

Chestnut Tree

The Pennsylvania Chapter of
The American Chestnut Foundation



PA-TACF Contact Information:

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Spring Meeting Scheduled for Saturday, March 28

Maynard to Discuss Genetic Engineering and American Chestnuts



Keynote Speakers: Dr. Chuck Maynard, College of Environmental Science and Forestry S.U.N.Y. and Essie Burnworth and Kathy Marmet of the MD and VA Chapters (pictured below)..

Meeting Date: Saturday, March 28

Location: Milton B. Hershey Environmental Center, Hershey, PA.

Time: 8:30 a.m. to 3:00 p.m.

Donation: \$10 (for lunch and break service)

In 1988, Maynard began working with American chestnut (*Castanea dentata*), first on pollen collection and storage techniques to support the backcross breeding program, then in collaboration with Dr. William Powell, on engineering blight resistance into American chestnut. He says of the collaboration: "Bill is the molecular biologist and forest pathologist. I'm the tissue culture and field-planting specialist. Bill designs and builds the genes. I put them in plants and grow them up, then he inoculates and kills them. It's a closed-loop system." About 5 years ago, they



Essie Burnworth, Barbara Knapp (MD-TACF Secretary), and Kathy Marmet observe the Isaac Walton League Orchard in Maryland.

expanded their collaboration to include Dr. Scott Merkle at the University of Georgia. Scott has supplied invaluable expertise on somatic embryos and acclimatization of plantlets.

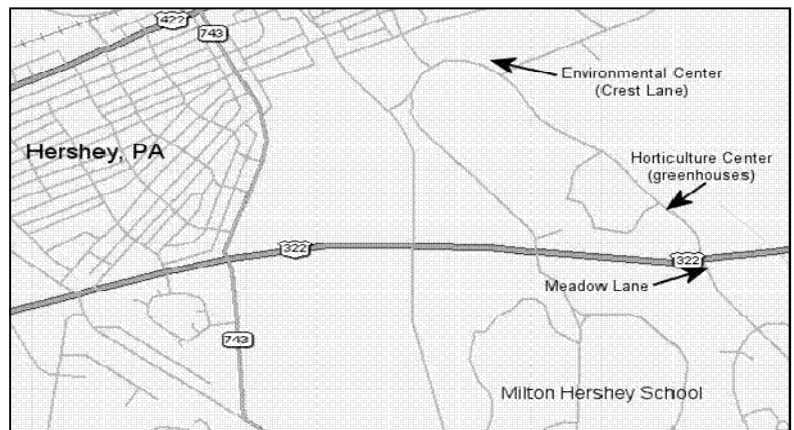
We are pleased to

also welcome guest speakers **Kathy Marmet and Essie Burnworth** presenting their work on chestnut outreach in the schools. Grower supplies will be distributed after the meeting.

Join your fellow members and volunteers for a day of chestnut research, education, and camaraderie.

Directions to our Spring Growers Meeting:

1. From US 322, turn onto Meadow Lane
2. Continue on Meadow Lane to for .05 mile to Crest Lane
3. Turn right to the Environmental Center



In the event of a snow emergency, please call the Leffel Center at 814-863-7192 for an update. The best way to keep informed is to join the PA-TACF E-mail listserv. If the meeting is cancelled due to inclement weather it will be rescheduled for April 4.

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President's Corner

By R. Alex Day

With the start of the New Year and as a result of last year's elections, our Chapter has several new board members and new officers. As the new president I have the privilege of working with our Board and communicating to you about Chapter activities. I would like to thank out-going president Chandis Klinger for his service to our Chapter and especially for introducing me to all the procedures and duties associated with this office.

Likewise, I would like to thank all officers and board members who graciously volunteer their time and talents in various positions. This wonderful outpouring of energy and talent makes our Chapter a very dynamic part of the TACF family. Finally, and on behalf of all, I want to express my sincere thanks to the Leffel Center staff, Sue Oram and Sara Fitzsimmons for their wonderful dedication to their duties and for their boundless energy on behalf of our Chapter.

Looking forward to coming Chapter activities, we will conduct our annual spring (growers) meeting at the Milton B. Hershey Environmental Center again this year. The date is Saturday, March 28th, 2009. Please save this date. Our staff is preparing an interesting agenda including some visiting speakers and a number of hands-on activities. Watch our website for more up-to-date details. The meeting will begin with coffee and refreshments beginning at 8:00 AM. The program begins promptly at 9:00 AM and will last until 3:00 PM.

Also during 2009 our Chapter will host various work sessions throughout the two-state chapter. Please visit our website for more details...And finally, don't forget that TACF's national meeting will be held this year in Pittsburgh, PA. The dates are October 23-25th. Details of the meeting will be posted on the TACF website as the date draws near. Mailings will be sent to all members as well. Thanks to all for your efforts on behalf of PA-TACF and TACF. Remember our great strength is in our tremendous grass-root numbers. **Recruit a new member today.**



Member/Grower Rick Hartlieb and fiancé Jen Huseman of Berks County, PA pose by their PA-TACF orchard sign. Rick and Jen started planting a CMS orchard in 2006 and planted through the 2008 season.

A recent graduate of Penn State University and current forester for PA DCNR, Rick became a PA-TACF member in 2005, while still a forestry student at PSU. In addition to planting a chestnut orchard on his property, he helps tell the chestnut story through his work and educates people about chestnut restoration today.

Election Ballots Are In! With 30% return

We are pleased to present the PA-TACF 2009

Board of Representatives:

Officers:

- President: R. Alex Day (2009-2010)
- Vice President Tim Eck (2009-2010)
- Past President Chandis Klinger (2009-2010)

Board Members:

- Dylan Jenkins (2008-2009)
- Dr. William Lord (2009-2010)
- Mike Shanshala (2009-2010)
- Susan Smith (2008-2009)
- Alan Tumblin (2008-2009)
- Jim Walizer (2009-2010)

Appointed Board Positions:

- Tracey Coulter DCNR Rep.
- Jim Egenrieder Treasurer
- Ron Farr New Jersey Rep.
- Sara Fitzsimmons Breeding Coordinator
- Sue Oram Secretary

Contact information is available through the Leffel Center office by calling 814-863-7192 or at mail@patacf.org

Don't Count Your Tents Before They Hatch.

Member, grower, and volunteer Les Nichols called our office to offer some advice about Tent Caterpillars (and always one to take advantage of an opportunity when he sees it, please see a note about Les' generosity on page 4).

Last season, many areas of Pennsylvania, New York, and New Jersey were hard hit by these unforgiving eating machines. These pests are quite fond of laying eggs in cherry trees, but they will eat many different hardwoods including oaks and, of course, chestnut.

While there are some pesticides labeled for use on tent caterpillars in forested situations, mechanical extraction and destruction of the egg masses can be more effective and, depending on the height of the tree, much less risky. Doing this in the winter, before the eggs have hatched, makes them quite easy to spot and remove (see Figure below).

The egg masses will be out toward the tips in masses that are ceramic-like, almost looking like a bean seed, as Les put it. With the leaves down, these masses can be readily seen in many species but especially black cherries and even ornamental cherries in yards. Clip off the egg masses and then burn them. Using a telescoping pole pruner can allow for effective removal to heights up to 20feet or more.

Bacillus thuringiensis subsp. *Kurstaki* and *aizawai* are effective biological insecticides. Chemicals such as Sevin that are labeled for control of tent caterpillars. But for either, application can be risky, exposure increased, and efficacy decreased as the trees become taller. For very tall trees, many extension publications recommend contracting certified aerial application agencies, though the cost can be quite high, if not prohibitive.

If choosing to spray for control, the best time to do this is just after the caterpillar hatches and while they are young, around April and May. Destroying adult caterpillars may satisfy for vengeance, but does little or nothing to prevent damage; it's all already been done (adults shown above).


As with most chemical controls, timing and efficacy both depend on the chemical being used. Be sure to read all labels very carefully!



Tent caterpillar egg masses. Photo credits: Herbert A. "Joe" Pase III, Texas Forest Service, Bugwood.org




Adult tent caterpillars. Pennsylvania Department of Conservation and Natural Resources - Forestry Archive, Bugwood.org



Thank you, Chestnut Grove Foundation for your 3-year commitment of support for maintenance at the House Rock Nature Preserve Hybrid Chestnut Orchard.

Uncle Sam wants YOU
to have more tax deductions based on your dedication to the restoration of the American chestnut.



**10,128
volunteer hours
in 2008!**

We wish to thank all of the volunteers that submitted their volunteer hours supporting chestnut restoration in 2008. We know there are more hours that go unreported, but here's how we stack up:

- **8,191 Individual Hours**
- **2,427 Group Hours**
- **46,589 Miles Driven by Volunteers**
- **\$3,926 in Donated Goods/Supplies**

These donations can be **TAX-DEDUCTIBLE!** Join us for our spring meeting in Hershey, PA on March 28 to learn how to more easily track your donated time, mileage, and donations.

NEWS FROM NEW JERSEY: BOARD APPOINTS RON FARR AS NJ REP

Ron Farr has been employed in the Source Water Management Program at the North Jersey District Water Supply Commission for eight years as a Watershed Land Scientist/Forester. Ron has a BS in Forest Management from the University of Maine and a Masters Degree in Environmental Management from Montclair State University.



New Jersey Board Representative, Ron Farr.

Ron is a Certified Forester and is an Approved Forester in New Jersey and New York City Watershed. Beside the American Chestnut Foundation, he is a member of the Society of American Foresters, American Water Works Association and American Water Resources Association. Past work experience includes employment two years at the New Jersey Forest Service as a Forester, three

years as an Adjunct Professor at DeVry College of Technology, seven years as a Senior Environmental Specialist with the Bergen County Health Department and one year as a field technician with the United States Testing Company. Ron was roped into the American Chestnut Foundation by Bob Summersgill after reporting three American Chestnut trees in Northern New Jersey. He has been involved with the breeding program there for about 5 years now. Ron resides in West Milford, New Jersey with his wife and three children. Welcome Ron and thank you for representing NJ chestnut initiatives!

Raystown Lake Chestnut Orchard Expands!



Raystown Chestnut Program Coordinator, Rick Entrekin inspects flowers at the Raystown orchard with Matt Long, environmental resources intern at the Army Corps of Engineers at Raystown Lake



Member Sheldon Hoover has volunteered at Raystown for 2 years. In addition to donating his time, labor, and knowledge, Sheldon has loaned his equipment and tools to the orchard.

In 1999, PA-TACF worked to establish an American chestnut germplasm reserve orchard at Raystown Lake, just south of Huntingdon, PA.

With continued perseverance by Jeff Krause, wildlife biologist with the Army Corps of Engineers, and the recent dedication and, seemingly endless energy of volunteer Rick Entrekin, the orchard has begun to flourish and fruit.

Now, with two deer fenced areas, Rick, Jeff, Sheldon (pictured above), and other volunteers from the area will work to plant a 2nd generation CMS orchard (1st backcross material) in one fenced-in area. In the other, the crew will plant advanced backcross material from the program at the Connecticut Agricultural Experiment Station (CAES).



Nichols Supports Chestnut Restoration in Lieu of Retirement Party

New Jersey member and volunteer Les Nichols was given the option to have a retirement party in celebration of his 40 years of service to Embarq, or have the \$1,000 directed to a charity of his choice. He picked PA-TACF. Thank you Les, for your generous support.

Volunteer Spotlight: Robin Wildemuth by Josh Flad

For the past five years, consulting forester Robin Wildemuth has been actively involved in the restoration of the American chestnut. A graduate of Dartmouth College and Duke University, Robin has spent his career tackling multifaceted natural resource management issues. Those that know him find it no surprise that he has chosen to spend countless hours in the field and office helping reestablish the American chestnut in Northeastern Pennsylvania.

Robin's volunteer work with the American Chestnut Foundation started in 2004 when he attended a meeting at Grey Towers National Historic Site and former home of Gifford Pinchot. Since then, Robin has consistently taken time out of a busy work schedule to control pollinate native chestnut trees scattered across the Pike county landscape in an attempt to capture genetic variability of regional specimens. Under his direction recruited family members and volunteers have located, bagged, pollinated and collected nuts from native chestnuts growing in diverse locations. Pollinating some native chestnuts required carrying ladders through dense laurel and blueberry thickets while other trees were reached by tree trimming bucket trucks generously donated by PPL. All tree locations were recorded for future reference.

In addition to running his consulting business, and his extensive volunteer work, Robin serves as the land manager for one of the oldest and largest private hunting clubs in the country, the massive Blooming Grove Hunting and Fishing Club. It is this setting that provided the inspiration and necessary space to establish a successful chestnut orchard. In 2005, Robin orches-

trated the preparation and planting of a 2 acre orchard on the Blooming Grove property. The Blooming Grove orchard was established to help reach TACF's goal of 20 regionalized lines of advanced backcross material within the Clapper source of resistance. With the help of Robin's family and several volunteers

254 chestnuts were planted that first spring. Since that time additional blocks of chestnuts were planted each spring to the present day. Today there are almost 500 healthy chestnut saplings growing at astonishing rates on soils that previously supported a white pine woodland. Some 3- year- old saplings in this orchard measure 7 feet!

The possibility of bringing a species like the American chestnut, known for its importance to wildlife and timber production back into our Eastern forests excites natural resource professionals like Robin and his small group of volunteers. Through his efforts and the efforts of others like him local genetic variation among native chestnuts may have been captured for backcross breeding future generations of blight resistant chestnuts. His dedication, time and knowledge has led to the establishment of the first significant chestnut orchard in Northeast Pennsylvania. The contributions of volunteers like Robin are invaluable to the success of TACF's goal.

“Those that know him find it no surprise that he has chosen to spend countless hours in the field and office helping reestablish the American chestnut in Northeastern Pennsylvania.”



Volunteer Spotlight nominee, Robin Wildemuth (left), stands with the author, Josh Flad, at the Blooming Grove orchard in Pike county sometime in 2007.

PA Native Chestnut Culture: C.K. Sober and the Paragon Chestnut

Part One

by William Sober, Sr.



C.K. Sober farm in Northumberland Co. PA where Sober turned most of unproductive land especially mountain sections that had been lumbered off into permanent usefulness.

Most of the land lumbered off was of chestnut timber. This is where Sober got the idea of starting the Chestnut Farm. After the timber is cut in a comparatively

His idea was new and his father laughed and asked “whoever heard of grafting chestnuts?”

short time, a luxuriant second growth appears. This is where he got his grafts for the start of the new trees by cultivations and artificial propagation. In Europe, the cultivated chestnut is an important food product.

Italy, France, Spain, and Turkey the nut served as a

chief article of food to the peasants, who learned how to prepare it. The nut was used as a vegetable or ground into flour and made into bread, or prepared as a soup or pudding, and also candy. It was also used as filling of the turkey at Thanksgiving here in our country.

Mr. Sober bought the farm from his father in 1896. When he got his idea for the Paragon Chestnut. There was some 400 acres of waste mountain land reclaimed and put to use. The shoots from the old chestnut stumps were allowed to grow until 1-2 years old, when they were grafted. There were different varieties such as Numbo, Ridgely, Alpha, Reliance, Hall, or Parry, but the Paragon was recommended above all for best results. Mr. Sober as a boy of 18 years received his first lesson in grafting from his father while helping to graft

apple trees. He suggested to his father that they graft some chestnut trees. One old chestnut tree on the farm bore unusual size and excellent quality nuts. From this tree, CK Sober wished to graft scions upon other native trees. His idea was new and his father laughed and asked “who ever heard of grafting chestnuts?”

His idea as years past was not forgotten. In 1896 his dream became a reality

after he purchased the farm which he called the Chestnut Grove Stock Farm, which is located in the beautiful Irish Valley about 7 miles from Shamokin, PA.

“....most burs of immense size, often 5 inches or more in diameter, with spines over one inch in length

The original Paragon tree was grown in Germantown, PA by W.L. Shaffer from a nut brought to this country from Europe, perhaps France or Spain. These nuts are of excellent quality and compare favorably in sweetness and delicacy of flavor with the native nut. These nuts were found to be 3-4 inch in circumference and size, often 5 inches or more in diameter, with spines over one inch in length and occasionally one is found to cover a silver dollar, while the average nut will over a half dollar. 32 selected nuts when first gathered weighted a pound and 48 average nuts fill a quart measure. These nuts ripen in the last week of September or first week of October. These nuts average from 3-5 inch each bur and most burs of immense size, often 5 inches or more in diameter, with spines over one inch in length. In 1898 they began the grafting with the use of professional grafters, but the results were discouraging. There were less than 5% of the scions that lived. The



Bareroot stock being prepared for shipment at the Sober Farm

wedge graft used was so imperfect that only a fair number started to grow. Or were blown off by the wind. The rapid growth of the scion made possible by the good root system of the stock was too much for the young shoots. The weight of the leaves made them top-heavy and were blown off by the light winds.

In 1899 Sober began experiments on grafting and devised methods to reduce failures. With this new experiment as a result 75% of the scions grafted in the 1900 lived. The whip or tongue graft used proved to be the most successful. The month of May was the time for grafting. In February and March, scions were cut and kept dormant in cool places, packed in damp sand or moss, and kept there in an ice house packed in ice cakes until wanted. The grounds around the young grafted trees **has to be** kept clean by grubbing, mowing, and burning. This was done mostly by Italian workers. C.K. Sober employed as many as 15-20 men.

Editor's Note: William Sober, Sr. is C. K. Sober's great grandson. Part 2 of this article will follow in our Fall edition of the Chestnut Tree. Much of the information presented in this article is covered, with wonderful pictures, in a publication from Bucknell University entitled Chestnut Culture in Pennsylvania Professor Nelson F. Davis in 1904.



Workers clear orchard brush at the Sober Farm to make way for more plantings.



BREEDING PROGRAM UPDATE SARA FITZSIMMONS

As always, it's been a busy year for the Pennsylvania Chapter! Here are a couple of the more prominent aspects of our program.

2009 FOCUS ON AMERICAN BACKGROUNDS

With Dave Armstrong back at the helm of our Science Committee, our vision for the future of breeding in PA and NJ is strong and far-reaching. This season, a main focus of our breeding and harvests will center on obtaining as many sources of **AMERICAN SEED** as possible. If you have an American chestnut and can either pollinate and/or collect open-pollinated seed from it this fall, we want to hear from you! All previous submitters of Tree Locator Forms will be contacted in an effort to retrieve as diverse a set of American collections as possible.

Once these new backgrounds are made available, we'll need people to plant them and conserve the available diversity of American chestnuts in our state. Though many are hesitant to plant blight-susceptible trees, there are many great reasons to plant these trees. Please call our office to find out how these plantings will significantly help our cause.

BC3F3 PRODUCTION and PLANTINGS

As you all know, the current breeding program of TACF expects that its sixth-generation material should be that which can be utilized for large-scale distribution and reforestation. With production now really starting, seed and seedlings are now going to be made available to our members on a seniority basis.

Headed by our National offices in Bennington, those who have been members the longest should soon receive notice of a chance to purchase these seed. This material is not yet guaranteed, of course! But we hope to have our membership become an integral part in the testing of TACF's most advanced material.

In addition to making this material available to our membership, our CEO makes decisions regarding special and ceremonial plantings such as that at the White House in 2005. This year, we will be planting several seedlings in cooperation with **MORRIS ARBORETUM** in Philadelphia, PA



Tim Womack of "Trees Asheboro" shows off scion wood from the Adair County tree (KY) to students from the Chestnut Hill Academy on a field trip to Morris Arboretum.

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The Chestnut Tree Newsletter

PA-TACF Partners with Penn State for Centre County United Way's Day of Car- ing 2008



PSU Outreach employees help at the Hybrid Chestnut Orchard at the Arboretum at Penn State in October 2008. Volunteers shown: Denise Rupert, Trishtana Harvey, Jennifer Mastrofskyi, Chriss Shultz, Paul Demmert, Dennis Bender, Naana Nti, Sam Komlenic, Karol McClintic, Paul Lupo (Group Leader) Sara Fitzsimmons, (Group Leader) Photo provided by volunteer and graphic designer, Dennis Bender of Theorem design.

Chapter Calendar: Spring 2008

February 18-20, Society of American Foresters (SAF) Conference, State College, PA.

March 7, Woodland Owners Conference, sponsored by Bradford County Extension, Penn's Inn, Penn College of Technology, Williamsport, PA 570-265-2896

March 21, New Jersey Native Plant Society Annual Meeting, 10: 00 a.m. -1:00 p.m. at the Trailside Nature Center, Mountainside, NJ.

March 27, PA-TACF Board Meeting, Milton B. Hershey School, Hershey, PA.

March 28, Annual Spring Member Meeting, Milton B. Hershey School Environmental Center, Hershey, PA.

March/April The history and impact of the American chestnut and American Chestnut Foundation presented in part 4 of the PBS series "Appalachia: A History of Mountains and People" Check your local PBS station listings for dates and times.

April 18-19, Planting weekend at the Lancaster County Conservancy House Rock Chestnut orchard.

April 18, Earth Day Celebration at the Lewis Morris County Park in Morristown, NJ.

April 23-24, Outdoor Adventure Days, Quemahoning Lake, Somerset County, PA.

May 15, Outdoor Education Days, Boswell Elementary School, Somerset County, PA