



Drawing by Dr. Fred Paillet

the New Leaf

News from the Connecticut Chapter
of the American Chestnut Foundation
Spring 2006

Our mission is restoration of the American chestnut in the State of Connecticut



From the President

Elected CT-TACF President at the Chapter Fall 2005 Annual Meeting,

Bill Adamsen served previously as CT Chapter Treasurer (2005). Bill has an undergraduate degree in Terrestrial Ecology (SUNY) and lives in Fairfield County. He works as an Information Technology Management Consultant for American Express in NYC. Bill can be reached via phone at 917.796.4284 (m) or e-mail at bill@ctacf.org

What an exciting time! The regional adaptation program is in full swing, with the new orchards in Salem and Woodbridge planted with the seeds (now growing sprouts) of local CT trees. Plus we have five additional land trusts and organizations seeking orchards for next spring - four of which have test plantings illustrating their commitment.

What does this mean in terms of our organization's commitments? We supply the know-how, the advanced breeding nuts, and the confidence and management. Our number one priority is producing viable seed from local trees for these orchards. This is hard and thoughtful work. I would suggest to all members that they get involved in the pollinations. Call me if you are interested, and want to know more.

So I've outlined some successes, let me describe a failure. One of

continued on following page ...

New England Regional Science Coordinator

Please welcome Leila Pinchot to the staff of TACF. Leila is a Graduate Student at the Yale University Graduate School of Forestry, and will split her time between school and serving as TACF's New England Regional Science Coordinator. While she'll be working with State Chapters throughout New England, Connecticut will be her home. I asked Leila to tell us a little about herself, and this is what she sent.

I have always enjoyed being outside in nature. As a little girl I spent summers in eastern Pennsylvania, where my sister and I would camp, fish and hunt

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Leila Pinchot, New England Regional Science Coordinator, dressed for work!

Calendar

- May 26th Woodbridge Land Trust Fence erection. Call Philip Arnold 203/387-2098
- June 3rd Save the Chestnut, Earthplace Westport. 2:30pm - 3:30pm. All Ages welcome. Call Pat van de Kamp 203/857-4887
- June 10th Deadline for Pollination requests. Call Gayle Kida 860/668-7981
- June 17th Salem Orchard Maintenance. Call Bill Adamsen 917/796-4284
- June 21st Start of Pre-Bagging. Call Gayle Kida 860/668-7981
- July 1st Start of Pollinations. Call Gayle Kida 860/668-7981
- Aug 2nd Plant Science Day at CAES. Wednesday 10am-4pm Lockwood Farm, Hamden. Call Bill Adamsen 917/796-4284
- Sept 23rd CT-TACF Nominating Committee Meeting. Call Bill Adamsen 917/796-4284
- Sept 23rd CT-TACF Board Meeting. Call Bill Adamsen 917/796-4284
- Sept 24th Start of Harvest. Call Gayle Kida 860/668-7981
- Oct 20-22nd TACF Annual Meeting. Abingdon, VA. Contact Bill Adamsen 917/796-4284
- Nov 11th Annual Meeting, Yale University Sage Hall. Call Garrett Smith 860/678-0437

See the Chapter Web-Site for updates.
<http://ctacf.org>

From the President ...

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our goals this year was to hire a summer intern to assist with the pollinations. We identified a fully funded program through a major (southern) University and qualified (including securing local lodging) but were unsuccessful in attracting a candidate. It would be my dream that by next year, when we have so many new orchards to onboard, that some individual, or company could step forward and provide a grant where we could attract a local student - Yale, UConn, Conn College - to work in the program. The upside is that we were fortunate this year, in being able to hire an extremely qualified Regional Science Coordinator.

The Board has worked over the past six-months developing a program that provides a vision for the Chapter's activities over the next decade. This work culminated with approval and adoption of the Strategic Plan at our most recent Chapter Board meeting. We intend to use it to guide our activities and provide focus to our mission. Other actions included: four confirmed committee appointments, confirmation of an orchard agreement with Great Mountain Forest Corporation, acceptance of the 2005 financial statements, and approval of the budget for 2006.

The Strategic Plan is the result of input from dozens of experts, and countless volunteer hours. It defines our primary goals, and the implementation steps required to achieve those goals. What this means to you the member, is that your membership is more important than ever. I encourage you to get involved by picking one or more events to attend on the

calendar (web-site or front page) and calling the contact name to make arrangements.

While pollinations are the key to our Chapter's success, knowledgeable staff becomes a catalyst for the enthusiastic volunteers that makes the program tick. With this formula we can capture local CT genes for future generations of resistant hybrid American chestnuts as well as future generations of CT residents. I hope you can get involved helping with the pollinations and gathering of advanced breeding nuts. If interested, please fill out and return the response card, or simply pick up the phone and call.

*By Bill Adamsen
CT-TACF President
917/796-4284(m)*

Great news for the Connecticut Chapter! On December 7th, the Internal Revenue Service completed our review, and reclassified us as a public charity 170(b)(1)(A)(vi) under section 501(c)(3).

Reading from their letter (copy on the Chapter web-site)

Based on information you submitted, our letter dated APRIL 1997 in which you were presumed to be a private foundation is hereby superseded. You are classified as a public charity under the code section listed in the heading of this letter.

This is an exciting milestone for the Chapter. This recognition by the Internal Revenue Service allows us to seek funding through charitable contributions as opposed to exclusively membership. Thanks to everyone ... especially the team at TACF Offices in Bennington, for their assistance in securing this change in status.

...Science Coordinator ...

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for edible plants. In high school my father told my sister and I about blight and showed us some sprouts growing in PA. As many people are, I was drawn to the chestnut story.

Over winter break of my senior year at Oberlin College, I volunteered for Dr. Sandra Anagnostakis at the Connecticut Agricultural Experiment Station. The month long internship turned into a summer job, where I learned how to grow, pollinate, and inoculate chestnuts, and to grow chestnut blight and to convert blight fungus with hypovirulence. After working for Dr. Anagnostakis, I helped establish an American chestnut orchard at the Milford Experimental Forest in PA.

I am currently a student at the Yale School of Forestry and Environmental Studies. I am very excited to join the American Chestnut Foundation as the New England regional Science Coordinator.

*Feel free to contact me at
Leila@acf.org.*

I hope you all get a chance to meet Leila this summer. Chances are, that if you participate in one of the pollinations, you will. My first experience with Leila was her "bailing me out" of some of the logistics associated with last year's annual meeting at Yale University. I can't tell you how delighted I am that she's accepted the position to support our regional efforts to restore the American chestnut.

*By Bill Adamsen
CT-TACF President*

Spring Orchard Planting Comes to Salem in Eastern Connecticut!

April 8th dawned overcast with a decidedly poor forecast - snow, sleet and rain - for planting.

While the weather was inauspicious, the occasion was anything but, since the day represented a major first for the CT Chapter.

The trees being planted were the first advanced breeding hybrids from regionally adapted nuts at a TACF hybrid orchard in CT!

David Bingham had prepared the site during the previous week pulling a light harrow over the rows, along with some brush clearing along the edges. He'd also installed some 45 post sockets used to receive the fence posts. The Benners Garden deer fencing system uses lightweight, black polyethylene fencing and 10 foot black steel posts that slide into a 2 foot long sleeve pounded into the ground. David and I completed almost 1100 feet of fencing in 5 hours. The fencing itself is low visibility, so we installed small white flags at regular intervals to make it at least somewhat visible! Expected lifetime is 15-20 years.



David Bingham with direct seeding tubes, seeds, and calculations for the randomized control planting sequence. (Photo courtesy of Bill Adamsen)

While the primary goal had been the fence, we'd also planned to layout and start planting. We were using a system, new to us, for direct seed planting. Gayle Kida arrived to explain the system for integrating control nuts in a random fashion. We numbered the Blue-x sleeves for field placement and identification of our complete complement of 202 nuts (hybrids, controls and Chinese). Field layout was done with a 350 foot surveyors tape with rows 15 foot apart and trees at 8 foot apart in row. Because David operates a low impact farm (in terms of pesticides) he's been experimenting with using a torch to sterilize the soil. We also torched each planting hole for 15 seconds.

One of the objectives of the planting was to test different mycorrhizal effects on growth. We mixed in forest soil from around an American Chestnut in Rows 1,3, 5, 7 - while rows 2,4, and 6 have Oak forest soil additive. Soil from the holes, taken with a bulb planter, was torched to kill any residual seeds and rootlets, then mixed 50/50 with a combination of peat and vermiculite, before adding the Chestnut and Oak additives (latter not torched, to avoid killing facultative soil organisms). David would also like to test the effect of intercropping with different types of plants. There are several ideas to test. First, we'd like a better understanding of any variable response to typical forest understory plants. Chestnut was so dominant that it's loss has undoubtedly had a huge impact on plants as well as animals. Second, would be identifying simple beneficial crops. Since David doesn't use pesticides, this orchard location is

an excellent location to test these relationships.

Back to the planting. I placed out the 24" Bluex tubes in order (they had been pre-numbered and labeled) and returned to insert them in the holes and stabilize them with a 32 inch bamboo wand. The 2.5 inch diameter tubes slid down into the bulb planter holes about 3 inches, hopefully providing some degree of rodent protection. David followed behind with the prepared soil mix and seeds. We were both glad when the sun set and we could no longer read the tube labels, giving us a reasonable excuse to stop. Last step was securing the tops of each tube with a clothes pin to help keep rodents or fowl away from the nuts. David completed the planting over the following days under ideal sunny conditions.

By Bill Adamsen
CT-TACF President



Secure inside their fence, CT Advanced Breeding Chestnuts grow under the watchful eye of a pair of Tree Swallows (Photo courtesy of Dr. David Bingham)

CT-TACF and Northern CT Land Trust Prepare Test Orchard Site

On April 17th, volunteers from the Northern CT Land Trust (NCLT) and CT-TACF joined forces to prepare a section of NCLT's Swann Farm for possible use as a chestnut orchard. Located in Ellington, the Swann property has been preserved as working farmland and also helps provide income for NCLT's land preservation activities. The site offers excellent access to well-drained Narragansett silt loam soils adjacent to a forest with numerous chestnut sprouts.

However, due to its recent cultivation, a soil test last fall revealed a pH of 6.9, not quite acid enough for optimum chestnut growth. It was decided to try a bit of an experiment with soil amendments, to see if acidity could be restored in time for a test planting in mid-May. First, Swann Property Manager George Grant and Jesse Amsel of NCLT and I measured



Garrett Smith guides the rambunctious rototiller between surveyors flags marking row and planting areas (Photo courtesy Gayle Kida)



The intrepid Swann work crew (left to right): Ginny Patsun, Bruce Marvonek, Albe Grant, Jerry Stage, Arend Knuttel, Gayle Kida and George Grant. Not pictured but participating: Garrett Smith, Jesse Amsel and Leslie Grant (Photo by Leslie Grant)

and flagged a three-quarter acre portion of the potential orchard area for rows nineteen feet apart. A central row representing the highest to lowest areas of the field's slope was selected for our test, to check if all areas have favorable soil and drainage qualities.

Garrett Smith, of TACF manned the roto-tiller, while NCLT members and I developed pitching arms tossing aside numerous rocks brought to the surface. NCLT Vice President Jerry Stage, Directors Albe Grant and Arend Knuttel, Jesse, George and I prepared ten 9x9 plots spaced twenty-one feet apart within the strip. Each plot had seven pounds of iron sulfate mixed in, followed by a second tilling; next we raked in one-quarter bale of milled peat moss to add additional acidity plus organic matter. Ginny Patsun, Bruce Marvonek and Leslie Grant joined us for final prep work and cleanup.

After soil bacteria have a month to break down the iron sulfate into acid components, we plan to plant ten 100% American chestnut seed within protective plastic tubes in the prepared plots around mid-May. Ten additional

seeds will be planted in non-treated areas for comparison. I will soil test both treated and untreated areas to see what effect the amendments had over this short period.

CT-TACF appreciates NCLT's support of our early steps toward a system of backcross orchards in Connecticut, and their willingness to set aside land to perform this planting. I would like to personally thank each enthusiastic volunteer for their assistance, and hope the combined resources of CT-TACF and NCLT will nurture promising generations of backcross chestnut seedlings in the years ahead.

By Gayle Kida
CT-TACF Director and Tree Breeding Coordinator



During this beautiful afternoon at Swann Farm, Jerry, Albe and Garrett "work-in" the iron sulfate (Photo by Gayle Kida)

Woodbridge Land Trust Plants their Orchard

At the Tuesday May 9th meeting of the TACF-CT Board, Robert Gregg described the publicity regarding the recent planting of chestnuts from a backcross with Joe Calistro's American Chestnut tree in Woodbridge. On April 21, 2006, Philip Arnold, Robert Gregg, Joe Calistro, Robert Fries and other volunteers planted the chestnuts with a local paper, The Amity Observer, and Channel 12 in attendance. This resulted in an across the front page spread with a picture and a story of TACF's role in bringing back the American Chestnut.

The following week Beecher Elementary students walked to the site for a short talk by Dr. Arnold followed by a question and answer session when the students peppered him with questions that he handled skillfully. The students came in three groups accompanied by several parents, teachers and administrators. It was heartening to see the enthusiasm of the students and the supervisor had to cut off the questions when it came time to go back to school.

Reporters and cameramen from three newspapers and channel 12 were there for this school event. Again we had a front page spread with a picture. Gregg pointed out that personal contact with media representatives led to this result. This favorable publicity can benefit TACF and help in accomplishing our goals. We need more of it. One direct result was that Joe Calistro was given the location of three chestnut trees in Woodbridge that we did not know about. We shall check them out as possible mother trees.

TACF has a well developed program for schools that should be used even more widely than it is now being used. Laurence Grotheer is the Woodbridge Land Trust's chestnut emissary to Beecher School and he made arrangements with the administration and science section and gave them TACF material. Many of the students had logged on to www.charliechestnut.org and some of them had their parents bring them to the site even before the school visit.

Robert Gregg had given out to the media a 10 page brief that he had written or copied from TACF publications so that the story line in the papers was accurate. Copies of this brief, together with photocopies of the front page spreads, was given to each attendee at the TACF-CT meeting.

Wednesday, May 10, 2006, Robert Gregg gave a progress report on the Woodbridge Chestnut nursery to the Board of Selectmen of the Town of Woodbridge. It was well received with kind remarks from members of the Board. The presentation was an expansion of the remarks made at the TACF-CT Board meeting with emphasis on education. The same newspaper reports and information brief were given to the Selectmen as were given to our board members.

To learn more about the Land Trust's efforts, contact Directors Phil Arnold or Robert Gregg.

By Dr. Robert Gregg
CT-TACF Director

Take a Hike Week! At the Stamford Museum and Nature Center

The Stamford Museum and Nature Center continued their special partnership with the American Chestnut Foundation (TACF) during "Take a Hike" week. On Wednesday, April 19, TACF volunteers and Nature Center Staff helped plant new American chestnut seedlings in a research grove at the Nature Center.

The research grove is located in the Beech forest just north of the Museum building. The research grove was established in 2004, to help nurture the growth of blight-resistant American chestnut trees, and restore them to forests in the eastern United States.

TACF Directors Pat van de Kamp and Bill Adamsen talked about what made the Chestnut special and how TACF is working to bring the tree back to the forests of Connecticut. Nature center Director Will Kies organized an outstanding event.

By Pat van de Kamp
CT-TACF Director



Will Kies, directs the tree planting energy of about 40 children at the Stamford Nature Center "Take a Hike" (Photo by Bill Adamsen)

Vegetative Propagation of Chestnut

A few months ago while reviewing e-mails from the Chestnut Growers Forum (Pennsylvania State University) I saw this response to a readers question about vegetative propagation by Hill Craddock at the University of Tennessee, which I reproduce here with his permission. As a detailed description of his experiences I thought it a valuable resource that should get greater distribution. If you have experience with vegetative propagation or grafting with American chestnut we'd be interested in hearing about your experiences.

By Bill Adamsen
CT-TACF President

Chestnuts are difficult to root from cuttings. In my experience, certain types never rooted. In general, Japanese and hybrid cultivars rooted, while European and Chinese cultivars did not. I have no experience with American chestnut.

The kinds of problems encountered while trying to root chestnut cuttings include rooting inhibitors in the stem tissues (endogenous factors which must be removed before adventitious roots are formed), the physiological age of the stems (seedling and juvenile stems root more readily than sexually mature stems), the hardness of the wood and timing of the cuttings (hormone levels need to be adjusted - softwood cuttings in early summer may require less rooting hormone than hardwood cuttings taken later in the summer; and fully dormant shoots collected in winter almost never root).

Attempts to overcome the list of problems have included techniques such as soaking the cuttings before sticking (to leach out inhibitors), collecting from near the base of the tree rather than

from the crown (because shoots arising from near the root system are physiologically immature), wrapping shoots in light-proof barriers (etiolated shoots may more readily form adventitious roots), repeated grafting and re-grafting onto seedling rootstocks to rejuvenate the "adult" material, hormone pre-treatment of shoots before cutting, etc. Tip cuttings from week-old seedlings may, in fact, be very easy to root (however, one has to question the utility of multiplying seedling material).

Consequently, virtually all of the world's chestnut cultivars are propagated by grafting. The only exceptions that I know of are for a few Euro-Japanese hybrids grown from tissue-cultured micro-cuttings in a process patented by INRA (Bordeaux, France), and a very few other types grown from stool-bed layering. These own-rooted plants are mostly used for rootstocks.

Tissue-cultured shoots, by the way, face a similar set of problems with the additional difficulty of hardening off the micro-cuttings even when they do (rarely) root!

Some chestnuts can be coaxed into forming new roots by layering. Simple layers and stool-bed layers were used commercially during the 1970s and 1980s in Italy and France to produce own-rooted cultivars of some of the Euro-Japanese hybrids. But, the stool beds that I know of have mostly been abandoned.

There is a large body of literature on the rooting of (and the failure to root) chestnut cuttings. I have some of the references. If you are interested, please write to me, and I will try to locate the papers.

Hill Craddock Hill-
Craddock@UTC.EDU

NRCS Soil Survey Tool

A new on-line tool from the Natural Resources Conservation Service (NRCS) puts soils databases at your fingertips. A bit challenging at first, it can be mastered relatively quickly and easily.

Although the chestnut was relatively ubiquitous in CT, and can grow in some "questionable" locations, there are some factors which will definitely not allow for good (fast) chestnut growth. Typically, chestnut does not grow well in limestone or calcitic soils, and they cannot tolerate poorly drained soils or those with poor permeability. Soils with large amounts of clay for instance tend to be poorly drained. Once you find out the soil type, you can track down more about that soil type by entering in the soil's name in the database, a full description is then provided.

This tool can provide a great first look into your land's suitability for growing chestnuts (or even other species). It can be used to quickly build professional presentations.

By Bill Adamsen
CT-TACF President



Connecticut's Notable Trees

Trees have a special meaning for people; trees are providers of food, inspiration and materials for art and architecture, as well as providers of renewable fuel. Trees are not only symbolic of our relationship with nature, but symbolic of our reliance on nature for existence. Perhaps for this reason man holds trees in a special place in his heart and trees of record size become a symbol ... a touchstone of the present that links to our past and future. Connecticut College maintains the database of Notable Trees for the state of Connecticut. And this resource can provide hours of fun in researching and discovering trees of great variety and unimaginable dimension.



Rodman Longley (left) and Paul Dieter Wagner visit the magnificent Japanese Chestnut at the First Congregational Church in Cheshire

A book by Glenn Dreyer, Connecticut's Notable Trees, was published by the Connecticut Botanical Society and the Covered Bridge Press in 1989, 1990 and 1998. The later editions were the same as the original, except that they were perfect bound and included updated Champion Tree Lists. Most libraries in the state have copies of the book, and it's also available from the Connecticut College Arboretum.

This description (below) provided by Dr. Sandy Anagnostakis from the CT Agricultural Experiment Station provides background.

In 1876, S. B. Parsons of Flushing, New York, imported lily bulbs through plant collector Thomas Hogg for his garden in Connecticut, and one of the baskets contained, instead, seed of Castanea crenata. He planted the seed, and gave seedlings to all his friends. Two of these are still growing very well in Connecticut; one in Old Lyme on the grounds of the Bee and Thistle Inn, and one in Cheshire behind the Congregational Church.

Though as you can see, this tree is magnificent in size and flower, its size is exceeded by the Old Lyme Tree which holds the record in the Connecticut College list of Notable Trees (below). Should someone have the opportunity to visit the American chestnut (*Castanea dentata*) in Madison, we could provide an update here.

By Bill Adamsen
CT-TACF President

Champion Chestnuts in Connecticut

Species	Colloquial Name	Year Meas.	PTS	Circ.	Height	Spread	Location
<i>Castanea crenata</i>	Japanese	1989	196	135	43	71	Old Lyme
<i>Castanea dentata</i>	American	1991	133	53	70	38	Madison
<i>Castanea mollissima</i>	Chinese	1990	177	108	53	63	Greenwich
<i>Castanea pumila</i>	Chinkapin	1998	38	20	12	23	West Hartford
<i>Castanea sativa</i>	Sweet	not recorded					
<i>Castanea seguinii</i>	Chinkapin	not recorded					

¹ Alleghany Chinkapin ² European or Carpathian (*Castanea sativa* Mill.) ³ Chinese chinkapin

Help Restore the Chestnut to CT

I am very happy to be working as the New England Region Science Coordinator for TACF. I'll be working full-time during summer, and splitting my work with studies at the Yale School of Forestry during the school year. Since I am located in New Haven, I will be working especially close with the CT chapter of TACF. I will be assisting the chapter in many ways, including helping maintain orchards, planting, inoculating, and carrying out the long term plans of the chapter.

This summer, one of my main concerns is to organize successful pollination of new lines of Connecticut American trees. So far CT has made hybrid crosses with two lines, which are now planted in orchards. I would like to pollinate at least five more trees this year, giving us a total of seven lines. In order to accomplish this goal, we need volunteers to help check, bag and pollinate the flowers, and to harvest the nuts. The most time consuming and critical part of this process is checking for readiness of the flowers. Each tree needs an "owner" who will take responsibility for checking the flowers daily or every other day beginning in mid June. Timing in pollination is absolutely critical. If you would like to take responsibility for a tree, or would like to help bag or pollinate the flowers, or harvest the nuts, and I urge you to do so, please fill out and return the card enclosed in the newsletter.













Thank you. I look forward to working with you.

By Leila Pinchot
TACF New England Regional Science Coordinator

**Connecticut Chapter of the
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Inside This Issue!

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The New Leaf

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