



# Vermont-New Hampshire Chestnut Notes

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Spring 2012

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## FIRST "RESTORATION CHESTNUT" TEST PLANTING IN NEW ENGLAND

Kendra Gurney, TACF New England Regional Science Coordinator

This spring, the VT/NH Chapter will partner with the Beaver Brook Association in Hollis, NH to install the first large-scale test planting of TACF's "Restoration chestnuts" in New England. The Chapter will provide the chestnuts and the know-how, and Beaver Brook the planting site and long-term care. This exciting project has taken over a year of planning and members from both organizations are looking forward to getting their hands dirty on planting day.

Restoration chestnuts, or B<sub>3</sub>F<sub>3</sub>s in chestnut-breeding lingo, are the product of over a quarter of a century of breeding work and are the generation that just might have enough blight resistance for forest reintroduction. But before we round up an army of "Johnny Chestnut-seeds" to start re-populating our forests, we need to test these trees to make sure they will do the job. Specifically, the test planting will be assessing the blight resistance and American chestnut character of these trees over time and under natural conditions.

The site provided by Beaver Brook is a great place to do just that. Hollis is in southern New Hampshire and well-within the native range of chestnut. In fact, the Beaver Brook property hosts several populations of chestnut sprouts (and chestnut blight), indicating that this area was once home to native chestnuts. The site selected is in close proximity to some of these sprouts, and also easily accessible to the public, allowing for not only rigorous scientific study, but also education and outreach.



A group of leaders with the Beaver Brook Association and VT/NH Chapter met in May of 2011 to assess several possible planting sites on the Beaver Brook property.

*Photo courtesy of Grace Knight.*

*(Restoration Chestnut, Continued on page 3)*

## JOIN US FOR OUR FOURTH ANNUAL MEETING!

The VT/NH Chapter will hold their fourth Annual Meeting on **Saturday, April 28, 2012** at the Beaver Brook Association in Hollis, NH. The meeting will include a keynote presentation exploring the future of TACF, updates on the work of your local VT/NH Chapter and an afternoon field visit to New England's first "Restoration chestnut" test planting site. Please see page 7 for more information.  
**Hope to see you there!**

“For all of our members who have donated time and treasure to the chestnut cause...

**THANK YOU!”**

## PRESIDENT’S CORNER

### Grace Knight, VT/NH TACF President

Well, today I take a break from preparing my family’s tax return to write this note for our newsletter. And, I have good news for all of you who pay taxes (which is to say, all of you!). Our VT/NH-TACF Chapter now has its own tax exempt status! Donations and dues to the national TACF office, in Asheville, NC, have always been tax deductible. But, as a newer Chapter that formed in 2007, our VT/NH group has not enjoyed tax-exempt status. Treasurer Carol Kirkland of Arlington, VT spent hours preparing the application, which the IRS approved in September, 2011. For all of our members who have donated time and treasure to the chestnut cause up till now, THANK YOU! And for all who will donate in the future toward orchard work, tree location work, and outreach, thank you AND

you can deduct your donation from your taxes! Doing good work should have some tangible reward, as well as the glow of knowing that our planet is better for our efforts.

Since formation in 2007, I am proud to say that our chapter has grown to 208 members strong. And, in addition to our new tax-exempt status, we continue to work hard in the field. We now have five breeding orchards with a sixth in the works and more potential sites to investigate. We will be installing a “Restoration chestnut” test planting this spring. We have included



VT/NH TACF volunteers hard at work in our Otter Brook orchard in Peterborough, NH  
*Photo courtesy of Kendra Gurney.*

17 different wild American chestnuts in our Chapter breeding program. We regularly exhibit at outreach events to share the chestnut story. We have a dedicated Board of Directors and some amazing volunteers. We have come a long way since 2007 and I look forward to our future!

## EDUCATIONAL DISPLAY AWARD

The VT/NH Chapter participated in the 78th Annual VT Farm Show (Jan 24-26) at it’s new location - the Champlain Valley Expo in Essex Junction, VT. The new venue drew a big crowd, many of whom were interested in learning about the American chestnut. The Chapter was named a runner-up for best educational display, as a result of the variety of information available to visitors. Thanks to all who helped out or stopped by for a visit!



Chapter President Grace Knight and Board member Terry Gulick show off the award-winning display at the VT Farm Show!

*Photo courtesy of Bill Emmons.*

## MEMBER PROFILE: GARY ROBERTSON

### Dan Hale, TACF Intern

Gary Robertson contributes to TACF in a variety of ways. His skills are put to use in the field – locating, pollinating and harvesting wild trees, and working in orchards – and as an active Board Member for the VT/NH Chapter.

Though he has been a member for just a few years, his background with chestnut extends much further. As a child living in Bradford, Pennsylvania, his grandparents would often talk of bountiful chestnut groves, and their subsequent sudden death. A lifelong naturalist, Gary frequently found chestnut trees, but it was not until he was twenty, attending Penn State, that he found some viable American nuts near campus.

Gary earned his degree in experimental physics, and has since moved to Gilford, NH, where he’s been supervising the design of electrical connectors for nearly thirty years. He enjoys experiencing the New England landscape through human-powered sports such as biking, hiking, and canoeing.

Gary had been reporting trees to TACF for years before he officially became a member in 2009. Since joining, he’s learned and practiced the skills of pollinating and harvesting the trees he’s found. Although Gary says, “It has been a special privilege to be a member,” we are truly the ones privileged to have him. **Thank You, Gary!**

If you’d like to nominate a VT/NH TACF Member to be profiled in our newsletter, please contact Grace Knight at 802-263-9613 or [gsknight@tds.net](mailto:gsknight@tds.net)



To help with a pollination in Canaan, NH Gary soars high into the treetops. Photo courtesy of Kendra Gurney.

## RESTORATION CHESTNUT (Continued)

(Continued from page 1)

And the presence of blight means that the Restoration chestnuts will be put through their paces when it comes to blight resistance.

In addition, the Restoration chestnuts are produced in TACF’s Legacy Tree orchard at the Meadowview Research Farms in Meadowview, VA. The planting will follow TACF’s testing protocol, which has been used to install several test plantings in the central and southern portions of the

American chestnut’s range. The planting in Hollis will be the farthest north this type of planting has been sited. Having a test site in New England should give us some indication of the cold hardiness of these trees.

For more information on this planting, please contact Kendra Gurney ([kendra@acf.org](mailto:kendra@acf.org) or 802-951-6771 x1350). For more information about the Beaver Brook Association, please visit their website: [www.beaverbrook.org](http://www.beaverbrook.org)



This 30-tree test planting of pure American chestnut was installed on June 14, 2011 at the selected site by a group of VT/NH TACF and BBA staff and volunteers. By the end of the growing season most trees were doing well and had grown up and out of the protective tree shelters. Photo courtesy of Pete Smith.

## A NEW ORCHARD AT PIKES PEAK FARM

Marshal Case, VT/NH TACF BOD, TACF President Emeritus



“The early morning light was stunning...and appeared to focus on the planting crew.”

*Photo courtesy of Marshal Case.*

It was a glorious Vermont day in early fall as more than a dozen chapter members and volunteers from New Hampshire and Vermont came together at Mike and Vicki Greenberg’s Pikes Peak Farm to plant chestnut seedlings. This new orchard in Perkinsville, VT has great potential and the Greenberg’s are fully committed to making it thrive.

Both Mike and Vicki actively participated in the planting while chapter president Grace Knight cruised around the slope offering help and encouragement, in addition to getting her hands in the soil. Charter chapter mem-

ber Terry Gulick, long time chestnut grower, was pleased with the planting supplies on-hand, which made for more efficient planting. These had been scoped out by Kendra Gurney, our Regional Science Coordinator, who worked closely with Grace.

The early morning light was stunning, as rays came down and appeared to focus on the planting crew. Hard work and good fellowship made for fast and efficient planting of the seedlings. A lunch break back at the cabin of Mike and Vicki allowed time for informal discussion as the work crew enjoyed an ex-

pansive view of the mountains from the front deck.

Thanks to all who helped with the planting and to Mike and Vicky for hosting a new breeding orchard!



Mike Greenberg prepares to plant a chestnut at his farm in Perkinsville, VT.

*Photo courtesy of Marshal Case.*

## MANY THANKS FOR POLLINATION DONATIONS!

The VT/NH Chapter received very generous donations in support of their 2011 pollination season. A special **thank you** goes out to Central Vermont Public Service (CVPS), Public Service of New Hampshire (PSNH), National Grid and Asplundh Tree Expert Company!

This year, PSNH Supervisor of Vegetation Management Bob Allen played a special role in our pollination efforts. Not only did he help us by coordinating a bucket truck, but he also located the wild, flowering tree and was trained to conduct the pollination and harvest himself! Having spent the past several years in the Supervisor’s seat, his crew was excited to see him riding in the bucket. And of course, we were happy to teach him the finer points of chestnut pollination. Thanks Bob!

Anyone interested in donating their services to the VT/NH Chapter should contact Kendra Gurney: [kendra@acf.org](mailto:kendra@acf.org), (802) 951-6771 x1350 (office) or (802) 999-8706 (cell).



Bob Allen of PSNH pollinates a tree he located in Mason, NH with support from Asplundh (and of course, PSNH).

*Photo courtesy of Kendra Gurney.*

## EARLY CHESTNUT BREEDING EFFORTS IN NEW HAMPSHIRE

Yurij Bihun, VT/NH TACF BOD

Grace Knight, President of VT/NH Chapter, didn't think much of it when Dr. Fred Hebard, Chief Scientist at TACF's Meadowview Research Farms, set his lunch tray down next to her at the 2010 TACF Annual Meeting in Shepherdstown, WV. During the course of lunch, Fred asked her if she knew Paul Galloway of Walpole, NH and could she pass on his regards. Grace did not recognize the name and Fred proceeded to inform her of Paul's pioneering work in the late 1980s and early 1990s providing germplasm from an American chestnut tree he located in northern New England.

After Fred described Paul's pivotal role in early chestnut breeding, Grace decided to track him down. When she returned to Vermont, she checked the phone book and found that there was a Paul Galloway, alive and well, in Walpole, NH. After an initial inquiry letter in the winter of 2011, Grace passed the information to me. I began to unravel what turned out to be an unrecognized story of early chestnut breeding and a tale of Yankee ingenuity.

In early 2012, I contacted Paul and learned that he had not been following the development of TACF and had lost track of chestnut breeding efforts when the legendary plant geneticist and TACF co-founder, Dr.

Charles Burnham, died in 1995. However, an envelope arrived in my mailbox with a twelve-page booklet including color photos called "My Chestnut Story." In this short recollection, Paul Galloway, now 82, recounted his initial contact with Charlie Burnham and the role he played in the unfolding restoration of chestnut.

"My family comes from generations of farmers and woodsmen that settled in the Walpole, NH area in the 19<sup>th</sup> century," said Paul. He worked as a building contractor and started accumulating small parcels of abandoned farmland and woodland in Cheshire County in the 1950s, eventually assembling several hundred acres. Paul was aware of the tragic loss of the American chestnut tree and remembered stories from his mother about their family harvesting wild chestnuts by the bushel in the fall. "I was walking my property line in the 1970s when I spotted a relatively large, vigorously growing chestnut a few feet over the boundary on land that belonged to Society for the Protection of New Hampshire Forests (SPNHF)," recounts Paul. He alerted SPNHF of his discovery and the tree, which measured 63" in circumference at breast height and 84' tall, and was registered as the largest American chestnut in New Hampshire's Big Tree Program.

"It was somewhere around the

early 1980's, when I spotted an article about Dr. Charles Burnham, a professor at the University of Minnesota, who had built up a great reputation in plant genetics and was turning his attention to the chestnut tree," noted Paul. He decided to write to Burnham, who was 81 at the time. Paul continues, "Much to my surprise, not more than a week after posting my letter to him, he called me!" Dr. Burnham asked him to help with pollinating the tree and Paul, who had no experience in tree breeding, had to overcome his initial skepticism to become a willing partner in pollinating and collecting seed from the NH tree. This is the beginning of the exchange that is documented in "My Chestnut Story", which also describes the construction of a 50' tower to get to the tree's first branches.

According to Fred Hebard, the story holds true. Dr. Larry Inman, another co-founding TACF scientist, visited NH in 1989 to confirm the tree was a pure American and arranged for it to be pollinated. Pollination work began in 1990, crossing the Walpole tree with pollen from the 'Graves'

"I began to unravel what turned out to be an unrecognized story of early chestnut breeding and a tale of Yankee ingenuity."



Alan Rhodes harvesting backcross nuts from a 50' homemade scaffold in Walpole, NH. Photo courtesy of Paul Galloway.

## CHESTNUT BREEDING IN NEW HAMPSHIRE (continued)

(Continued from page 5)

tree, a B1. Pollination of the “Paul Galloway” tree continued until 1993 and quite a few nuts were harvested in the early 1990s. “Trees raised from those nuts were the founders of one out of about 30 American lines we have at Meadowview derived from the ‘Graves’ source of blight resistance,” added Fred. “That particular line is known as the ‘Paul Galloway’ line and planting of the B3-F2s from the ‘Paul Galloway’

line was started at our Wagner Research Farm and completed quickly in 2006. B3-F3 nuts from that tree, and others like it, have been planted out in the forest since 2010,” concluded Fred.

This story reminds us that there are many unsung heroes who have played a significant role in the larger effort to restore the American chestnut. To read “My Chestnut Story” visit [www.acf.org/ChapterNews\\_vt.php](http://www.acf.org/ChapterNews_vt.php)



**SQUAM LAKES  
NATURAL SCIENCE CENTER**

The mission of Squam Lakes Natural Science Center (SLNSC) is to advance understanding of ecology by exploring New Hampshire's natural world. <http://www.nhnature.org/>  
Photo courtesy of SLNSC.



A preschooler at SLNSC's Blue Heron School learns to value our forests.

Photo courtesy of SLNSC.

## GET COOKING WITH CHESTNUTS

Janet Robertson, Squam Lakes Natural Science Center

As Development and Communications Director at Squam Lakes Natural Science Center in Holderness, New Hampshire, I have the pleasure of arranging an annual event to thank our donors. In 2011, I was fortunate to have New England Regional Science Coordinator Kendra Gurney speak. She presented an informational program on the American chestnut on a hot July night. Refreshments following the program featured – you guessed it – American chestnuts! Here are two recipes you might enjoy trying yourself.

### Chestnut and Spinach Dip

Recipe developed by Julie Rhoads, University of Missouri College of Agriculture

1 ½ cups shelled raw chestnut meats  
10 ounce package of frozen chopped spinach, thawed  
¼ cup diced green onion  
1 package dried vegetable soup mix, such as Knorr's  
2 cups sour cream  
1 cup mayonnaise

Coarsely chop the chestnuts.

Rinse thawed spinach in water and drain thoroughly in a small strainer. Chop the spinach.

Combine all ingredients in a bowl. Two packages of the vegetable soup mix will make a more seasoned and thicker dip, if desired.

Refrigerate mixture at least 6 hours to soften the dried vegetables and combine flavors. Serve with crackers or veggies.

### Chestnut N' Honey Cornbread

Recipe from Allen Creek Farm Chestnuts, Ridgefield, Washington, [www.chestnutsonline.com](http://www.chestnutsonline.com)

1 cup yellow cornmeal  
½ cup unbleached flour  
2 tsp baking powder  
¾ tsp salt  
¼ tsp baking soda  
⅓ cup honey  
1 tbsp brown sugar  
1 ½ cups chestnut flour  
½ cup buttermilk  
2 large eggs  
½ cup water (adjust if needed)

Preheat oven to 350°F. Spray an 8-inch square pan with non-stick spray.

Combine dry ingredients in a bowl. Add buttermilk, eggs, honey, and water and mix.

Pour into prepared pan and bake at 350°F for 45-50 minutes.

Cool on rack for 10 minutes. Serve warm or at room temperature. Serves 6

## JOIN US FOR OUR FOURTH ANNUAL MEETING!

The VT/NH Chapter's Fourth Annual Meeting will be held on **Saturday April 28, 2012** at the Beaver Brook Association's Brown Lane Barn in Hollis, NH. See schedule on page 8. We hope you can join us!

### Highlights:

This year's keynote speaker will be Dr. Fred Hebard. As TACF's Chief Scientist, Dr. Hebard has spent most of his career running TACF's breeding program at the Meadowview Research Farms in Meadowview, Virginia (more on Dr. Hebard's work with chestnut, below). We are excited to have him speak with our group!

A field tour is planned to look at the site selected to host NH's first test planting of TACF's "Restoration Chestnuts". In addition, there will be an opportunity to brush up on the basics of the chestnut restoration story or participate in a short work session in the field. Please dress for the outdoors if you plan to join us.

Coffee, water and light snacks will be provided. A box lunch may be **pre-ordered** for \$13 (contact Spencer Brookes – [sbrookesii@me.com](mailto:sbrookesii@me.com) or (603) 493-0546) or attendees can bring a bag lunch.

See you soon!

### Directions:

From NH Route 3, take exit 6 onto Broad Street/Route 130 West. Follow approximately 6 miles to Route 122. Turn left at the light onto Route 122 South. Follow approximately 1 mile and turn right onto Ridge Road. Continue approximately 0.7 miles to the Brown Lane entrance. Turn right onto Brown Lane, and follow to the Brown Lane Barn and parking area. The Brown Lane Barn is a restored barn, set in a small valley surrounded by fields and forests, offering immediate access to trails.



[www.beaverbrook.org](http://www.beaverbrook.org)

## MEET OUR KEYNOTE SPEAKER: DR. FRED HEBARD

Courtesy of [www.acf.org](http://www.acf.org)

Dr. Fred Hebard brings to TACF many years of experience researching chestnuts along with practical farm experience. Fred has headed up TACF's research in Meadowview, VA since the farm was established in 1989. Beginning as Superintendent of our Wagner Research Farm, and later becoming Staff Pathologist, he has guided TACF's research over the years.

Prior to joining TACF, Fred was a research specialist (post-doc) at the University of Kentucky, working on disease physiology of chestnut blight,

with Dr. Lou Shain. Fred received a Bachelor of Science degree in Biological Sciences from Columbia University in 1973, where he worked on tissue cultures of chestnut and their interaction with the blight fungus. He continued the tissue culture work at the University of Michigan, where he received a master's degree in Botany in 1976.

He then studied the histopathology (microscopic studies) and epidemiology of chestnut blight at Virginia Polytechnic Institute and State University, and worked measuring blight resis-

tance in American and Chinese chestnut. He received a Ph.D. from Virginia Tech in 1982, where his advisor was Dr. Gary Griffin. "This is my dream job, to breed chestnut trees for blight resistance in a practical field setting. I hope that someday, the mountainsides of the Appalachians will once more be white with chestnut blossoms on the fourth of July."

Fred and his family reside in the Meadowview area.



Dr. Fred Hebard, in the orchards in Meadowview, VA. Photo courtesy of TACF.

"I hope that someday, the mountainsides of the Appalachians will once more be white with chestnut blossoms on the fourth of July."

If you'd like to learn more about volunteer opportunities or report an American chestnut tree that may be useful for our breeding program, please contact Kendra at 802-951-6771 x1350 (office), 802-999-8706 (cell) or [kendra@acf.org](mailto:kendra@acf.org) OR

VT/NH Chapter President Grace Knight at 802-263-9613 or [gsknight@tds.net](mailto:gsknight@tds.net)



VT/NH Chapter of  
The American Chestnut  
Foundation

Care of:  
Kendra Gurney  
TACF Regional Science Coordinator  
705 Spear Street  
South Burlington, VT 05403

Check out this newsletter on-line!

[http://www.acf.org/  
ChapterNews\\_vt.php](http://www.acf.org/ChapterNews_vt.php)

## CALENDAR OF EVENTS

**Saturday, April 28, 2012**

**Fourth Annual Meeting**

10:00 am – 4:00 pm

Beaver Brook Association

Brown Lane Barn

Brown Lane, Hollis, NH

**Schedule of Events**

9:30 am – 10:00 am: Registration and coffee

10:00 am – 12:00 pm: Annual Meeting, including  
keynote address by TACF's Dr. Fred Hebard

12:00 pm – 1:00 pm: Lunch and Raffle

1:00 pm – 3:00 pm: Field and Education Session – Enjoy  
an overview of chestnut restoration or participate in a  
short work session. We'll also visit the site of New  
England's first "Restoration chestnut" test planting.  
Come dressed for the field.

3:00 pm – 4:00 pm: Board meeting (members welcome)

**We hope to see you there!**

**Sunday, May 6, 2012**

**Herricks Cove Wildlife Festival**

Rockingham, VT

Join the VT/NH Chapter at our display booth!

Volunteer to help out or stop by and say hello.

Please contact Terry Gulick for more details:

[gulicktrees@yahoo.com](mailto:gulicktrees@yahoo.com) or (802) 885-5405

**Wednesday, May 16, 2012**

**Shieling Forest Orchard - Work Day**

Old Street Road, Peterborough, NH

Join us for a work session as we get the orchard  
ready for the growing season. Please contact

Spencer Brookes for more details:

[sbrookes@tds.net](mailto:sbrookes@tds.net) or (603) 654-6771

**Spring Plantings!**

We're in the process of scheduling our spring  
planting activities. If you'd like to help out please  
contact Kendra Gurney for more details:

[kendra@acf.org](mailto:kendra@acf.org) or (802)951-6771 x1350