

The Bur

The Newsletter of the Virginia Chapter of
The American Chestnut Foundation



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Expanding TACF's Horizon's Through Herbarium Audits

By Brian Smith (Part One of Two)

Since joining TACF in 2005, I have spent many hours in the woods looking for American chestnut trees. Back in 2010, I confirmed the existence of American chestnut in Lancaster County, an area TACF previously did not consider in chestnut "range." But lately, I have been going to various herbariums around Virginia. Here's the story.

For those who don't know what a herbarium is, it is a collection of preserved plant specimens. These are usually dried and put upon a sheet. In the summer of 2013, Cathy Mayes got word of the herbarium that is at Longwood University (my Alma Mater) and about the old botanist (who had recently died) who used to maintain it. The botanist was Dr. Alton Harvill. I used to see him around campus when I went there. I also knew where the herbarium was located on campus. Cathy wanted somebody to check out any American chestnut samples that the herbarium might have. Since I graduated from Longwood, I volunteered for



this assignment. However, I wasn't able to get down there until the spring of 2014.

When I went to Longwood to see the herbarium, there were about fifty samples of American chestnut collected between 1949 and 1995. I found some samples that were collected in the 1970's and 1980's that came from areas that are not included in the map of the chestnut range developed by Elbert L.

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President's Column—The Economic Importance of American Chestnuts

Faithful readers will remember last year this column told why restoring the American chestnut is important to forest health. As we said, forest health is only one reason why restoring the tree is so important to Virginia. Today let's explore why restoring American chestnut is important to the economic health of the state, particularly the mountain regions.

A century ago, American chestnut was the most important cash crop of the subsistence farmers of Appalachia. Families would gather huge loads of chestnuts in the fall and barter or sell them to local merchants. The nuts were then transported by railroad to markets in the cities to the north—Baltimore, Philadelphia, and New York. This made the chestnut harvest also a very important source of revenue for Virginia railroads. In some counties, tens of thousands of pounds of nuts were shipped each fall.



In addition to chestnuts as a food crop, chestnut trees provided revenue to timbermen and related industries. Trees were harvested by the thousands and sold for cordwood, tannin, and lumber.

The chestnut blight brought an abrupt end to that economy. The epidemic was followed almost immediately by the Great Depression and the Appalachian economy suffered horribly. The population dwindled, shops closed, and small towns withered. The Appalachian people turned primarily to mineral extraction to sustain themselves, but in many ways, the economy and the social structure of the mountain community never recovered.

Appalachian farming itself changed after the blight. What was once a subsistence farming culture changed to a monoculture. People's diet changed along with it: from what was available on the farm to what was available in the grocery store, little grown locally. The days of turning livestock as well as children loose each fall to forage for nuts were gone. Fencing laws themselves changed, from fencing livestock out of fields to fencing them in. Some of these changes were coming anyway; but maybe they would not have come so suddenly nor so thoroughly.

The return of the chestnut offers a promising future to those who stayed on this beautiful land. While eating chestnuts is not so common today, many of the newcomers to our shores grew up eating them in South America, Europe and Asia. When nuts again become abundant, they will again provide a source of income to those who gather, ship, and process them. And, while much of our hardwood production has gone overseas, the chestnut is a fast-growing tree with lots of timber value. In a few years, there could be enough of a supply of fresh wood to restart an American hardwood industry.

If you would like to read more of this fascinating history, I commend *American Chestnut: The Life, Death, and Rebirth of a Perfect Tree*, by Susan Freinkel (2007). I also thank Dr. Donald Davis of Washington, D.C., and Dr. Ralph Lutts of Meadows of Dan for their careful research on the history of the Appalachian chestnut culture. Any errors are my own misunderstanding or oversimplification.

SWVA Branch Active in 2016

The SW Virginia Restoration Branch is looking forward to another active year, assisting with inoculation, pollination and the harvest at the Meadowview Farms, working on new and monitoring existing test plantings and attending various outreach events. There are now over 300 individuals on our volunteer contact list, and although only a small percentage can help at any given activity, we have gradually built a great and still growing local resource.

Planning is underway for a large planting (over 4000 trees) in the Channels State Forest near Meadowview. The planting will include both silviculture test plots and reforestation. In addition, the Branch is working with two high schools to coordinate educational plantings with a mix of American, Chinese, F1, and Restoration seedlings provided by the Chapter. The plantings will be part of the established Panicello Trail at Abingdon High School in Washington County and a walking trail at the new Ridgeview High School Trail in Dickenson County.

The Branch will sponsor a public talk in the spring and our restoration celebration in the fall. Dr. John Scrivani will speak at the Bristol Public Library on Saturday March 19, from 2-3pm on *How the American Chestnut Acquired and Lost Foundation Species Status*. Our 7th Annual Restoration Celebration will be held in late October at the Glenn C. Price Farm at Meadowview and will feature farm tours, live music and chestnut themed food and drink and, of course, fresh roasted chestnuts.

The Branch will be represented at several area events where we educate the public about the chestnut story and restoration and also recruit additional Branch and Chapter volunteers. These events include Earth Day in Abingdon (Saturday,

Apr. 18), the Mid-Atlantic Garden Faire (Apr. 22-24), the Virginia Highlands Festival (Aug 2) and Damascus Trail Days (May 13-14). The latter will include a Mega Transect seminar and hike on the Appalachian Trail to identify surviving American chestnuts. In the early fall Branch members attend Farm Field Days where every Washington County 6th grader (about 600) is introduced to a variety of agricultural and environmental topics, including our presentation of the chestnut story. For the fifth year, we will organize a Teacher In-Service workshop. Chestnut history, restoration, and classroom learning materials (highlighting the Learning Box) are presented to encourage teachers to include the chestnut story in their classes.



Springtime is time for planting!

Get VATACF News!

Back issues of *The Bur* are available online at vachestnut.org.

Celebrating Virginia Volunteers

All our volunteers help in our quest to restore the perfect tree, but three were singled out last year for extraordinary efforts.

Doug and Stacey Levin received the TACF Volunteer of the Year award. When Doug and Stacey arrived in Abingdon in 2011, neither knew the chestnut story nor about TACF restoration activities. However one of the local Master Gardener projects was to create a rain garden at the new Glenn C. Price Research Lab. Since then both have participated in just about every outreach and volunteer activity that the Branch has planned. Doug has been President of the Branch and currently maintains contact with over 200 Branch volunteers. Stacey annually helps to present the chestnut story to 600 Washington County 6th graders as part of Farm Days. They were instrumental in the 25th Anniversary Celebration of the Meadowview Farm, including having the distinctive T-shirts for the event. They have worked for the Branch to have an impressive outreach display, including colorful display boards, a large banner, and a flip-chart of “What do you know about chestnuts?” Doug is in his second year as a Director for the Virginia Chapter. While on the Board of Di-



Doug and Stacy Levin

rectors he has served on the Nominating Committee and, this year, the Audit committee.

Deborah Fialka was awarded a certificate of appreciation by the Virginia Chapter Board of Directors for her dedication from the earliest days of the chapter. Luckily the chapter organizers had the good fortune to have met her and convince her to join the initial Board of Directors as its secretary. Deborah served one term as Secretary and one as Director of the young chapter, often traveling long distances, sleeping in cheap motels, and eating fast food to do so. Deborah became a critical member of the small cadre of volunteer enthusiasts. She edited our first newsletters, helped breed our first



Deborah Fialka

trees, established our first orchards. She continues to help out in many ways, most importantly as steward for the orchard at Mt. Zion Regional Park.

How the American Chestnut Acquired and Lost Foundation Species Status

Dr. John Scrivani to Speak on March 19

Many of us have heard how chestnuts were a dominant tree in Appalachian forests and in the lives of those living here in the early 1900's before a disease eliminated the majority of chestnuts. This talk will review the scientific evidence of the pre-blight role of the American chestnut as a foundation species in eastern North American Forests and the current efforts of the American Chestnut Foundation to restore chestnuts to the forests. Dr. Scrivani is the Geospatial Program Manager with the Virginia Information Technology Agency, Chester, Virginia. He has been active in the Virginia Chapter, including serving as president. His talk will cover changes in the range and dominance of the chestnut since the last ice age. Scientific evidence on the ecological functions of the chestnut will be reviewed, especially those that qualify chestnut as a foundation species. The role of humans in the spread and decline of chestnut will be postulated. Statistics and maps will be presented on the past and present ranges, including chestnut sprouts and large survivors. Lastly, implications of these factors to current restoration efforts will be explored. The data analysis performed for this talk was a key component of a recent scientific paper co-authored by Dr. Scrivani and published as an *open access article* (see <http://www.mdpi.com/1999-4907/7/1/4>).

Dr. Scrivani's talk will be presented on March 19 at 2:00 p.m. at the Bristol Public Library.

About The American Chestnut Foundation – In 1983, a dedicated group of scientists formed The American Chestnut Foundation and began a special breeding process which, in 2005, produced the first potentially blight-resistant American-type trees suitable for widespread testing called Restoration Chestnuts 1.0. Now assisted by almost 6,000 members and volunteers in 16 state chapters, TACF has developed a sophisticated chestnut breeding program with over 300 breeding orchards located throughout the eastern US. The mission of The American Chestnut Foundation is to restore the American chestnut tree to our eastern woodlands to benefit our environment, our wildlife and our society. For more information on TACF and its national breeding program, visit www.acf.org or contact TACF Director of Communications Ruth Gregory at (828) 281-0047, email: ruth@acf.org.



Dr. John Scrivani (left) and Taylor Cochran, Miami University of Ohio intern, bagging chestnuts in Lesesne Forest.

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Little, Jr. in 1966 and widely referred to since. One sample came from the Eastern Shore of Virginia in 1985. Most of the samples came from within what is considered chestnut range, but about ten came from areas that were considered either “borderline” or places that were considered outside of the range map. Also, when I was looking at the samples, some of the samples had labels of the Southern Appalachian Botany Club (now called the Southern Appalachian Botanical Society). When I did some research on them, I found out that one of the founders was Dr. Edith Stevens. Dr. Stevens was a Longwood professor who has a building on campus named after her. (I also learned that their journal is called *Castanea* and their newsletter is named *Chinquapin*.)

Later that summer, I had found a copy of the *Atlas of Virginia Flora* in the Fairfax Library. The book had an overview written by Dr. Harvill (and others) regarding how the plant maps were compiled. It also said that the data used came from herbaria all over Virginia (GMU, JMU, William & Mary, etc.). It also gave credit to botanists who assisted in collecting data for the *Atlas*. This prompted me to search these herbaria as well. When I went through the American chestnut samples at these herbaria, I found yet even more “out of range” samples.

My work with the herbarium got me quoted in a Longwood Alumni Mag-



This Herbarium sample from William & Mary is from King and Queen County. It is not listed in either the *Atlas of Virginia Flora* or the Little's Range map.

azine article about the herbarium. The only downside was this: The person writing the article wanted to know how the Longwood herbarium was helping TACF. Unfortunately; the person writing the article was unable to reach Cathy to answer this question. When I asked Cathy this question, she said, “The herbaria of Virginia are an indispensable record of where American chestnut once thrived. Each specimen tells exactly when and where it was collected, proving how widespread the tree was in the state. It also captures the DNA of a now dead tree, which may help us someday to know what genes made it such a perfect tree.”

The *Atlas of Virginia Flora* (now available online) shows plants species of

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Spring Calendar of Events

Please contact the Chapter Office if you are interested in volunteering at or observing any of the following events.

February 27:	Chapter Board Meeting beginning 1:00 p.m.—Marshall
March 5:	Orchard planting — Catawba
March 19:	Dr. Scrivani Lecture beginning at 2:00 p.m.—Bristol Public Library (<i>see</i> story p. 5)
March TBD:	Orchard planting—The Plains
April 18:	Earth Day — Abingdon
April 22-24:	Mid-Atlantic Garden Faire — Abingdon
May 13-14:	Damascus Trail Days Mega Transect Seminar and Appalachian Trail Hike
August 2:	Virginia Highlands Festival — Abingdon

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all kinds that have been collected in Virginia. It also maps out what counties in Virginia that the plants have been collected from. When you look at the map for American chestnut, a lot more counties in Virginia are cited as having American chestnut present than Little's range map would indicate. Because of this, I decided to contact Dr. Donna Ware (retired W&M professor) and Dr. Gary Fleming (of VA-DCR) to help shed light on these discrepancies. Dr. Fleming felt that Little's range map was "out of date and inaccurate." My e-mail to Dr. Fleming also resulted in a spirited exchange between him and Dr. Fred Hebard, then Chief Scientist for TACF.

The big question is what has been learned from these herbarium audits? When I found the chestnuts

down on the Northern Neck of Virginia back in 2010, I thought I had found something rare and unique. I quickly concluded from the herbarium "audits" that my Northern Neck find was only the tip of the iceberg. When I informed Dr. Hebard about the "out of range" chestnut samples, he felt that perhaps *Phytophthora cinnamomi*, which kills many trees below the fall line, wasn't as prevalent in the Piedmont and Tidewater of Virginia as originally thought. I've also used my experiences in the herbarium audits to help assist other state chapters with chestnuts that might be "out of range" in their states. The herbarium audits have also told me that TACF can go into some areas of Virginia we previously thought were off-limits. One of these areas happens to be Williamsburg. That will be covered in Part Two of my paper.



First, dig a hole



Then, plant a seedling

The Cycle of Growth



When trees mature, catkins appear in the spring



Burs are formed



Harvest at last!



THE
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