



Chestnut Tree

The Pennsylvania Chapter of
The American Chestnut Foundation

GREAT HARVEST!

Largest Ever in Pennsylvania!

Congratulations PA Chapter volunteers. We were able to exceed all expectations with the Fall Chestnut Harvest.

Eugene Dougherty and **Barbara Bartusik** produced 92 BC1 seed in Schuylkill County this year, utilizing pollen from tree NHR3T5, an American X Chinese F1 tree described by Dr. Sandra Anagnostakis as “very good resistance and form”. **Jack Laws** and team produced 154 of the same cross. Forty-two BC2 were produced for replanting at Moshannon, Clearfield County. TACF-Meadowview supplied pollen from screened BC2 trees to enable PA-TACF to produce 1505 BC3 seeds in 1998!! **Chandis Klinger** produced 488 BC3 seed; 436 on one tree! **Tom Pugel** and **Bob Summersgill** and team followed with 299 and 256 BC3 seeds, respectively. **Jean Saufley** and **Mary Carbaugh** and spouses were part of the team penetrating the “wilderness” of Indiantown Gap Military Reservation for 128 BC3 seeds and also “ascended again” in the giant bucket truck, provided by **Wayne Wynick** and operated by **Charlie Cian** of Bureau of Forestry, to harvest 152 BC3 seed from a 70-foot tall specimen tree in Sprout State Forest! **Gladden Gingerich**, **Doris Goldman**, **Phil Varndell**, **Bill Peifer**, and **Lloyd Lupfer** also contributed BC3 seeds. PA-TACF members and friends collected 5492 American chestnut seed in 1998!! One-thousand nuts were sent to Dr. Scott Schlarbaum, University of Tennessee, Knoxville, as part of a tree culture study. One-thousand were sent to Dr. Greg Miller at Empire Chestnut Co. in Ohio, where they will be used for TACF seed kit and seedling sales.



The 83rd Pennsylvania Farm Show will run from Jan. 9th to the 14th. Please come visit our PA Chapter chestnut booth located in The Family Living and Learning Center. Dan Heacock needs more volunteers too. Call him at (717) 232-5300 (W) or (717) 957-2733 (H).

Board Meets to Shape 1999 Activitiesand to Dedicate the Newly Opened Office



Front Row, L to R: **Marshal Case**, Exec. Dir. TACF; **Larry Patchel**, Grants; **Don Franks**, Member; **Bob Summersgill**, Secretary; **Dan Heacock**, Vice President; **Bob Leffel**, Chapter Scientist; **Bill Lord**, Historian; Back row: **Gene Dougherty**, Coordinator; **Ann Leffel**, Communications; **Tom Pugel**, Board Member; **Bill Peifer**, Board Member; **Janice Maruhnich**, Member; **John Maruhnich**, Coordinator; **Mary Carbaugh**, Member; **Blair Carbaugh**, Board Member; **Not Pictured**: **Al Eelman**, President; **Phil Gruska**, Board Member; **Jack Laws**, Coordinator; **Gene Witmeyer**, Coordinator; **Warren Lauder**, NL Editor. Photo by **Dave Armstrong**, Office Manager.

On Saturday, November 7th the PA Chapter Officers, Board Members, County Coordinators, Committee Persons and other members met at 800 East King Street in York, Pa. to decide our operational strategy for 1999 and officially open the new office.

We were pleased to welcome the The American Chestnut Foundation, Executive Director, **Marshal Case** to the meeting. He spoke of a preliminary strategic plan for TACF and requested that each chapter provide input and develop a local parallel plan. The strategic plan review is scheduled for the April 10th spring meeting as a separate workshop.

John and Janice Maruhnich presented a print of *A Chestnut Morning* to the Chapter which will be framed and hung in the York office. Chapter member **Chris Ditlow** did a beautiful chestnut frame and donated it to the Chapter. **Thanks John, Janice and Chris.** (Continued on page 2)

In this issue.....

President's Report.....2
PA Chapter Nursery Locations.3
PA Region Coord. Locations.....3

Bedford County Report.....4
Chestnuts to Turkey4
EXXON Grants.....4
Grant information.....5

Who's Who in Chestnuts.....5
South East Region Activity.....5
Need for Historic Information...6
PA Chapter Office Functions.....6

Supporting the Restoration.....7
Breeding Program Update.....7
Back Cross Breeding Chart.....7
Calendar of Events.....8

**The Pennsylvania Chapter of The
American Chestnut Foundation**
800 East King St. York, PA 17403
(717) 852-0035 E-Mail: pachapter@acf.org

Officers

President: Al Eelman, Chester County
610-358-1077, FAX: 610-358-9308
Vice President: Dan Heacock, Perry Co.
717-957-2733, FAX: 717-232-1885
Secretary: Bob Summersgill, New Jersey
908-647-5864
Treasurer: Tracey Coulter, Cumberland County
717-486-8935

Board Members

1999 Term
Blair Carbaugh, Montour County, 717-275-7848
Phil Gruska, Chester County,
610-388-1000, Extn: 541
Chandis Klinger, Snyder County, 717-837-0457
1998 Term
William Peifer, Ohio, 219-478-6413
Rich Polini, Berks County, 215-675-1898
(Ann Leffel, effective: January 1999)
Tom Pugel, Bucks County, 610-346-6198

Committee Coordinators

History: Bill Lord, Allegheny County,
412-793-0255
PA Farm Show: Dan Heacock, Perry Co.
717-957-2733, WORK: 717-232-5300,
FAX: 717-232-1885
Membership: Ron Stanley, Bedford Co.
814-784-3652
Education: Mary Stanley, Bedford Co.
814-784-3652
Tree Location and Identification: Blair
Carbaugh, Montour County, 717-275-7848
Grants: Larry Pachtel, Allegheny Co.
412-824-5019
Tree Breeding Program: Bob Leffel, York Co.
717-927-9557, FAX: 717-927-8410
Communications: Ann Leffel, York Co.
717-927-9557, FAX: 717-927-8410
Fund Raising Auction: Chandis Klinger, Snyder
Co. 717-837-0457
Newsletter Editor: Warren Lauder, Chester Co.
610-388-6944
Newsletter Production: Dave Armstrong, York
Co. 717-632-8669, FAX: 632-0479
Newsletter Printing: News Printing Co.
Barney and Charlotte Barnhart
Newsletter Mailing: Ron Stanley
Chapter Office Manager: Dave Armstrong

The Chestnut Tree is published three times a year by
The Pennsylvania Chapter of the American Chestnut
Foundation.

The PA bylaws provide for an Executive Board
composed of four officers and six board members. The
board meets several times a year. The Committee
Coordinators and the Area Coordinators participate in
meetings. All members are invited and encouraged to
attend the board meetings.

TACF was founded in 1983 as a 501(c)(3) non-profit
organization. Its sole goal is to restore the American
chestnut through co-operative research and a scientific
breeding program.

We do not discriminate with regard to race, religion,
color, natural origin, gender, age or disability.

PRESIDENT'S REPORT - Al Eelman

Seasons greetings to all you Chestnut enthusiasts!

This has been a banner year for the PA Chapter. Our membership has grown, as has the number of trees and tree plantations.

Progress, however, brings its own problems. Overseeing the breeding program has become a gargantuan job. Running the office requires more than volunteers should be asked to do. With the new emphasis placed on regionalization we need more dedicated coordinators. In short, we are experiencing growing pains. If you would like to help please let us know.

This coming year we will elect three board members, as well as the entire slate of officers. While we deeply appreciate our present board and officers, it is imperative for the health of an organization to bring forward more than one nominee for each position.

If you wish to nominate anyone please call their names into the office. If you would like to be on the nominating committee, please call me. I will appoint that committee between now and our spring meeting.



Board Meets to Shape 1999 Activities (Continued from page 1)

Bob and Ann Leffel presented the **breeding, planting and pollination program** for 1999 and sites for B3, B2, F1 and American nurseries will be located throughout the state. Additional sites are still being considered. Sites are selected on the basis of environment, experience of growers and other factors.

Regions. The board approved a plan to organize into eight regions with a regional coordinator for each and county coordinators to complete the region team.. (See article on Regional Concept on page 3)

A **calendar of events** was discussed, revised and approved by the board. The entire 1999 calendar is on page 8.

The Treasurer's Report shows a balance of \$19,006.87 in the treasury and a surplus this year to date of \$1019.33. Our income from donations, auction, interest, and TACF payments was \$9,398.58 and our expenditures were \$8,379.25. Projected expenditures for 1999 include an increase in planting supplies, pollination bags, office telephone costs, and meeting expenditures. The shortfall for 1999 is approximately \$2,500 which will be paid from potential grant money and/or current treasury assets. Treasurer, Tracey Coulter, keeps excellent records and monitors expenditures very closely to be sure they are proper and authorized. She has recently installed an automated financial accounting system that will aid in accounting and record keeping.

Election of Officers in 1999. The board requested that Chapter President Al Eelman appoint a nominating committee to recommend candidates for all four officers and three board members whose terms will expire in 1999. We will include this in the August newsletter and hold elections at the Chapter Fall meeting.

1998 Board members, **Bill Peifer**, **Rich Pollini**, and **Tom Pugel** whose terms expire in December 1998 were renominated, but Rich could not run because of work. The nominating committee recommended **Ann Leffel** to replace Rich. Without objection, the President directed that the Secretary, **Bob Summersgill** cast a unanimous vote for Ann and the two current board members.

Membership Improvements for 1999. An outstanding achievement award was given to the PA Chapter by **Marshal Case**. It was accompanied by a paid mailing of 5,000 pieces of mail which will be targeted on locations around the state for new member solicitations.

PENNSYLVANIA NURSERY AND REGION MAP

Chestnut Nurseries in PA



The Pa Chapter has been very busy over the last four years pollinating, harvesting and planting local nurseries. The map shows the locations of our current nurseries. We have five BC3 Nurseries; one B2 Nursery; one F1/B1 Nursery; six Experimental/Test sites and 18 American chestnut nurseries placed around the state. 19 of these nurseries were planted in 1998. The following is a key to the map symbols and numbers:

#1 + B3 Bob & Ann Leffel, Brogue, 428 trees	#12 ● Demonstration, Renfrew Historical Park, Waynesboro, 26 trees	#25 ★ American, Bill Peifer, Dornsife, 50 trees
#2 + B3 Bill Piefer, Dornsife, 315 trees	#13 ● Demonstration, Tuscarara State Park, Barnesville, 100 trees	#26 ★ American, Tom Pugel, Reels Corner, 60 trees
#3 + B3 Lee & Jean Saufley, Hummelstown, 75 trees	#14 ★ American, Audubon Wildlife Sanctuary, Audubon, 100 trees	#27 ★ American, Lee & Jean Saufley, Hummelstown, 25 trees
#4 + B3 Tom Pugel, Central City, 160 trees	#15 ★ American, Tyler Arboretum, Media, 140 trees	#28 ★ American, Lee & Jean Saufley, Renova, 100 trees
#5 + B3 Longwood Gardens, Kennett Square, 317 trees	#16 ★ American, Dave Armstrong, Hanover, 107 trees	#29 ★ American, Bob Summersgill, Stahlstown, 60 trees
#6 + B2 Moshannon State Forest, Clearfield, 258 trees	#17 ★ American, Barbara Bartusik, Zion Grove, 15 trees	#30 ★ American, White Haven Sportsman, White Haven, 100 trees
#7 + B1/F1 Reineman Wildlife Sanctuary, Landisburg, 217 trees	#18 ★ American, Forkston Property Assn., Tunkhannock, 30 trees	#31 ★ American, Ed Wilson, Clearfield, 60 trees
#8 ● Silviculture Study, Allegheny National Forest, Warren, 157 trees	#19 ★ American, Henry Gerhold, State College, 210 trees	#32 ★ American, Norm Wurzbach, Susquehanna Co., 30 trees
#9 ● Performance Test, News Printing Company Farm, 209 trees	#20 ★ American, Phil Gruszka, Longwood, 135 trees	#33 ▲ Major Pollination/Harvest Site, Buchanan State Forest, Fort Loudon
#10 ● Performance Test, Pittsburgh Highland Park, 102 trees	#21 ★ American, Bob Harrison, Tioga Co., 50 trees	#34 ▲ Major Pollination/Harvest Site, Michaux State Forest, Fayetteville
#11 ● Performance Test, State College, 1585 trees	#22 ★ American, Jack Laws, Bedford, 50 trees	#35 ▲ Major Pollination/Harvest Site, Indiantown Gap Military Reservation, Anneville
	#23 ★ American, Bob & Ann Leffel, Brogue, 87 trees	
	#24 ★ American, Lloyd Lupfer, Landisburg, 50 trees	

Organization of Region Coordinators

The PA Chapter Executive Board approved a method of organizing the state coordinators. The state was divided into eight regions based on the PA DCNR's physiographic growing regions and the USDA Forestry Service Hardwood growing regions. Each region would have an overall Coordinator with a county coordinator in each county to fill out the regional team. The regions are shown on the map above. Coordinators are being established for each region. We are seeking a county coordinator for each county. Please call Dave Armstrong at the Chapter Office (717) 852-0035 with recommendations for your county.

Bedford County's Ups and Downs by Jack Laws, South West Regional Coordinator

The past year has been a busy one for Bedford County members and volunteers albeit a disappointing one in one aspect. We had a big success and a major failure.

The success: we bagged three trees for a total of eighty-eight bags. We covered the pollinating bags (paper) with onion bags (netting) and proved that the onion bags were a squirrel deterrent. Last year "Old Bushy Tail" did us in. We also proved the efficacy of using a bulb glue applicator for applying pollen on female flowers. Receiving pollen from Dr. Sandra Anagnostakis in Connecticut, **Ron Stanley** used the traditional method of application and **Chuck Betch, John Custer** and **Jack Laws** used our own method. For our method, the pollen was collected from the male catkins on clean white paper and loaded into three of the glue applicators. We who used the applicators found it was less "hand intensive", and certainly easier than trying to remain careful of the pollen in catkin form while hanging precariously here and there in the trees. We harvested 154 BC1 seeds and also collected 112 American seeds from new finds.

The failure: On State Gameland #48, we dug 50 holes by hand and with an auger on a farm tractor. Both were required - we even contemplated using dynamite on the rockier locations! The holes were backfilled with top soil. Finally the seeds were planted with peat moss as prescribed. Then came the wettest spring in years. By the time the mud dried up and we were able to get back on site, we found numerous nuts had rotted; about 1/3 were surviving. Then came the bears! They batted about the tree shelters, destroying trees with their games, and by the end of the summer only five of the fifty seedling trees remained. They were green and vigorous. The next time we visited the site, we were dismayed to find these shelters knocked down and the seedlings dug up. A state forester commented that the state had found it more cost effective to fence than to provide tree shelters where there is a known danger of bear and deer depredation. The state has been dealing with this problem for years and it has become our problem as well.



Chestnuts in Turkey by Bob Summersgill (or another way to stuff Turkey with chestnuts!!)

March of this year my wife, Lori, and I traveled to Turkey, a beautiful land but with serious economic and social problems. Trouble begins with the high cost of maintaining the fourth largest army in the world. It drags down the economy contributing to 95 to 100% inflation. Try figuring 236,000 liras to the dollar every time you want to make a purchase. Dollars are readily accepted and even preferred. TV news carries the rate of exchange with every broadcast. The army plays a very prominent roll due to the seven countries on their border: Syria, Iraq, Iran, Armenia, Georgia, Bulgaria, and Greece plus they have major troubles in the East with the Kurds.

Geographically, 1/3 of Turkey lies above the 40th parallel which is almost the same latitude as York and Philadelphia with weather conditions that are similar. Naturally with changes in altitude the weather changes as you travel East into the Central Anatolian Plateau. The big difference from our country is the lack of trees. There are almost no trees because over the centuries the land has been stripped for fuel, then sheep and goats eat any new shoots. When a farmer retires, a fenced plot of fast-growing aspens is planted for paper and in some sections those plots are the rare times you see any trees. There are other areas where the forestry department has planted hill sides with pines, but fires become a serious problem. No one could tell me why a variety of trees wasn't planted.

What Turkey can use is a fast growing hardwood tree that can regenerate itself. Our guide, Murat Tiryaki's father is a retired corn breeder, so when I told Murat about TACF he was very interested and put us in contact with the head of tourism for Turkey and then to the forestry department. Yes, they have the blight just as we do, but there are enough isolated areas that chestnut trees could grow. Details for a planting are being arranged for straight American chestnuts from our fall harvest. Here is an economical way we can help another country help itself. (Bob collected over 1200 American chestnut seed from trees on his property in Westmoreland County. He plans to send about 250 to Turkey)



EXXON Grants by Tom Pugel

As an employee of the Exxon Corporation, I have been fortunate in requesting and receiving a grant of \$1,000 from Exxon's Volunteer Involvement Fund (VIF) each year for the past three years. Exxon encourages eligible employees to actively contribute their time and talent to community service organizations by offering small project funding on their behalf.

The first grant in 1995 was used for initial PA Chapter start-up material, slide projector, FAX machine and telephone hookup. In 1996 we used the grant money for planting material in our nurseries across Pennsylvania. This year I presented the Exxon Grant to the full board at the November 7th meeting and it will be used to upgrade the York office computer.

The Pennsylvania Chapter and TACF mourn the death of one of our most active members, **James A. Koenig**. Jim was the coordinator for Cambria County. He and his wife Evelyn contributed their time and energy to locating chestnut trees, collecting chestnuts, and providing craft items for our auctions. Thanks Jim... Our thoughts are with Jim's family.

DON'T TAKE GRANTS FOR GRANTED

by Larry Patchel

You may take your best friend for granted and expect them to come through in your time of need. But, you can't take the grants we have requested from various foundations for granted. We just cannot count on them in a time of need like our friends. We use grants like adding icing on a cake. We have in our budget a wish list that could come true if one or more of these grants come through. If they don't get funded, we still have a sound budget and we can do what needs to be done to accomplish our goals for the year.

Right now we have six grant proposals pending. The most promising one is from **Bob Summersgill** who provided information that led to Allegheny Power.

Two grant proposals are languishing in our states Wild Resource Conservation Fund. One to the Bureau of Forestry, titled The American Chestnut, The Lumber Tree for \$6,150 and the other to the Pennsylvania Commission titled Reestablishing the American Chestnut Tree as a Dependable Food Source for \$4850. These two grants were initiated in January. In October I received a letter from them stating the grants were still being considered but are on hold because of limited funds. At one time, these two organizations were well funded by revenue from the conservation vanity license plate program. Many other organizations now compete for license plate revenues.

There are three proposals waiting for disposition at the American Tree Trust, an organization supported by the federal government. One is for regional funding and we qualify because we are doing a wide range collection of genetic material for our regional adaptation and expansion of the gene pool. We are requesting \$12,500 for that project. The second proposal is for \$7,000 and we are requesting funding for educational materials and services. The smallest one, \$5,000 is for overhead expenses.

Obtaining grants is a number's game and you must play the odds. To improve your odds, you want to make certain you are applying to an organization that is compatible in all ways to your philosophy and objectives. The more proposals submitted, the greater the chances of getting funded. Our goal is a noble one and we have a realistic means of achieving it. If we get our message to the right organizations, we should be able to get funding. We could use help in writing these proposals. If anyone is interested in writing proposals, please contact **Larry Patchel** through our state office (717) 852-0035.

TACF Workshop at the Spring Meeting

Our Executive Director, Marshal Case has asked that each chapter work with TACF in developing a strategic plan for the future. He has produced a draft plan and would like it reviewed as well as develop a parallel local plan that will support the overall goal of American chestnut restoration. We plan to run a three hour workshop at the spring meeting for interested members as well as anyone in the mid-Atlantic area. The next issue of the *BARK* newsletter will have more details.

Who's Who in Chestnuts



Chris and Lois Ditlow, with son **Winston**, age 3, attended the TACF Annual Meeting at Longwood Gardens this October. They are young and relatively new members, who are actively contributors and live just outside Harrisburg. They came laden with gifts. Chris is a woodworker, and he brought a chestnut step stool and a storage box for compact disks, beautifully made of chestnut for the silent auction. The storage box is too beautiful for CDs. A fine jewelry box or treasured love letters would seem better suited as the contents of such a lovely chestnut piece. He also brought a sample board of five different woods with three different stain treatments (that you may see at future PA-TACF meetings) to help with the identification of woodgraining and quality.

Chris and a partner are proprietors of Oak Park Cabinetry. They design and build custom cabinets for kitchens and bathrooms, etc. Chris has always had an interest in things made of wood and wood technology, particularly as to the why of the way things are done as well as the how. He especially likes to study techniques used on antique pieces at his father's business. Chris became a great admirer of chestnut wood working. He is largely self-taught. He began selling at craft shows and worked his way toward his own business. He recently made a chestnut picture frame for the lovely print of *Chestnut Morning* given to the chapter as a gift. And he graced us with a chestnut desk clock for the office. Oak Park Cabinetry, 4220 Paxton St., Harrisburg, PA 17111, 717-561-4216

South Eastern Region Activity

Gene Witmeyer has scheduled a chestnut presentation at The Lancaster County Environment Center on January 28 at 7:00 PM. The contact for the event is **Alice Stitt** of the Environment Center at (717) 295-2055

Who's Who in Chestnuts (Continued)

Dave Armstrong is the office manager for our newly opened office in York. Born and raised in Clearfield County, Pa., coincidentally on the same farm near Glen Richey where chapter members **Ed and Beverly Wilson** raise American chestnuts and other hardwoods. He became interested in the American chestnut tree during those years on the farm listening to his parents reminisce about the chestnut harvest of past times and their longing for the return of that tree.

Dave entered the U.S. Army at age 19 as a Private and retired in 1984 as an Army Officer. After retirement he provided financial planning for young military families, as well as owning his brokerage firm in Hanover, PA. Still a resident of Hanover, Dave and his wife Madge have two daughters, Suzanne who lives in Washington, DC, and Beth a Social Worker with the Brethren Home in New Oxford, Pa.

A member of TACF since February 1997, Dave believes that full involvement with the PA Chapter is the best way to advance the restoration of the American chestnut. He is an American chestnut grower, a local coordinator and participates in pollination, planting and harvesting each year. Dave also coordinates and produces the *Chestnut Tree* newsletter three times a year. He presents classes and workshops with Blair Carbaugh on the identification of chestnut species.

Dave was successful in locating the Pennsylvania Chapter Office in York, Pa, obtaining office equipment and operating the office. His mission is to continue the same excellent administrative and coordinating support to the chapter that Bob and Ann Leffel have provided in the past.



Chestnut History Request by Bill Lord

The American Chestnut Foundation is in the formative stages of compiling its archives. We are open to suggestions. In example, archives may be in written form, in a video or on a computer disk. Old, good quality photographs have special

significance. Subject matter is anything that is relevant to the chestnut tree in its association with humanity. Connections to important historical events and people hold particular interest. Obvious selections would be a description of the chestnut and its many uses, and of the scientific research now in progress to produce a blight resistant tree. But certain other aspects come to mind, such as the chestnut in folklore, literature, and song.

For a beginning, all members are invited to identify published or recorded material on the American chestnut and send the correspondence to our Vermont headquarters., care of Shelly Stiles, Publications Editor, 469 Main Street, P.O. Box 4044, Bennington, VT 05301.

PA Chapter Office Functions

by Dave Armstrong

The chapter office in York, Pa is becoming the focal point for daily chapter operations, as well as coordinating and executing special projects around the state. There are, however, some activities that will remain at the current sites such as the breeding program operation and coordination at the Leffel's farm; the financial procedures and accounting with Treasurer, Tracey Coulter, and the individual committee coordinators' functions. Most other operations will be done at the new office, including:

Communication and Coordination.

Maintaining communications with TACF, personnel, PA Chapter Members, Officers, Board Members, Coordinators and Committee Persons.

Special projects coordination and preparation in conjunction with the responsible individual(s).

Newsletter planning and implementation with the newsletter editor; Collection of articles from Coordinators and others; and production of the newsletter in conjunction with the News Printing Company.

Administration

Maintain membership lists, member mailings, and contacts.

Maintain annual chapter calendar.

Assist the education committee in scheduling, preparation and presentations.

Assist the membership committee with membership activities and follow-up.

Providing budgets and financial information to the chapter treasurer.

Automation

Maintain and upgrade the membership/ mailing list system.

Provide the chapter treasurer with a financial and budget system. Continue a word processing system for correspondence and Newsletter production.

Maintain an e-mail system for communications and an internet connection for research and education.

Develop an automated nursery system to record tree and nursery data state-wide.

Develop other breeding program data such as individual producing tree location, bagging and pollination records, harvest statistics and spring planting information.

Supporting the Restoration by Ann Leffel

The Pennsylvania Chapter of The American Chestnut Foundation (PA-TACF) members initiated a regional backcross breeding program for TACF in 1995. In four summers, with volunteers and the help of cooperators, 5410 chestnut seeds were planted in 31 orchards in 22 counties. This fall 1795 backcross seeds and over 5000 American chestnut seeds were harvested to be planted next spring. The backcrosses advance the breeding program to the fourth of the six or more generations of trees needed to produce blight-resistant American chestnut trees. The American orchards preserve the local native gene pool and provide mother trees for the backcrossing. Each orchard planted is an important step along the way to the completion of the program.

The chapter continues its goals to support TACF in its mission by promoting the work of the organization through varied educational programs and extending the breeding program to develop chestnut trees with the genetic diversity, local adaptation and resistance needed to produce a breeding population of trees in this region.

PA-TACF Breeding Program for

Regional Adaptation - Update by Bob Leffel,

In the PA-TACF breeding program, local PA American chestnut trees are hybridized with trees selected for blight resistance at TACF Meadowview Farms and at Connecticut Agricultural Experiment Station (CAES). The objective is to establish breeding populations of blight-resistant American chestnuts adapted to PA.

In 1988 TACF President Phil Rutter and David Steckel, Natural Lands Trust, led a team planting 52 F1 and BC1 trees at Reineman Wildlife Sanctuary at Landisburg, PA. Fifteen of these trees survive and two of them are sufficiently impressive in tree form and blight resistance to be considered for backcrossing in 1999. PA-TACF's first planting, a BC1 orchard at Reineman in 1995, has endured heavy browsing and breakage by deer and has not made sufficient growth for inoculation in 1999. Dr. Carol Loeffler, Dickinson College, and her classes will measure these trees for height and diameter at breast height (DBH) this fall.

PA-TACF 1996-97 BC3 orchards at Crystal City (Pugel), Dornsife (Peifer), Hummelstown (Saufley), and Brogue (Leffel) have made good growth, but the 1997 BC3 orchard at Longwood Gardens has lost many seedlings and performed poorly despite Herculean efforts by Gruszka, Eelman, and others. Apparently a site problem (poor drainage, macrorrhiza, ???) exists: chestnuts require a well-drained, acid soil!! We must be especially discerning in site selection of future orchards. Fortunately, almost all of the material at Longwood is duplicated at one or more of the other four BC3 orchards.

Wayne Wynick and Jim Bailey, DCNR, PA bureau of Forestry, have taken notes on the BC2 orchard at Moshannon

State Forest, reporting 87% survival with half of the losses tracing to one seed lot. This orchard contains a new source of blight resistance from "Dr. Sandra's favorite tree," from CAES, NHR2T2, from the cross: American X [(Japanese X European) X American].

In three years, 1996-98, PA-TACF has seeded 1177 BC3 seed and 228 BC2 seed. In 1998 PA-TACF seeded 17 American chestnut orchards for future backcrosses.

THE WAY AHEAD?! Plans for 1999 backcross and other orchards, the seeding of those orchards, and another season of hybridizing lie ahead. Plans for inoculations and screening of BC3 trees for the BC3F2 orchards must be made. The future BC3F2 orchards should consolidate the germplasm that PA-TACF has generated in the BC3 generation and should be strategically located within PA to provide locally adapted material for several regions within the state. Subsequent to inoculation and stringent selection for blight resistance and American chestnut characteristics, the BC3F2 orchards can provide the seed for the first blight-resistant American chestnuts adapted to PA!!

THE PATH OF MOST RESISTANCE

PARENTS

100% Chinese X 100% American
 (Blight Resistant) (Blight Susceptible)
 (Orchard Type) (Timber Type)

Characteristics	Degree of Resistance			
	Average % American	No	Moderate	Full
50% (F1) First Generation				100%
Backcross American X F1 =				
75% (BC1) Second Generation Inoculate and Select		75%	25%	0%
Backcross American X BC1 =				
87.5% (BC2) Third Generation Inoculate and Select		75%	25%	0%
Backcross American X BC2 =				
93.75% (BC3) Fourth Generation Inoculate and Select		75%	25%	0%
Intercross BC3 X BC3 =				
93.75%+ (BC3F2) Fifth Generation Inoculate and Select		43.75%	50%	6.25%
Intercross BC3F2 X BC3F2 =				
93.75%++ (BC3F3) Sixth Generation		0%	0%	100%

Each generation of trees is inoculated with the blight and selected for blight resistance and American timber characteristics. Each generation requires a minimum of 6 to 7 years to complete.

Calendar of Events for 1999

- January 9-14 - PA State Farm Show, Harrisburg
- January 28 - South East Region Chestnut Program, Lancaster, Pa
- February 10 - Deadline for articles and photos for the spring newsletter
- March 10 - Spring newsletter mailed
- March 13 - Planters meeting. Location to be announced.
- March 15 - April 20 Planting time.
- April 9 Afternoon Regional Coordinators meeting/workshop and dinner
- April 10 - PA Chapter spring meeting at Roaring Springs, PA.
- April 11 - Western Region meeting and planting at Powdermill Nature Preserve and at Bob Summersgill's farm.
- June 15 - July 7 - Pollination time: bagging and hybridizing.
- June 7 - Meadowview volunteers activity week.
- June 21 - Meadowview volunteers activity week.
- August 3 - Deadline for articles and photos for the summer newsletter
- August 31 - Summer newsletter mailed
- September 15-Oct 10 Harvest time.
- September 24 - PA Forestry Association meeting. Located in the State College, Pa area.
- October 16 and 17 TACF Annual meeting in Ohio
- November 5 afternoon PA Chapter Executive Board meeting and dinner
- November 6 - PA Chapter fall meeting in the Pittsburgh area.
- November 19 - Deadline for articles and photos for the winter newsletter
- December 17 - Winter newsletter mailed

The Pennsylvania Chapter of the American Chestnut Foundation

MEMBERSHIP APPLICATION

Our members keep up the enthusiasm and interest that helps to bring back this once magnificent tree from the brink of extinction. The Chapter and Foundation depend on the membership for support and volunteer activities.

Sign-up a friend...

Please send the application information including \$40 annual dues to:

**TACF, 469 Main St., P.O. Box 4044,
Bennington, VT 05201-4044:**

Name: _____

Mailing Address: _____

County _____

E-Mail _____

Telephone: _____

TACF is a 501(c)(3) non-profit organization. Contributions are tax deductible to the full extent of the law.

Pennsylvania Chapter of
The American Chestnut Foundation
800 East King Street
York, PA 17403

Nonprofit Organization
U.S. Postage Paid
Claysburg, PA 16625
Permit No. 45



Happy Holidays! This year was outstanding!
With your great support, 1999 looks even better.
Thanks for all the volunteering!