



Spring 2014

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## Highland School Students Help Chapter Orchards Resist Asian Ambrosia Beetle

Students at the Highland School in Warrenton, Virginia helped construct “Simply” traps to prevent Asian ambrosia beetle damage in the Virginia Chapter’s backcross breeding orchards in February.

Asian ambrosia beetles did substantial damage to trees in three of the Chapter’s most advanced orchards in 2013. The tiny beetles emerge before bud-break and bore small holes through the bark, generally attacking tree trunks between one-half inch to two inches in diameter. As they bore the hole and deposit their eggs, they also deposit a fungus. It is this fungus, which the beetle and its larvae eat, that causes the tree to die above the beetle’s point of entry.

Highland School biology teacher Leslie Ziegler and sixty of her 9th and 10th grade students worked with Regional Science coordinator Matt Brinkman and VA Chapter volunteers Deborah Fialka, Alan Plisch and Kathy Marmet to construct the traps from plastic juice bottles.

Traps made by the students will be hung in orchards this spring and monitored to detect Asian ambrosia beetles. Students examined two species likely to be caught in the traps



VATACF volunteers Deb Fialka and Kathy Marmet work with Highland School science students

with microscopes. Entomologists at the Hampton Roads Agricultural Research and Extension Center will confirm the identification and include data from the Chapter’s orchards in a study that maps distribution of these beetles. The traps will reduce or even eliminate the need for insecticide treatment.

Inspired by hearing VATACF’s Cathy Mayes’s telling of the American chestnut story, Highland students have been helping with the chestnut breeding program for a number of years. This year Highland School student volunteers plan  
(continued on page 6)

## The President's Message

Dear Members and Friends,

A new growing season is upon us and nuts in storage are already sending out roots. Similarly, we are also preparing for continued growth.

Last year, weather and insects limited our pollinations. The Rockley Foundation orchard will be planted with nuts from one mother tree in Fairfax, Virginia, that produced over 180 backcross nuts! American nuts were also collected for planting in a new mother tree orchard at Claytor Nature Center, operated by Lynchburg College. In the field, owners and volunteers are monitoring and measuring our existing orchards in anticipation for upcoming inoculations. The Science committee is determining quantity and locations of our last few backcross breeding orchards, as well as planning for our first seed orchard.



Last Fall, Virginia was the site of TACF's Annual meeting that featured a well-attended reception and tree tour. Planning is underway to again host this event. Education and outreach are critical to our mission. In January, we hosted a teacher's workshop in Reston. Lectures at the Frontier Culture Museum in Staunton continue in March. A seminar at the Virginia State Arboretum will take place in May. Demonstration plantings are also planned throughout the commonwealth.

Although 2013 was an off year for harvests, in some ways, it couldn't have come at a better time. It allowed us to take stock of what we have and start planning for the future. This included a comprehensive planning process begun last year. The recommendations of this strategic plan are now being tailored to our organization's specific needs, with the hope of incorporating them into the structure of the chapter. Without a doubt, these efforts will insure that our resources are applied in a sensible and efficient way.

None of the above could be accomplished without the active participation of our members and volunteers. Emphasis is being placed on developing Restoration Branch events, encouraged by the success and diligence of the SW Virginia Branch. These local branches are ways of uniting our members, and provide updates and support for our programs. We are also fortunate to have developed a loyal following of contributors. I can assure everyone that all contributions to our mission are deeply appreciated, highly valued, and applied with great deliberation.

Gratefully yours,

Jack LaMonica

### Breeding Program Update

by Matt Brinkman, Mid Atlantic Regional Science Coordinator

The Virginia Chapter of The American Chestnut Foundation (VATACF) continues to work on developing locally adapted, blight-resistant American chestnut trees, employing TACF's backcross breeding techniques. VATACF has a goal to fully develop 20 unique genetic family lines of two separate Chinese sources of blight-resistance, "Graves" and "Nanking". We are currently growing over 20 lines of Graves and 7 lines of Nanking in our orchards. We are actively looking for mature wild American chestnut trees across Virginia to pollinate with Nanking pollen in order to complete 20 lines.

(continued on page 3)

## American Chestnut Stars in Barter Theatre Production of The Dryad: An Appalachian Tale

Carol Wright Krause is a playwright and a member of The American Chestnut Foundation from Missouri. She entered her newest play THE DRYAD in The Barter Theatre's annual Appalachian Festival of Plays and Playwrights in Abingdon, Virginia. Krause contacted the Virginia Chapter by email, writing, "THE DRYAD is set in the 1930s in the Appalachians, and the chestnut blight is a prominent part of the story." She invited "any Chestnutters in the area" to attend its first reading and give "some informed feedback". Several members of the VA Chapter's SW Virginia Restoration Branch attended and were enchanted. THE DRYAD was subsequently selected as the top play of the Barter Festival in 2013, and a full production is scheduled to open at The Barter Theater on March 8<sup>th</sup>.

Members of the SW Branch are also supporting the production by representing The American Chestnut Foundation as a Partner with the Barter Theater for Theatre Matters—a free and casual discussion for select plays and performances led by Barter staff and community organizations. Performance Dates and Times can be found at [bartertheatre.com](http://bartertheatre.com)

For an interview with the playwright conducted by the local Branch go to <http://acf.org/newsletter2.20.14barter.php> The Barter's annual Appalachian Festival of Plays and Playwrights showcases stories and writers inspired by the Appalachian region, .

### Help Stop AAB Damage

It will take hundreds of "Simply" traps to prevent damage in all the orchards. You can help by saving plastic containers similar to the 1.8 quart "Simply Orange" juice bottle (with lid) and dropping them off at either the Marshall office or Matt Brinkman's office at the VA Department of Forestry in Charlottesville.

[vachestnut@verizon.net](mailto:vachestnut@verizon.net) – 540-364-1922

### (Breeding Program continued from page 2)

Inoculations of our Graves lines to test for blight resistance will begin in 2015 and continue for several years. Planting of VATACF's first seed orchard will likely begin in 2017 and could start producing seed by 2023. The first seed from the Seed Orchards will be used in progeny testing to help further evaluate blight resistance and competitive ability. Once progeny testing is complete (takes several years), VATACF will start strategically distributing seed to partners to begin restoration. Nanking inoculations, seed orchards, and seed distribution will be conducted in succession of Graves, as trees mature.

We are always busy keeping up with the "3 M's" at all of our orchards, Maintenance, Monitoring, and Measurement. 2014 promises to be a productive year for the VATACF science program. To see how you can be a part of this incredible effort, check the calendar on page 10 and keep a close eye on our website [www.vachestnut.org](http://www.vachestnut.org) for exact details as we approach the Spring planting season, summer maintenance and pollination, and fall harvest and measurement.





## Chapter Gathering a Success!

Meadowkirk Conference Center, set among the rolling fields and forests of Fauquier County, was the setting for celebrating all things chestnut at the Virginia Chapter's Chestnut Gathering on a misty October evening last fall. Preceding the national organization's Annual Meeting in Herndon, it was held on the 350 acre setting of Delta Farm, outside Middleburg. The Gathering proved a relaxing retreat for TACF President Bryan Burhans, and other national Board members who attended.

More than 100 local members, volunteers and guests came together in support of the Chapter's research orchards and education initiatives across Northern Virginia.



Volunteers Charles Harris and Deborah Fialka roasted chestnut appetizers

Before dinner they tasted chestnut beer and freshly roasted chestnuts around a fire ring on the center's rear deck as the late Indian summer evening drew in.

Guests seated themselves at dinner, meeting other chestnut supporters from downstate as well as other chapters. They dined on locally sourced foods prepared by Meadowkirk's talented chef, Mike Brown. Chef Brown has served for a quarter century at Meadowkirk's neighboring Foxcroft School.

Rain threatened, but held off until Guest Lecturer Peter Hatch, pictured at right, the retired head and chief restorer of Thomas Jefferson's historic landscape at Monticello had begun to take



his attentive audience on a visual tour of Jefferson's lifelong passion for useful and beautiful plants and trees. The topic was the subject of Hatch's latest book, *A Rich Spot of Earth*. The latter part of his talk was fittingly accompanied by a thundershower drumming softly on the roof of the converted stone barn. The rain lingered just long enough for the author to sign copies for many of the guests before returning to his home in Crozet.

This year's fundraiser, which raised nearly \$7000 for Chapter activities, depended for its success on contributions by many local groups and individuals, including donated flower arrangements from the gardens of the Blue Ridge Garden Club. We are grateful to all and sundry.



Deborah Fialka replenishing bags of hot roasted chestnuts, while TACF Directors Dr. Joe James, South Carolina, and Ben Finegan, Indiana, toast the chestnut beer

## Outdoor Educator Betty Gatewood: Bringing Students Into the Woods and Chestnuts Into the Classroom

Participants in the January 19th workshop at Reston's Walker Nature Center hiked to local American chestnut trees and used natural objects from TACF's American Chestnut Learning Box to gain an understanding of the hands on learning activities that are available to those who want to teach or learn the history and science behind restoration of the American chestnut Tree.



Virginia educator Betty Gatewood shared experiences of teachers whose students are learning the history, lore, culture and science of the American Chestnut while addressing learning objectives and state standards. Gatewood has extensive experience working with teachers to use the outdoors as a teaching tool.

For the past two summers, Gatewood has worked with teachers and students from Valley Ridge Governor School in Rockingham/Augusta Counties as they have delved deeply into the history and the science of the American chestnut through readings and electrophoresis in a genetics lab. Students collected data, then analyzed and shared their conclusions with each other and the public. These educational techniques have stimulated these students to

think about the future of the American chestnut and theorize ways to participate in stewardship of this iconic tree of American forests.



Brian Smith, center above, with other participants, lead a walk to look at American chestnut trees growing in the woods of Reston's Walker Nature Center.

## Central VA Volunteers Ready to Form a Branch

With five orchards planted in chestnuts to push blight resistance research and a corps of interested volunteers from partner organizations, VATACF members are ready to branch out this Spring... literally.

Restoration Branches within the Virginia chapter are a way of supporting local orchards and building local networks to promote our efforts while strengthening the national organization. In the past celebrations sponsored by the SW Virginia Restoration Branch have raised funds to help equip and landscape the TACF Research Lab at Meadowview.

Information sessions in Lovingson, Madison and near Charlottesville during the month of April will be followed by a meeting at the Virginia Department of Forestry Headquarters the evening of Thursday May 15 to organize a Restoration Branch in the piedmont of Central Virginia. Details at: [vachestnut.org/events/calendar/](http://vachestnut.org/events/calendar/)



## Valley Tech Horticulture Student Report: Experiment with Chestnut

We are excited about the American and Chinese Chestnut Experiment because we are anxious to see what differences we will see between the chestnuts in our experiment. We will be using five different potting mediums, Miracle Grow Potting Mix, HP Mycorrhizae Potting Mix, Coconut Coir, and Compost. In addition, we are comparing fertilizers: 20-10-20 water soluble, and Holly Tone granular organic soil amendment and fertilizer. We are topping the planted seed with vermiculite.

To hold the tree seedling tubes we used upside down file crates with 2.5" holes cut in the bottom. We used coffee filters in the tubes first to hold in the soil and yet allow for drainage. Then we added our potting mediums



and the chestnuts seeds, then vermiculite. When the trees sprout, we will water them as needed and fertilize the ones selected for the 20-10-20 fertilizer treatment.

Sincerely ,

The P.M. Horticulture Class: Megan H, Kirsten R, Kyle Y, Daniel K, Taylor K, Megan O, Mike M

The A.M. Horticulture Class: Cody M, Marc N, Jordan W., Emily C, Jacob G, Heather L, Alissa M.

*Valley Technical Center horticulture teacher Jo Ann Dunham contacted the Virginia Chapter last fall about the possibility of growing chestnut in her Augusta County greenhouse "classroom". Thanks to all who helped gather seeds last fall, the Chapter was able to supply seeds. Jeff Donahue, Director of Operations at TACF's Meadowview Research Farms met Dunham at the Chapter meeting in Staunton and assisted her in launching the project. Class photos above and left.*

### (Highland School continued from page 1)

to take tree measurements in two orchards and help finish planting the Rockley Foundation Orchard. Their connection with the chestnut story teaches them both science and a bit of local history. More importantly, these are critical steps toward restoring the chestnut to the northern Virginia forest ecosystem.

High School biology students from Highland School examine Asian ambrosia beetles photo at right.



## American Chestnut on the Virginia Frontier

An appreciative audience of more than one hundred people filled the Dairy Barn Meeting Room at the Frontier Culture Museum of Virginia (FCMVA) in Staunton on February 18<sup>th</sup>. The crowd came to hear Dr. Donald Edward Davis share his extensive research into the history of the American chestnut tree. Davis is author of an environmental history of the southern Appalachians, and plans to publish his history of the American chestnut next year. The February 18<sup>th</sup> event launched the 2014 Winter Lecture Series at FCMVA.



Dr. John Scrivani's presentation "How Chestnut Acquired and Lost Keystone Species Status" also drew an enthusiastic response on February 25. Scrivani, who is Geospatial Projects Manager for the Virginia Geographic Information Network and a Virginia Chapter Director and former President, used a series of maps to put the historic range and frequency of American chestnut into a larger context as he reviewed the data behind five rhetorical concepts that are often used to tell the story of the American chestnut: "Keystone Species," "The Perfect Tree," "One in Four Trees" (Four billion trees), "Mighty Giants" and "Restoration".

### Future Lectures in the series:

**Tuesday March 11, 2014 7:00pm:**  
**Ralph Lutts – "Chestnut Trade in Southwestern Virginia."**

Dr. Lutts is active in Blue Ridge Heritage, an organization that is developing a cultural center and tourism gateway adjacent to the Blue Ridge Parkway in southwestern Virginia. He describes himself as an environmental historian who has studied the history of sustainability and semi-subsistence living in the Appalachian Mountains, and a naturalist who delights in helping people to read the stories in the landscapes around them

**Tuesday March 18, 2014 7:00pm:**  
**Harmony J. Dalgleish – "The Ecology of American Chestnut Restoration."**

Dr. Dalgleish teaches at William and Mary College and is a plant population ecologist. Her current research examines biological interactions critical to American chestnut reintroduction and the potential consequences of successful establishment of blight-resistant chestnut for the ecology and carbon dynamics of eastern US forests.

The 2014 Winter Lecture Series is dedicated to retiring FCMVA employee Mark Gatewood (pictured at right).



### Great Valley Restoration Branch?

Virginia Chapter volunteer Kathy Marmet has been attending the Winter Lecture series and talking with attendees at an information table. Several people have signed up to receive more information about forming a restoration branch in the Staunton area. Let us know if you're interested at [vachestnut@verizon.net](mailto:vachestnut@verizon.net)



## ORCHARD STEWARDS STEP UP

As our research orchards across the state grow, new pests and other factors require more frequent monitoring. Volunteer Orchard Stewards work with orchard owners to provide continuity of care to sustain progress toward the most promising crosses for reforestation efforts.

Last year's onslaught of cicadas and the arrival of another foreign visitor, the Asian ambrosia beetle (AAB), highlighted the need for early detection and quick response. Trees were attacked by AAB at three of our most mature plantings.

VATACF volunteers with experience helping with orchard care have stepped up to adopt specific orchards, coordinating volunteer efforts to ensure consistent high quality orchard maintenance.

One of our first VATACF volunteers, Alan Plisch, will serve at Mt. Zion Orchard, inside the new Gilbert's Corner Regional Park. Alan has been monitoring wild American chestnuts, on a small forest property he owns far up slope in Madison County for years.

His first task at Mt. Zion will be monitoring ambrosia beetle traps. These weekly trips will start mid-March. Alan will alert other volunteers as issues arise, and will coordinate scheduling for volunteer work parties with mowing and mulch deliveries, working with park staff at the historic landscape above Mosby Run. Some orchard work days may coincide with the new park's chestnut program for visitors.

At Old Whitewood, intrepid hiker Mike Mastropalo will assist the farm manager and alert the Chapter and orchard owner when he sees that extra help is needed. These duties can include fertilizing, weeding, preventing deer and drought damage. At season's end he'll make sure that volunteers collect measurements needed to plan inoculation and selections for blight resistance.

Loren Haag has volunteered to provide the same services at our new orchard at Rockley where Highland school students will join him to replant with new crosses from a threatened Fairfax tree. Summer storms scoured part of the orchard, calling for orchard prep on March 27 before planting begins.

David Means has been ensuring quality care at the Smithsonian mother tree orchard at Front Royal and Arborist Bob Arnold keeps close watch on the Blandy orchards, while in central Virginia Board member Warren Laws, pictured above, has been coordinating care of the Fried Farm orchard near Crozet, enlisting Scouts to replant some young trees that died in their first year.



Forester and Board member Carl Absher has taken the lead at the Catawba orchard, and takes his chestnut plantings to three nearby Montgomery Co. elementary schools, growing future volunteers as well as trees.

Volunteers interested in helping with orchard care may contact Regional Scientist Matt Brinkman ([matt@acf.org](mailto:matt@acf.org)) or the Marshall office ([vachestnut@verizon.net](mailto:vachestnut@verizon.net)). An orchard stewardship manual and training program will be provided.



Virginia Chapter President Jack LaMonica, left and Mount Zion Orchard Steward Alan Plisch.



## *Planting Time is Coming!*

By J. Norman Reid

The season for planting chestnut trees—whether from seeds or seedlings—is rapidly approaching. If you are planning to plant this spring, it's time to be thinking about what you need to do to improve your chances of growing healthy American chestnut trees.

First, consider your planting site. The soil you choose should be well-drained and acidic. A ridge or hillside makes a good site; avoid a bottom or swale. Dry, sandy or gravelly soil is best, but avoid clay or soils that hold water. Choose a spot where the trees will get a minimum of 6-8 hours of sun; chestnut trees will only flower when exposed to full sun. Plant trees at least 8-10 feet apart; more is better to allow for growth. Plant at least two trees if you want nuts; chestnuts are not self-pollinating. To allow for variable survival rates, planting five or more trees at any site is recommended.

Should you plant seeds or seedlings? Planting seeds directly in the soil allows the tree to grow in the environment it will live in for years to come and reduces the time it needs to get established. But starting seedlings in pots lets them get started a little earlier in the growing season and is a good option where rodent predation is a concern.

In either case, plant the seeds on their sides, with the root, or radicle, pointing down. Seeds should be planted 1/2-1 inch deep. In pots, choose a tall (12 inch) narrow pot such as a 2-quart milk carton with large holes punched in the bottom. Use a soilless potting mix.

When should you plant? Seedlings can be started in the late winter if they are to be grown indoors. If they develop leaves, they need to be acclimated for two weeks prior to setting them out by placing them in a protected, shady location. Otherwise, bare root seedlings can be planted as soon as the soil can be

worked. It's best to wait until the threat of hard frost has passed. The same is true for nuts.

Until they are planted, seeds should be stored at 33-40 degrees; a vegetable crisper is ideal. Seal the seeds in plastic bags with a bit of slightly moist peat moss, which has antibacterial properties. The seeds may sprout during storage; this is normal.

After planting, your chestnut trees will need care for the first several years. The plants should be watered at least once a week for the first month and regularly during the first year, especially during dry spells. Be careful not to overwater, though.

The trees will also need protection from a variety of predators, ranging from voles and squirrels to deer and even bears. An effective practice is to make a 3-inch diameter tube of 10-inch aluminum flashing and press it 2-3 inches into the soil around the seed or seedling. This will help with smaller predators. For deer, erect a fence in a three-foot diameter circle around the tree site. The sturdier and higher it is, the better, as deer can be aggressive in going after the tasty plants. The cage will need to stay in place for at least five years.

Weeds too are a significant challenge to young chestnuts. Plan on cultivating around the base of the new trees for the first five years.

The American Chestnut Foundation has many resources to help with planting and maintaining American chestnut orchards and offers help in identifying problems with disease and insect predation. For more information, go to <http://www.acf.org/resources.php>.

### *Spring Activities*

Check the web calendar for the latest information:

<http://vachestnut.org/events/calendar/>

## Volunteer Profile — Rod Walker, VATACF Director

Rod Walker lives in Sugar Hollow above Crozet surrounded by trees. He grew up in a wooded area in rural central Pennsylvania. Educated at MIT, he has spent 40 years as an information technology entrepreneur and consultant, and almost that long as an owner and manager of forest tracts. His first purchase swiftly followed his first job, before he and his wife Maggie purchased a house.

He joined TACF more than five years ago; but his activism was sparked by meeting Warren Laws and his wife socially. Warren got him involved in planting at the Fried Farm breeding orchard. And that led to him responding to a call for members to help craft the next Strategic Plan in 2013. His particular interest was crafting owner friendly protections that would encourage forest holders to become a vital link in our re-

introduction of chestnuts to public and private forests over the coming decades.

This spring will find him volunteering for chapter plantings and orchard projects at the Fried Farm orchard, as well as checking his own B3F3 seedlings to assess how their specific planting locations are influencing growth and survival.

He looks forward to the day when he can look out at his forests and those of the Blue Ridge and see healthy chestnut trees starting to reappear.



THE  
AMERICAN  
CHESTNUT  
FOUNDATION®

Virginia Chapter  
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## 2014 VIRGINIA CHAPTER CALENDAR OF CHESTNUT EVENTS

Check for updates and start times on the events/ calendar page at [vachestnut.org](http://vachestnut.org)  
 Feel free to contact about another opportunity we should schedule

March	April	May	June
Saturday 8: 'The Dryad' a chestnut themed play at Abingdon's Barter Theatre for pre- matinee discussion with VATACF members - 1:30pm	Saturday 12: Grow a Central VA Restoration Branch - Info and q&a at Ext. Office, 2 S. Main St., Madison, VA 10 am	Friday - Sunday 2,3,4: SW Branch Info Booth at Mid Atlantic Garden Faire, SW Virginia Higher Education Center, Abingdon, All Day	Friday 6: Pollination training and field trip to visit trees Marshall office 10am
VATACF discussions before 4 more performances on March 9,13,18, & Apr. 10. bartertheatre.com for times and tickets	Thursday 17: Grow a Central VA Restoration Branch - Info and q&a at Ivy Creek Natural Area Ed Ctr., Earlysville, 7 pm		
Tuesday 11: Winter Lecture Series w/ Ralph Lutts on chestnut's historical role, Frontier Culture Museum, Staunton - 7pm	Tuesday 22: Earth Day Chestnut Grove planting Virginia Tech, Blacksburg, VA (T)	Thursday 15: Central VA Branch Organization Mtg. VA Dept. of Forestry, 900 Natural Resources DR Charlottesville, 7 - 9 pm	
Tuesday 11: Beetle traps & clean-up at Mt. Zion Orchard, Aldie - 9:30 am	Friday 25: Trio of Arbor Day Tree Plantings for Montgomery Co. elementary schools	Friday 16 : SW Branch Trail Days , MEGA-Transect Training as part of 3 day event through 18 Damascus, 10am - 3 pm	Saturday 14: Bag trees in Northern Virginia Marshall office 8am
Saturday 15: Planting at Fried Farm Orchard, Crozet	Saturday 26: SW Branch Info Booth Arbor Day/ Earth Day Celebration, Abingdon, VA 9-1		Saturday 14: Pollination Field Trip at Lesesne State Forest Rain Date June 21 10 am
Tuesday 18: Winter Lecture Series w/Harmony Dalglish, Frontier Culture Museum, Staunton - 7pm	Saturday 26: VATACF Board meets, Smithsonian Conservation Biology Inst, Front Royal (T)		(T) Check website or contact office for details (Link below or <a href="mailto:vachestnut@verizon.net">vachestnut@verizon.net</a> )
Sunday 23: Plant new Claytor Mother Tree Orchard, Lynchburg College, Bedford. 1pm	Saturday 26 : First chestnut program at Mt. Zion orchard, NVRPA Gilbert's Corners Park, Aldie, 11 am		Saturday 28: Pollinate Northern Virginia trees Marshall office 8am
Thursday 27: Orchard work to prepare Rockley Foundation Orchard, Warrenton 10 am Planting date: TBA	Sunday 27: Grow a Central VA Restoration Branch, Info, q&a Nelson Center, Lovingson 2 pm	Thursday 29: TACF's Matt Brinkmann lecture plus orchard tour at the State Arboretum of VA, Blandy For tickets <a href="http://blandy.virginia.edu">blandy.virginia.edu</a> 1pm	Updates on Virginia Chapter Events at <a href="http://vachestnut.org/events/calendar">vachestnut.org/events/calendar</a>