



Vermont-New Hampshire Chestnut Notes

Volume 3, Issue 1

Spring 2011

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NEW DISPLAY OFF TO THE RACES!

Yurij Bihun, VT/NH TACF Board of Directors (BOD)

The New Year got off to a good start as the VT/NH Chapter got a chance to show off its new Downing display board at several public forums this winter. The new, redesigned display looks sharp and features new laminated photographs and graphics that not only look professional but also make it easier to share the chestnut story. The new board features a large header sign and wheeled carry-case, making it much easier to transport and set-up. A small grant from TACF made the purchase of the display board possible, while the VT/NH Chapter raised the funds for the graphics. In addition, a new chestnut Learning Box was given to the Chapter as part of a pilot program sponsored by TACF's Education Committee.

The Learning Box provides several hands-on chestnut artifacts that compliment the new display, including a set of wood blocks representing common species and intended to test one's wood ID skills.

The new display came together just in time to make an appearance at two of the big yearly outreach events the Chapter participates in. Grace and Randy Knight, Terry Gulick, Ed Toth, Yurij Bihun, Paul Schaberg, and Kendra Gurney took turns manning the display on January 25th - 27th at the Vermont Farm Show in Barre, Vermont. The display at the Vermont Farm Show drew a fair number of visitors who had the usual range of questions and shared possible chestnut sightings from around the central Vermont region. It even helped draw a quick stop by Vermont's new Governor, Peter Shumlin, who was interested in and supportive of the Chapter's work. The hit of the display, however, was a two-inch thick, oval-shaped, cross-sectional piece (i.e., "cookie") of American chestnut whose creamy pat-

(Display Board, Continued on page 3)



Thanks to a small grant from TACF, the VT/NH Chapter has a shiny new display board for use at educational and outreach events.

Photo courtesy of Grace Knight.

JOIN US FOR OUR THIRD ANNUAL MEETING!

The VT/NH Chapter will hold their third Annual Meeting on **Saturday, April 2, 2011** at the US Forest Service Northern Research Station in South Burlington, VT. The meeting will include a keynote presentation about American chestnut in New England, updates on the work of your local VT/NH Chapter and an afternoon field trip to the Chapter's oldest (and largest) chestnut orchard. Please see page 7 for more information. **Hope to see you there!**

“Our chapter is like these trees; young and flourishing. May both, through hard work and hope for the future, continue to grow and thrive.”

PRESIDENT’S CORNER

Grace Knight, VT/NH TACF President

In May of 2007, I came home from work to find a strange car with Connecticut plates in the driveway. I remembered that my husband, over a hurried breakfast that morning, had said that a woman from the Chestnut Foundation would be visiting to advise him on planting a number of trees. Walking down to our eastern field, I found my husband and Leila Pinchot (then New England Science Coordinator for TACF) planting 20 American chestnuts.

This was the start of our breeding orchard. I knew little about the goals of such an orchard in 2007; in fact, I had assumed that American chestnut, being a forest tree, would be planted in a five-acre area of forest that we had recently had logged. The notion that we would use 2 acres of open meadow to plant hundreds of trees, only 20 or 30 of which would ultimately be saved for breeding the next generation of resistant chestnut, was utterly novel to me (but not to my husband, who had for years read “The Journal of the American Chestnut Foundation” cover to cover as soon as it

landed in the mailbox).

It is more fun, and more work, than I could have imagined four years ago.

Our failures have stung, our successes have been

earned. The first year, an enthusiastic volunteer planting team, led by us, planted some of the seed nuts 4 - 6 inches deep, and many rotted in the ground without ever sprouting. One year, rose chafer beetles defoliated the newly leafed-out seedlings almost overnight. One year, we found out why chestnut leafs out so late in the spring – chestnut leaves cannot withstand a light frost. We had a frost on June 7, and the next day every chestnut leaf was black and dead. The young trees put out new leaves, but growth suffered that season. Last summer, deeply watering each seedling took three hours, and we watered each week during a rainless July and August.

Last May we finished our



Leila Pinchot helps plant the first American chestnuts at the High Shelter Farm orchard

Photo courtesy of Grace Knight.

four-year project of annual planting. Our field has no more room. Of the nuts planted, 367 are now surviving young trees and are poking their bare shoots above the standing snow as I write this on the last day of February. **I can hardly wait for the snow to be gone, for the trees to break bud in late May, for the joy of watching them grow to begin again.** The Vermont/New Hampshire Chapter has five breeding orchards such as mine; three are now full, one is in its second year of being planted, and one will be planted for the first time this spring. Our chapter is like these trees; young and flourishing. May both, through hard work and hope for the future, continue to grow and thrive.

MEMBER PROFILE: TERRY GULICK

Kendra Gurney, TACF New England Regional Science Coordinator

As a boy growing up in Springfield, VT Terry Gulick discovered a small tree unlike any he had seen before. With a little research, and confirmation by the county forester, he learned that this tree was an American chestnut and he was struck by the story. Over the years he kept an eye out for young sprouts and eventually planted some Chinese and hybrid chestnuts on his property in Springfield, enjoying the reliable nut production.

Thanks to an article in the Rutland Herald about 10 years ago, Terry discovered TACF and made a visit to the former headquarters in Bennington, VT. He was thrilled to learn about the organization's work and set out to help recruit interest in forming a VT/NH Chapter. When his hard work came to fruition with the Chapter's acceptance at the 2007 TACF Annual Meeting in Burlington, VT he experienced one of the "great moments in my world of chestnuts."

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



Terry does it all for the VT/NH Chapter! Here he helps pollinate a tree for the breeding program.

Photo courtesy of Leila Pinchot.

A founding Chapter board member, Terry works hard for chestnut – helping to find mother trees, conduct pollinations, plant orchards and share the story at events like the VT Farm Show. He even gives the occasional presentation to local clubs or school groups. In addition, Terry volunteers with the VT Farm Bureau, plays piano at a health care home and with a bluegrass band and also serves on the board of the Windsor County Maple Producers. He is a busy guy and we're lucky he gives so much of his time to the VT/NH Chapter.

Thank you, Terry!

NEW DISPLAY (Continued)

(Continued from page 1)

ina and silky-smooth finish drew visitor questions with its pleasing tactile sensation.

A week later, Grace and Randy Knight, Kendra Gurney, Spencer Brookes, Todd Ross, Curt Laffin, Amy Laffin and Gary Robertson had another opportunity to set up the display at the NH Farm and Forest Expo on Feb 4th & 5th in Manchester, NH. The Chapter was invited to host an educational session for Expo atten-

dees and on Friday evening Curt Laffin, Grace Knight, Todd Ross and Kendra Gurney shared the chestnut story and work of the chapter with interested participants. In addition to dovetailing with the VT-NH Board of Directors meeting, the NH Farm and Forest Expo seemed to draw more visitors because of its location and heavier foot traffic. For this event Randy Knight added to the wood block collection provided by the Learning Box, including several more wood samples from species common

to our northern forests. This expanded collection was a hit, especially with foresters and woodworkers. Kudos to all board members and volunteers involved in putting together the new display and taking time out to work the events!

The new display will be featured at our upcoming Annual Meeting.



Wood blocks from the Learning Box. Can you identify them?!

L to R: Red oak, pine, cherry, black walnut and American chestnut.

Photo courtesy of Kendra Gurney.

Close to 40 TACF members participated in New England's Regional Restoration Workshop. Photo courtesy of Kendra Gurney.



“...a considerable number of questions and issues were raised about the process of restoration.”

Todd Ross pollinates a Canaan, NH chestnut., thanks to the support of National Grid and Asplundh.

Photo courtesy of Kendra Gurney.



WORKSHOP RAISES MORE QUESTIONS THAN ANSWERS

Yurij Bihun, VT/NH TACF BOD

When it comes down to it, restoration of American chestnut is the underlying *raison d’etre* for the existence of TACF. With reintroduction efforts on the horizon, planning for restoration is pressing hard on the organization. Four regional workshops have been scheduled for TACF chapters to begin to tackle the concept of restoration. These workshops will be followed by subject-specific meetings to help address the questions raised. TACF will use all meeting feedback to draft a restoration plan for the organization.

About forty people from the New England chapters and the US Forest Service gathered at the Urban Forestry Center in Portsmouth, New Hampshire on Saturday February 12th to begin discussing the daunting challenge of restoring American chestnut to its native range. Representatives from all the New

England states were present with VT/NH Chapter members Yurij Bihun, James Powers, Paul Schaberg, and Grace Knight representing Vermont, and Spencer Brooks, Ann & Tim Elliot, Will Guinn, Curt Laffin, and Gary Robertson representing New Hampshire. Chairman of the TACF Board of Directors and Maine Chapter President, Glen Rea, welcomed the attendees and opened the workshop. Kendra Gurney, New England Regional Science Coordinator, gave an overview of the TACF restoration and planning process. Retired USDA Forest Service Entomologist, Dennis Souto, went over the meeting’s ground rules and led the facilitated session.

The three overriding questions that framed the discussion were “What criteria will help us to decide where to plant trees first?”, “What tools will help us implement chestnut restoration effectively?”, and

“How should the chapter breeding programs participate in the overall restoration plan?”. Dennis Souto kept the discussion on track and after considerable debate the attendees’ comments were prioritized for each question. A summary of discussions and prioritization from the meeting is available at <http://sfr.psu.edu/public/chestnut/meetings/regional-restoration-meetings/new-england>.

Although the meeting was only a first step to get preliminary feedback from the regional membership on how to proceed with restoration, a considerable number of questions and issues were raised about the process of restoration. The group did make clear however, that the TACF chapters need to play a role in the decisions and restoration practices employed in their respective states. It is expected that TACF’s restoration plan will incorporate feedback from this meeting.

MANY THANKS FOR POLLINATION DONATIONS!

The VT/NH Chapter received very generous donations in support of their 2010 pollination season. A special **thank you** goes out to Green Mountain Power, Central Vermont Public Service, Public Service of New Hampshire, National Grid and Asplundh Tree Expert Company! Anyone interested in donating their services to the VT/NH Chapter should contact Kendra Gurney: kendra@acf.org, (802) 951-6771 x1350 (office) or (802) 999-8706 (cell).

FINDING YOUR VOLUNTEER NICHE

Curt Laffin, VT/NH Chapter Volunteer

Many motivated people, doing a wide variety of tasks, will be needed to restore the American chestnut tree. The greatest challenge, or opportunity, will continue to be within our 17 Chapters where volunteers carry the day. I have found chapter-level work to be fun and rewarding. If you want to join in, there are many ways to find your niche. **Here is how I found mine.**

My interest in the American chestnut tree began when I was about 5 years old. My father took me to a hill in Harvard, MA and showed me the last living chestnut tree that he was aware of. That did not mean much to me back then. However, I always had an interest in natural resources, so much so that I pursued a career in wildlife management. Along the way I often came across historic notes about an era when the chestnut tree was engrained in American culture and supported vast forest ecosystems across the eastern US. Tragically, by 1950 all of these benefits were lost. Imagine how pleased I was to learn that TACF was making strides toward restoring this magnificent tree to our forests. There was no question about it; I had to become a member.

As I received TACF literature I became aware of how actively people from states in the historic chestnut tree range were involved. However, I also noticed that very few Board or

committee members were from New Hampshire. So, after retiring from the US Fish & Wildlife Service (FWS) I decided that I would devote time and effort to getting more folks from my state aware of and involved in American chestnut restoration. I wanted to do something and contribute where I saw opportunities. I knew that there were people in New Hampshire with potential to contribute to the TACF mission. Two things had to happen: find these people, and tell them our story. I gave myself a goal: **more NH people taking action to implement the TACF mission.**

My first step into TACF was to invite myself to a VT/NH Chapter Board meeting. I went to watch and listen. I was impressed by the commitment among Board members and their grasp of the TACF program. Next I sought help from my friend Carol Wallace. As a college professor, she offered her professional skills to help me put together a presentation that I could use to entice more NH folks to become active TACF members. Incidentally, Carol had also been introduced to the American chestnut tree at a young age by her father. I have been on the road with my show for about a year and have given seven presentations to a combined audience of 123.

It has been as enjoyable and rewarding as I had anticipated. I find people in every audience who say, "OK, you have me

excited, now give me some trees that I can plant on my land." Then I have to explain that trees are currently in low supply and high demand. I urge these to people to maintain their enthusiasm and find a niche within the VT/NH Chapter that fits their ability and interest. My other volunteer activities with our Chapter have included documenting mother trees, assisting with controlled pollination and orchard maintenance. Although these activities are rewarding, none compare with the satisfaction I get from knowing that someone joined TACF and/or took action toward restoring this magnificent tree based on what was learned at one of my presentations.

Another project I am working on is to plant some American chestnuts at Benson Park in Hudson, NH where I live. It will be exciting to have potentially blight-resistant American chestnut trees growing in my town. And by the way, you can be sure that this project will be used as an outreach tool resulting in **more NH people taking action to implement the TACF mission.**

If you know of a group that may want to see my presentation please invite a representative to contact me:

Curt Laffin: (603) 889-4643 or calaffin@comcast.net

"If you want to join in, there are many ways to find your niche."



Curt Laffin harvests a Hudson, NH chestnut.

Photo courtesy of Kendra Gurney.

MEET DR. FRED PAILLET: CHESTNUT ECOLOGIST



Fred takes field notes while studying native chestnuts in China.

Photo courtesy of Sara Fitzsimmons.

Fred Paillet is an Adjunct Professor of Geosciences at the University of Arkansas and Emeritus Scientist with the U. S. Geological Survey. Over the years he has investigated the relationship between chestnut and climate at various sites in New England and Virginia using fossil pollen, tree ring studies, forensic examination of trees killed by the original arrival of blight, and the relationship between surviving sprouts and original seed-producing

trees. Fred has represented TACF on previous missions to study chestnut forests in Russia (2002) and China (2008). His latest research is an ongoing TACF-funded study of the reconstruction of Ozark chinquapin stands in northwest Arkansas.

We are thrilled to have Dr. Paillet as the **key-note speaker** at our third Annual Chapter Meeting!

CHESTNUTS IN NEW ENGLAND

Dr. Fred Paillet, University of Arkansas and US Geological Survey

This spring I will share with the VT/NH Chapter a review of my years of research into the ecology of chestnut in prehistoric New England and the study of the sprouts we find living in our woodlands today. The evidence shows that chestnut was a very minor presence

in our forests until about 2500 years ago when chestnut abruptly changed the nature of our forest ecosystem. This is far too early to be related to aboriginal agriculture, and coincides with a subtle climate change in much of North America. Fossil pollen illustrates this shift, as well as a second abrupt increase in chestnut that is tied to early European land use practices. We will look at tree ring evidence of the impact of chestnut blight on Massachusetts and Connecticut forests, and discuss the unique adaptations of chestnut sprouts to survive in spite of the blight. We will

then **envision the re-colonization of blight-resistant chestnut in our forests** through my photos of the amazing progression of chestnut into the oak-

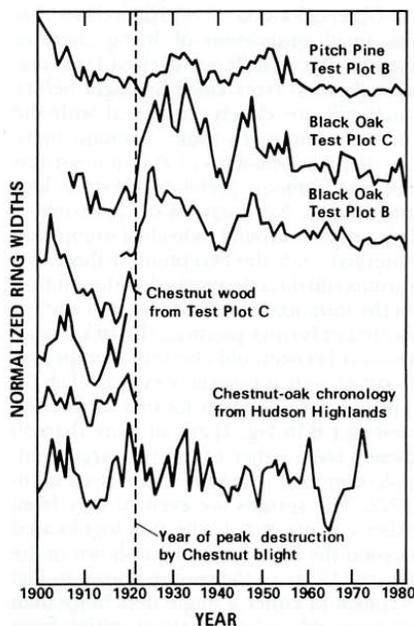
hickory woodlands at West Salem, Wisconsin in the decades before blight found that naturalized chestnut forest.

TREE RING CHRONOLOGY OF CHESTNUT BLIGHT

The relative widths of annual rings in the cross-sections of trees like chestnut indicate the rate of growth. The rings are wide in years of good growth – when there is plenty of rain and when there is no competition from neighboring trees. We use this information in two ways:

The variations in ring widths in old chestnut wood can be compared to standard ring width chronologies made by averaging data for many trees in a region (figure). The match between rings on chestnut logs from Andover, MA and a standard chronology for the northeastern US shows the last chestnut rings occurred in 1922. Also note the major regional differences: the drought of the 1940's was apparently felt more in mid New England than in the New York City area, whereas the reverse is true for the drought of the 1960's when Mayor Wagner famously advertised: "remember that not everything deserves a flush!"

Ring widths in trees next to dead chestnut trees show major increases in the years chestnut trees died. Counting rings back from the study date of 1982, the adjacent oaks showed dramatic increases in growth starting in 1922.



Tree ring chronology of chestnut blight.

Figure courtesy of Fred Paillet.

JOIN US FOR VT/NH TACF'S THIRD ANNUAL MEETING!

The VT/NH Chapter's Third Annual Meeting will be held on **Saturday April 2, 2010** at the US Forest Service's George D. Aiken Forestry Sciences Laboratory, 705 Spear St, South Burlington, VT. See full schedule on pg 8. We hope you can join us!

Highlights:

This year's keynote speaker will be Dr. Fred Paillet. A geologist by trade, Dr. Paillet has spent years investigating American chestnut ecology in New England and beyond (more on pg 6).

The US Forest Service Lab is home to two young 'Restoration' chestnut trees (B3F3s), which attendees are welcome

to visit.

Dr. Paul Schaberg will lead a brief tour of the US Forest Service's new "solar farm" installation of tracking solar panels.

An afternoon field trip is planned to the Valley View Farm chestnut orchard in nearby Shelburne, VT. The trees are getting big! Please dress for the field if you plan to join us.

Coffee, water and light snacks will be provided. A box lunch may be **pre-ordered** for \$10 (contact Grace Knight – gsknight@tds.net or (802) 263-9613) or attendees can bring a bag lunch.

Directions:

From I-89 take Exit 14-W onto Rte 2 W. Stay in the right lane and follow signs for Spear St. At the 3rd light bear right off of Rte 2 onto East Ave. Immediately merge left to go around the "jug handle" and cross Rte 2 onto Spear St. (You are essentially taking a left from Rte 2 onto Spear St.) Follow Spear St. for a mile or so past the UVM Athletic campus. The US Forest Service sign and building are on the right, just before an underpass. There are two large tracking solar panels on the front lawn – you can't miss them!



www.fs.fed.us/ne/burlington

UPDATE: CHESTNUT RESEARCH IN GREEN MOUNTAIN NATIONAL FOREST

Dr. Paul Schaberg, US Forest Service Research Physiologist and VT/NH TACF BOD

A planting of about 770 American and Chinese chestnut seedlings was established in the spring of 2009 in the Green

Mountain National Forest to study the influence of genetics and silvicultural treatment on growth and cold tolerance of chestnuts in the Northern Forest.

Preliminary data from the study suggest a trade-off exists between growth and cold tolerance (assayed as the winter injury of terminal shoots). For example, Chinese chestnuts grew the most but were most injured

by freezing damage during the winter. Differences in growth and winter injury were also measured for the different American chestnut seed sources. Growth and winter injury also varied with silvicultural treatment, with seedlings grown under open conditions (no overstory canopy) growing the most but also experiencing the greatest winter injury. Data will be collected for several more years to assess long-term trends in growth and cold tolerance and better inform restoration efforts in the northern range of American chestnut. Stay tuned for future updates!

"Preliminary data from the study suggest a trade-off exists between growth and cold tolerance ..."



Graduate student Tom Saielli and US Forest Service Research Technician Paula Murakami take growth measurements as part of this on-going research project. *Photo courtesy of Josh Halman.*

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 OR

VT/NH Chapter President Grace Knight at 802-263-9613 or 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 in full
color!

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

CALENDAR OF EVENTS

Saturday, April 2, 2011

Third Annual Meeting

10:00 am – 4:00 pm

US Forest Service

George D. Aiken Forestry Sciences Laboratory
705 Spear St, South Burlington, VT 05403

Schedule of Events

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

10:00 am – 12:00 pm: Annual Meeting, including
keynote address by Dr. Fred Paillet

12:00 pm – 1:00 pm: Lunch and Raffle

1:00 pm – 3:00 pm: Field trip – We'll carpool or
caravan to Shelburne Farms to visit the Chapter's
oldest (and largest) breeding orchard. Come dressed
for the field, directions will be provided.

3:00 pm – 4:00 pm: Board meeting at US Forest Service
(members welcome)

We hope to see you there!

Sunday, May 1, 2011

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 Grace Knight for more details:
gsknight@tds.net or (802) 263-9613

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, (802)951-6771 x1350 or
(802)999-8706

Summer 2011: Pollinations!

We will continue pollinating VT and NH mother
trees this summer. To learn more, please contact
Kendra Gurney:

kendra@acf.org, (802)951-6771 x1350 or
(802)999-8706