

Chestnut Tree

The Pennsylvania Chapter of
The American Chestnut Foundation



PA-TACF Contact Information:

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March 2008



Spring Meeting Scheduled for Saturday, March 29



- Date:** Saturday, March 29
Location: Milton B. Hershey Environmental Center, Hershey, PA.
Time: 8:30 a.m. to 3:00 p.m.
Donation: \$10
Keynote: Dr. Bob Paris, Research Geneticist, TACF Meadowview Research Farm

Dr. Paris' presentation will be Strengthening the breeding Program; including breeding basics, new sources of resistance and chestnut identification.

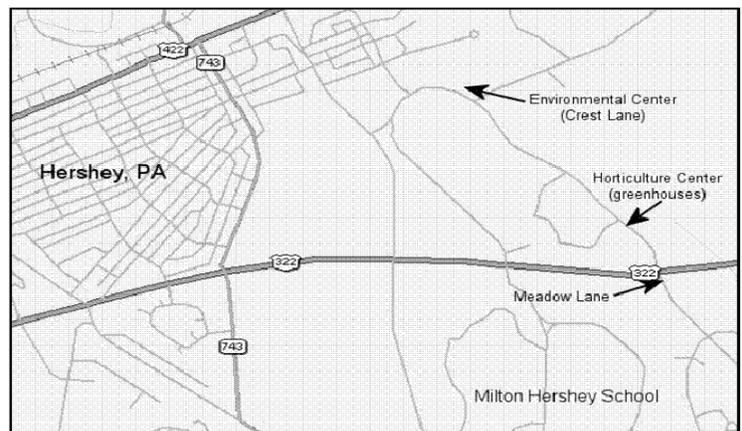
Meeting breakout sessions will include:

- Ann Leffel: update on CMS program
- Dave Armstrong: Fertilization and Herbicide Practices
- Ed Fritsch: NJ Forest Assessment Program
- Sara Fitzsimmons: Regional Breeding update

If you are a new member, or interested in becoming a member, this meeting is a great place to learn about PA-TACF and our mission. Hope to see you there!

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 12.

PA-TACF early 2008 Calendar:

Feb. 7-9	PA Sustainable Agriculture (PASA) Conference, State College, PA
Feb. 12	Nutley Community Preservation Partnership presentation, New Jersey.
Feb. 28	Western PA Nature Center Roundtable, Wild Resources Symposium
Feb. 29	PA Assoc. of Environmental Educators
Mar. 15	NJ Native Plant Society, Cook College
Mar. 29	Annual PA-TACF Spring Meeting, Hershey, PA
Apr.4-6	TACF Board and Cabinet Meeting, Pittsburgh, PA
Planting Season begins!	



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President's Corner

By Chandis Klinger

This year marks the 25th anniversary of The American Chestnut Foundation (TACF). When the foundation was formed in 1983, they thought it would take 60 years to develop a highly blight resistant American chestnut. In less than half that time, we began to produce nuts that we believe to be highly blight resistant. At the TACF research farm, a few of these nuts were produced for the last several years. This year we produced some of these nuts at the Arboretum at Penn State. These early nuts are entering a test program to determine if we getting acceptable blight resistance. It may take another 30 to 40 years to know if the tree has the American characteristics and grow to 100 feet tall.

There will be a 25th celebration at the annual meeting this fall in Chattanooga, TN. Part of the celebration will be an Appalachian Trail Walk between AL and ME. PA's walk coordinators are Tracey Coulter at 717-783-0381 or trco-coulter@state.pa.us and Ethan Habrial at Green-Tree@fast.net or 610-863-9962. Contact Ethan or Tracey if you can do a portion of the Walk. You can do the walk any time you desire, but before the fall meeting.

The previous 5 -year strategic plan was updated for the next 5 years. It defines the many items that must be and should be done for completing diverse breeding orchards with different sources of resistance. In the next few years, we will need to evaluate the requirements for additional help (both hired and volunteer). Currently we are sowing Clapper source of resistance in the Arboretum at Penn State and we will shortly begin sowing Graves source of resistance in an orchard. Other sources of resistance are in the works.

At the beginning of 2007, the only confirmed grant we had was \$5,000 from the Norcross Wildlife Foundation to purchase a vehicle for Sara. We did not have any other confirmed funding source to have long range operating visibility. By the end of the year, we had several confirmed funding sources that will aid us greatly. Thanks to Representative Sam Smith and Fred Roberts, we received a \$50,000 grant from the Department of Community Economic Development (DCED) to fund salaries (retroactive to July 1, 2006) for our Leffel Center staff. Tim Eck successfully got us \$25,000 to establish a Graves B3F2 breeding orchard. Sara Fitzsimmons and Sue Oram worked together at the office to get a \$22,400 grant from

Wild Resource Conservation Program (WRCP) for breeding activities, \$1200 Hardwood Forestry Fund for equipment., and \$4,000 from Hardwood Development Council for an intern. We continue to receive a quarterly \$500 grant from Exxon Mobil.

GROUNDBREAKING FOR ARBORETUM at PENN STATE

The Arboretum at Penn State had a groundbreaking ceremony this past November as the construction of Phase I of the H.O. Smith Botanic Gardens began. Thanks to a generous donation from PSU alum- nus Charles H. "Skip" Smith in May of 2007, The Arboretum at Penn State will now be an official part of the Penn State landscape.



Since the Arboretum is a long-time supporter of the chestnut project and home of the B3F2 seed orchard, many thanks and congratulations are in order.

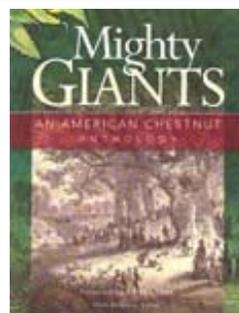
BOARD ELECTIONS

30% RETURN BALLOTS

Thank you for sending in your ballot cards. The following Board Members were voted in for a two-year (2008-2009) term:

- Ed Fritsch
- Dylan Jenkins
- Alan Tumblin

Effective January 2008, Board member Jim Egenrieder will take the Treasury position, and the former Treasurer, Tim Eck, will take the Board position.



Q.) *Mighty Giants: An American Chestnut Anthology* features which two Pennsylvania members and authors?

A.) Chris Ditlow and Dr. William Lord

Pick up your copy of the book at our spring meeting March 29, in Hershey, PA, or order directly from the main TACF offices in Vermont.

Ouch! Students Amazed by Sharp Burs

7th-graders from Park Forest Middle School, in State College, PA spent a morning at our orchard at State Gamelands #176 harvesting nuts, followed by an educational program by Sara Fitzsimmons.



We would like to thank Biology teacher Steve McAninch for including the American chestnut in his classroom.



We would also like to thank Sierra Ashley Hansen, State College High School student who harvested nuts at Gamelands #176 to fulfill her volunteer hour(s) requirement for school.



PA-TACF welcomes student volunteer groups. Call 814-863-7192 to find out how you can help PA-TACF in your region this spring.

Photos courtesy of Steve McAninch

(Continued from page 8) **BREEDING UPDATE**

partnership and willing to help Jan, Katie, and many other volunteers work in the orchard.

Please try to make it to our Spring meeting on March 29 where you might pick up a small lot of seed from that orchard to plant this spring.

DID YOU KNOW? We have several Research Partners in the Philly Area.

PA-TACF orchards are not just in the rural counties of PA. Check out our urban partners in Southeastern PA:



- The Philadelphia Zoo, Demonstration planting (near the bird area), Philadelphia, PA
- Longwood Gardens, Kennett Square, PA
- Schuylkill Center for Environmental Education, Philadelphia, PA
- Tyler Arboretum, Media, PA
- Red Clay Reservation, Hockessin, DE
- John James Audubon Center at Mill Grove, Audubon, PA
- The Westtown School, Westtown, PA

GET HUNGRY! for Arbor Day Fundraiser



Celebrate Arbor Day 2008 with a night out at Hoss' s Steak and Sea House.

20% of your bill will be donated to PA-TACF. As of press time, we have volunteers willing to distribute tickets/vouchers for the following locations:

Carlisle	Huntingdon
Chambersburg	Meadville
Duncansville	Shamokin Dam and
Gettysburg	State College
Hummelstown	

You will need to present a ticket with your bill for PA-TACF to get any proceeds. The event will be held in April. (Arbor Day week). Dates for each location will be announced prior to our spring meeting.

If you would like a voucher for one of these locations, please call the Leffel Center at 814-863-7192. Thank you for your support!!

\$25,000 ALCOA FOUNDATION GRANT JUMPSTARTS 5th GENERATION ORCHARD in LANCASTER.



PA-TACF and Lancaster County Conservancy (LCC) to Partner.



The grant from the Alcoa Foundation will fund the establishment of a 5th generation chestnut breeding orchard at that will be located on the Lancaster County Conservancy's House Rock Nature Preserve in Martic Township, Lancaster County.

The project includes installation of a deer enclosure around the planting site, establishment of a parking and educational resource area near the site, purchase of equipment necessary to maintain the American chestnut trees, and development of related educational materials.

The project will also partner with the National Wild Turkey Federation (NWTf) to include plantings of habitat for turkey and other wildlife. Such collaboration helps aid the LCC in efforts to fit multiple conservation strategies and goals on their lands.

“Within five years of the initial seed planting we expect the trees to begin production of sixth generation seed; and in another ten years we should begin to produce sufficient quantity and diversity for public distribution and restoration of Pennsylvania forests”, said Tim Eck, PA-TACF’s Lancaster County volunteer coordinator and orchard manager.



“The House Rock Project is a natural match for Alcoa's 10 million tree program,” said Tim Fitzpatrick, Alcoa, Lancaster’s Environmental Health and Safety Manager. “Alcoa has been giving trees each year since 2003 to employees and community groups, with the ultimate goal of planting 10 million trees. Several million trees have already been planted at sites around the world. Each tree, when mature, will absorb 40 pounds of carbon dioxide per year.” Scientists cite increases of carbon dioxide in the atmosphere as one of the prime causes of global warming, and many are recommending reductions in man-made emissions of carbon dioxide from burning fossil fuels to halt or slow global warming.

PA-TACF would like to thank Alcoa, Tim Eck of PA-TACF and Carl Martin of LCC for their vision and efforts for making this project a reality.

Major PA Paper Covers Harvest



On September 24, 2007, representatives from PA-TACF and the Pittsburgh Parks Conservancy harvested nuts from our

chestnut orchard on Stanton Avenue in Highland Park. The orchard was planted in 1996 when the City of Pittsburgh, led by the support of then-City Forester Dale Vezzetti and then-City Councilman Dan Onorato, joined the TACF’s breeding program.

Thank you to volunteers Phil Gruska, Larry Patchel, Bill Lord, Rudy Keller, April Claus, Aaron Stoler, and John Hemple. Thank you Melissa McMasters for working on the release and media distribution to get an article in the *Pittsburgh Post Gazette*. Highland Park is the oldest of three PA-TACF research orchards in the Pittsburgh area.

NOTE: The TACF Board and Cabinet Meetings will be held April 4-6 in Pittsburgh, with a visit to Frank Lloyd Wright’s Fallingwater. The meetings are open to members. For more information, contact TACF at 802-447-0110

Volunteer Job Board

Pa-TACF has many volunteer opportunities available throughout the year , throughout the state. Please consider lending your talents to one of these activities.

Orchard help

- **Planting**
- **General maintenance**

Education Outreach

- **Presenting to Groups**
- **Event Attendance**
- **Appalachian Trail Event Support**

Operations

- **Clerical, mailings**
- **Fundraising**
- **Website development**
- **Public Relations**
- **Developing marketing materials**

NEWS FROM NEW JERSEY



The Burlington County Parks Department will plant two test orchards this April, with the help of project leaders Bob Tallon and Matt Johnson, BCPD has over 2,100 acres of land allotted for parkland development, with more to come.

We'll be doing pollinating again in Monmouth County. Last year in addition to the hybrid crop, we were fortunate to harvest 195 nuts from two large Americans growing together that cross pollinated. One is a 75' high, 18" DBH tree and the other 12" DBH. We provided most of the nuts to the chapter for the breeding program and kept some for local use. These trees are exhibiting some blight resistance, so we think this is an important crop.

Thank you Monmouth volunteers: Gray Lovallo, Shade tree Commission Superintendent; Ken Thoman, Monmouth County Park System, Bob Mellert (provided Chinese pollen), Ira Taylor, Mike Ziroli, Frank Feather, Roy Morton, Christine Cheung, Kim Tjho, and

volunteer coordinator Tony Rosati.

Thank yous are also due to John Kressbach for taking care of Mount Paul in Chester, Mervin Haines and Mindy Becker at Schooley's Mountain; and Les Nichols at the Bruce field in Hunterdon County. Lou and Ann Cyktor continue oversight at their Lark Nursery research planting and survival updates were taken by Bob Summersgill and Bill George. And NJFS keeps working hard to protect their trees at Stokes State Forest—Thanks Jack Shuart and Frank Hennion! There were also pollinators Ron Farr, Ed Fritsch, Mervin Haines and Bill George in northern NJ.

Record Turnout At Fall Meeting



With over 60 people in attendance, we were filled to capacity at the fall meeting at Penn State. The meeting featured Lee Stover teaching a hands on wood ID class and informative chestnut planting workshops by Sara Fitzsimmons, Chandis Klinger, and Jim Walizer. In addition, Dr. Bill Lord followed up on his Spring meeting presentation on the Blight Commission reports by discussing both the history of work on hypovirulence.

The meeting ended with a tour of the BC3F2 Orchard at the Arboretum at Penn State. The chapter raised over



New Board member Ed Fritsch prepares a wood sample during Lee Stover's wood ID session



\$1200 from the silent auction and merchandise sales, and more than \$300 for Boy Scout Troop #55.

Thank you Alan Tumblin for working our "store" and Chris and Winston Ditlow for supplying the beautiful wood products. Special thanks to Lee Stover, and behind-the-scenes Penn Staters Allison Muth and Kathy Kasubiak.

Winston Ditlow kicked-off our meeting with his bugle call and flag ceremony. Winston was also willing to play the harmonica or bugle for every donation to Boy Scout Troop #55.



Thousands Flock to PA Farm Show

PA-TACF provides two chestnut presentations for the masses.

The PA Farm show continues to generate public interest for PA-TACF. This year, Dave Armstrong was interviewed by PCN (The Pennsylvania Cable Network) and PSU radio. Sara Fitzsimmons and Chandis Klinger gave chestnut presentations; and our tireless volunteers spent many hours discussing backcross breeding, tree locator forms and the value of PA-TACF membership.



Why do we spend 8 days and 300 volunteer hours at the PA Farm Show?

The PA Farm show is the nation's largest indoor agricultural exposition, giving us a chance to meet and educate people of all ages about chestnut history, TACF, chapter activities, and orchard locations. Each year, we gain new members, volunteers, donors, and growers from this one venue.



Peter and Juliet Lane took the train out to Harrisburg to volunteer with PA-TACF

Thank you Farm Show volunteers— We can't do it without YOU!: Alan Tumblin, Dave Armstrong, Tim and Liv Eck, Jim Egenrieder, George Perry, Ethan Habrial, Chris and Lois Ditlow, Bob Summersgill, Susan Smith, Alex Day, Jean and Lee Saufley, Robert Meiser, Tom Pugel, Don Franks, Dylan Jenkins, Fred Priebe, Les McCurdy, Sara Fitzsimmons, Sue Oram, Peter and Juliet Lane, Chandis Klinger, Tracey Coulter, Mike Webb, Jim Walizer, Lionel Lemery, Mike Waldron, and Bill Monatgue.



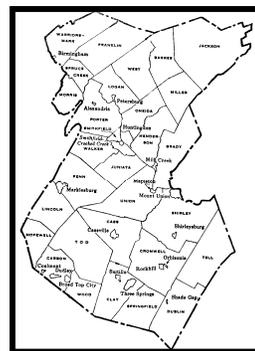
WELCOME JUNIATA COLLEGE!

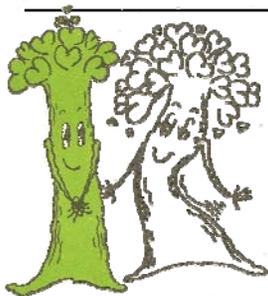
A new research and demonstration orchard will be planted this spring at Juniata College in Huntingdon, PA. Dr. Uma Ramakrishnan, Department of Environmental Science and Studies and Ashley Musgrove, student, will coordinate the research with Sara Fitzsimmons. Juniata College is our fourth higher education chapter partner. Many thanks to Rick Entriken for helping make this collaboration happen.

VOLUNTEER SPOTLIGHT

In this issue of *The Chestnut Tree* we would like to thank the Huntingdon County PA-TACF Members, who may be small in number, but whose efforts and enthusiasm abound. Thank you Rick Entriken, for your hard work bringing the Raystown /Army Corps of Engineer orchard back, numerous volunteer hours, and making the initial Juniata College contact.

We'd also like to thank new members Sheldon Hoover and Dale Sherman for joining our Huntingdon County chestnut contingent and spreading the word about our mission.





BREEDING PROGRAM UPDATE

SARA FITZSIMMONS

We had another solid breeding and harvest year through 2007. Though the Chapter is not making as many controlled pollinations as in the past, collection of open-pollinated seed is up and, as seen in the collections at Highland Park in Pittsburgh, allowing not only for great testing stock, but also good public relations and media attention.

That said, our most exciting development is likely the collection of . . .

SIXTH GENERATION SEED



As Chandis mentioned in his President's Corner, the BC3F2 seed orchard at the Arboretum at Penn State¹ has

produced sixth generation (BC3F3) seed. The hope of TACF's backcross breeding program is that BC3F3 seed will be that generation that can be used for reforestation and restoration purposes¹.

Where are these seed? Under lock and key, of course! But seriously, the first members of this generation will have very little genetic diversity and be useful only for evaluation purposes.

For the next several years, BC3F3 seed produced will primarily be placed in research plots so that we may test that generation's resistance and overall American form and character. Once that testing phase is complete, a more diverse set of BC3F3 seed should be available and ready for reforestation. We hope to hit that mark within the next 5-10 years.

INOCULATIONS

Since 2000, PA-TACF has been working to inoculate its orchards. This process is that wherein we challenge our hybrids with the fungus in order to determine whether they are good enough for future breeding.

Usually, we use a very subjective rating method. Trees are given a rating from 1—5 where 1 is highly resistant (the very best Chinese trees) and 5

is highly susceptible (like most American chestnuts).

But how do we know the system is selecting the best trees? Recently, PA-TACF member Timothy McKechnie spent a large amount of time measuring the length and width of every inoculated canker. A huge effort, to be sure!! While his measurements were taken for another distinct purpose, I decided to take a look at how our rating system matched up with the size of cankers.

Basically, the larger the canker, the less resistant the tree should be. The smaller the canker, the more resistant the tree should be. So, if a tree is ranked with a 1, it should have a very small average canker size. From there, the size of cankers should increase as ratings increase.

Thankfully, it looks like the ratings are matching up relatively well with canker size. Though these findings don't **guarantee** that the selections have the proper resistance alleles, these kinds of checks can help keep our program on check and evaluate possible changes that might need to be made.

HAUN ORCHARD

Why plant straight American chestnuts? They're just going to get the blight and die, right? Well, not exactly. Even straight American chestnuts can live for long periods of time and most produce chestnuts if properly cared for.

And a find by our Mercer County group (headed by the county's Cooperative Extension Director Gary Micsky) helps prove that point. In 1980, the late Charles Haun of Sandy Lake, PA (Mercer County planted 450 American chestnut seed on his 206-acre farm. Though all but one of the original stems seem to have died, many continue(d) to resprout.

(Continued on page 8)

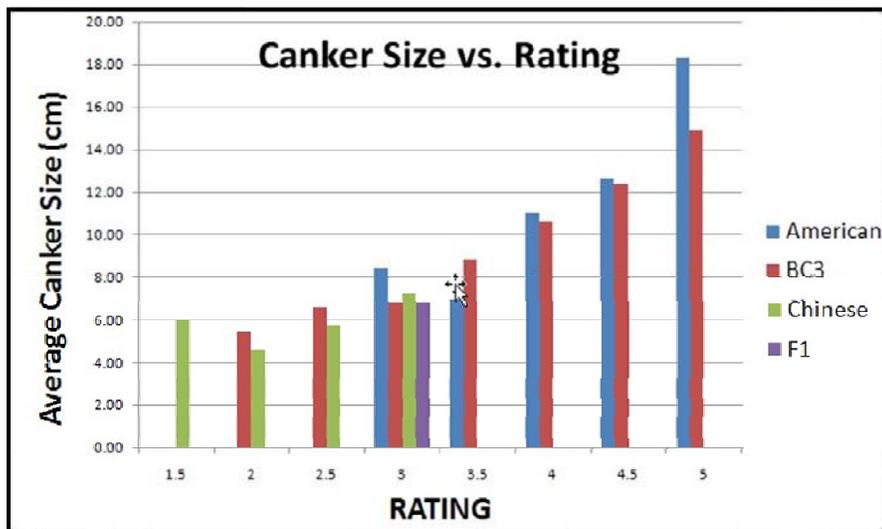


Figure 1. Chart showing the average canker size (in centimeters) on any given tree in relation to the tree's assigned resistance rating.

¹For basic information on TACF's breeding program, visit: http://www.acf.org/r_r.php

²Located on the University Park campus. For more information, visit: <http://arboretum.psu.edu/>

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206 Forest Resources Lab
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The Chestnut Tree Newsletter



Figure 2. Tracey Coulter observes many sprout clumps at the Haun American orchard in Mercer County.

(Continued from page 7)

Working with her advisor Dr. Jan Dudit of Grove City College, student Katie Schroeder took baseline measurements at the orchard late this summer and found that 267 clumps are still surviving (Figure 2). Those clumps produce 1000s of chestnuts every year and attract copious amount of wildlife.

Many thanks to Charles' son Fred Haun, PA-TACF member who has been vital in keeping the orchard going. Fred has become very involved with the Mercer County—PA-TACF

**Walk the Appalachian Trail and
Be a Part of Chestnut History**

Calling all PA-TACF Members, families and friends to walk short distances on the Appalachian Trail.

Call or e-mail Tracey Coulter at work:

717-783-0381

Or e-mail at:

trcoulter@state.pa.us

Ethan Habrial at

610-863-9962

Or e-mail at:

greentree@fastnet.net

