    \_\_\_\_ No**

**Year of Last Award (N/A if not applicable) \_\_\_\_**

**Amount awarded (will be completed by subcommittee):**

## Harvesting Chestnuts

As the article on Page 3 stated, many West Virginians are harvesting chestnuts this fall. Accompanying this article are some pictures of chestnut harvest at the Clements nursery.

On a sunny day in late September, **Stephen Rist**, president of the OH-TACF chapter, joined **Mark and Mindy Double** and **Daphne Kichta** of Monongahela, PA at the now-closed Clements state tree nursery in Mason County. The younger chestnut orchard at Clements contains about 800 trees that were planted in the late 1990s. Not all of the trees had burs and not all of the bearing trees had pure American characteristics. Mark chose to harvest from three trees (one of which was confirmed as pure American by a DNA test conducted two years ago). As with most American chestnut trees, the burs are positioned near the top of the trees and even with an 18' pruning pole, it was a chore to harvest some of the burs. Very few of the burs were opened, so it was a perfect time to harvest. The burs were collected and allowed to dry for two weeks prior to hand-opening the burs and collecting the nuts. One of the Clements trees yielded more than 350 chestnuts. Coupled with collections from other sites around the state, we should have an ample number of native chestnuts for members to plant in 2023.



Stephen Rist harvesting from a tree using a pole pruner while standing on the bed of his truck.



Harvest trees were chosen based on American characters like leaf shape, leaf dullness and red twig color.



Harvest trees also had unusual cankering. Cankers were swollen with little signs of fungal sporulation and a lot of callus tissue.



Also harvested at the Clements nursery were Allegheny chinquapins (*Castanea pumila*). They have 1 nut/bur.

## Rowlesburg Chestnut Festival

The 14th annual chestnut festival was held in Rowlesburg, WV on Sunday, October 9. The day's activities began with the fall chapter meeting, held in the Szilagyi Center. **Mark Double**, WV chapter president, presided over the meeting. **Lisa Thomson**, President and CEO of TACF, gave remarks at the beginning of the meeting.



Lisa Thomson, TACF's President and CEO

A report was given on our chapter's finances, and we reported \$69,900 in our account. Our chapter membership as of August, 2022 stands at 161 members. **Dr. Melissa Thomas-Van Gundy** presented a report on two of her backcross planting in the Cheat and Gauley districts. **Dr. Lewis Cook** presented information on four chestnut plantings in Fayette County. The WV chapter currently has 22 germplasm conservation orchards with plans for several more in 2023. **Susan Thompson** talked about a potential planting at Shepherd University. The new WV chapter logo, designed by **Professor Nora MacDonald** of Morgantown, was displayed on T-shirts that many members ordered. A discussion about nuts versus seedlings in 2023 centered around the fact that the chapter will be offered only one 9' greenhouse table at WVU next year (a limit of 550 seedlings), as the WVU greenhouse is expanding their flowers and ornamental plants. Thus, the chapter is hoping to plant more nuts than seedlings next year. For seedlings, we will use D90 pots that were donated by TACF's Meadowview Farm that will allow for better growth than the current 4" pots. Other potential greenhouse sites are Potomac State and Shepherd University.

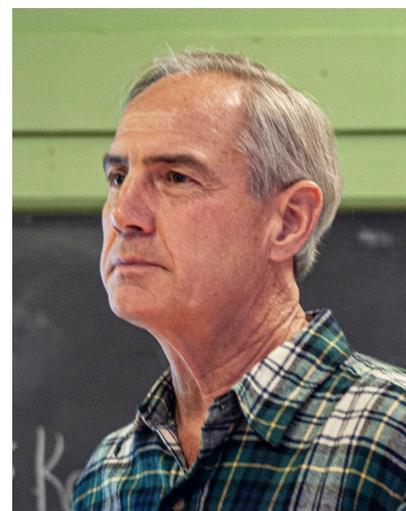
It appears that pollen from the genetically engineered

'Darlig 58' tree may be available to chapters next spring/summer. The WV chapter will need to locate native American chestnut trees that flower and then secure bucket trucks so that the female flowers can be pollinated next June. **Robert Sybolt** ended his second 3-year term as a member of the WV chapter Board of Directors, and Robert was presented with a gift for his many years of service to the chapter. In his place, we elected **Dr. Lewis Cook** for a 2022-2025 term on the board.

The afternoon session included talks by **Rob Eckenrode**, lead forest carbon analyst for Green Assets who informed the audience about carbon credits. Following Rob was **Jim Bowen**, landowner assistance forester with the WV Division of Forestry. Jim talked about natural hypovirulence on American chestnuts in Hardy County.



Rob Eckenrode



Jim Bowen

The chestnut festival concluded with the gala banquet and the crowning of Mr. and Mrs. Chestnut for 2022, **Jim and Terra Bowen**. Last year's Mr. Chestnut, **Jeff Kochenderfer** crowned this year's royalty and the Madrigal singers of Preston High School sang their rendition of 'O Chesnut Tree' as the couple was crowned.

