# **Chestnut Tree**

The Pennsylvania Chapter of The American Chestnut Foundation

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September 2002

# Fifth Generation Orchard **Initiated at Penn State Arboretum**

By Tim Phelps

milestone in the American Chestnut Foundation's breeding program was crossed with the planting of fifth generation (B3F2) seedlings on June 24 at the Arboretum at Penn State. Around forty participants came to witness the planting of these seedlings, as well as, the signing of a formal agreement between Penn State College of Agricultural Sciences, the Arboretum at Penn State, and the American Chestnut Foundation.

In attendance, among other chestnut enthusiasts, were Marshal Case, Exec. Director of TACF, Herb Darling, President of TACF, Phil Gruszka, President of PA-TACF, Dr. Robert Steele, Dean of Penn State College of Agricultural Sciences, Dr. Kim Steiner, Professor of Forest Biology at Penn State, and John Oliver, Secretary of Department of Conservation and Natural Resources (DCNR).

Dr. Steiner was the Master of Ceremonies and introduced Marshal Case, Dean Steele, and John Oliver who each shared their thoughts on what the reintroduction of chestnut means to their respective institutions, the forests of Pennsylvania, and the people who use those forests. The speakers were followed by a formal planting dedication by Herb Darling and Dean Steele, complete with a gold plated auger and shovel (although the auger had some mechanical issues that needed to be worked out).

After the first two plants were in the ground, Herb Darling put the final signature in place on the "Memorandum of Understanding between The American Chestnut Foundation and the College of Agricultural Sciences and The Arboretum at Penn State, The Pennsylvania State University". The MOU established a formal bond between the signatories to further the development of chestnut research designed to establish a blight resistant chestnut tree to the forests of Pennsylvania and it's former northeastern range. Two of the key factors within the agreement called for 1.) The creation of the fifth generation orchard on ten acres of Arboretum grounds, and 2.) The placement of two staff positions funded by TACF and

### **Calendar of Events:**

October 12 **Chapter Fall Meeting at PSU** 

October 18-20 Annual TACF Meeting at La Cross, Wisconsin

January 11-18 Farm Show

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housed by the Arboretum. One of these positions would support TACF's northern operations and chapter activities, and the other would be an outreach specialist who would develop and deliver public education programs related to chestnut restoration. The two positions would be housed within the Arboretum once the Education Center is built.

Over the next few years, 45,000 BC3F2 seedlings will be planted in the fifth generation orchard. Of these, only 300 parent trees will be selected and retained for their superior blight resistance and American chestnut characteristics. Through open pollination, these B3F2 parents will create the blight resistant seed that TACF has strived to achieve since its inception in 1983. There are currently 256 B3F2 plants growing at the orchard. These numbers will grow as more and more Meadowview and Pennsylvania B3F1 stock mature to produce the B3F2 seed.

The DCNR was very gracious in their support by supplying an eight-foot woven wire fence for deer protection.

Members are encouraged to visit the orchard and assistance will surely be needed in the years ahead as the orchard grows. For more information regarding this orchard or other chestnut related projects at Penn State please call Tim Phelps at 814-865-7228.



Ann Leffel

John Oliver

Robert Steele

# PA-TACF President Phil Gruszka's Remarks

I have a hard time believing that this is the last time I will be in contact with the membership of this chapter. My term as president has gone by extremely fast and there is still much to do.

When I accepted the nomination for this



position, I felt that this would give me a great opportunity to meet more of the folks that make this the greatest chapter in the entire organization. I did not make it to every orchard or every meeting but I have been blessed to have travelled the state of Pennsylvania, meeting all kinds of people and looking at every possible configuration of chestnut trees.

The spirit of "Volunteerism" is firmly entrenched in our membership. Giving freely of talents, time, money, land, equipment and "stick-to-it-ness". This chapter almost withdrew from the national organization because of a germplasm agreement that didn't work for many of our growers. The national and state boards of directors worked for several years towards a resolution. The solution was forged when all were heard, and due consideration occurred. Heartfelt thanks goes to folks like Dave Armstrong, James Ulring, Bob and Ann Leffel, Don Willeke, Herb Darling, and Marshal Case. To be complete, this would have to be a much longer list. I'll conclude with the national and state board members and attorneys Hopkins Guy and Judith Dorsey.

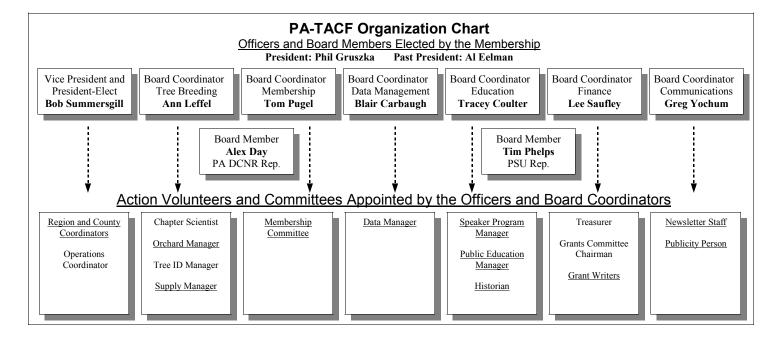
As noted in the lead article, the very first fifth generation chestnut trees planted in Pennsylvania occurred at Penn State Arboretum on June 24, 2002. These trees will be the mom's and dad's of trees that will go to the Pennsylvania Department of Conservation and Natural Resources for seed production, certification and distribution into the public domain.

Take your right hand, reach up and grab your right cheek and pinch yourself. You are a part of restoring a species back to the environment that ultimately would be extinct. We are working on developing a blight resistant population of trees, not just one tree. This is an awesome task and we are very close to bringing this to fruition.

This chapter and the American Chestnut Foundation should be very proud. However, I only see humbleness. What a virtue. I thank you for the blessing you bestowed upon me. Hopefully, I can pass this torch successfully to president elect, **Bob Summersgill**. Bob is a great guy. He has been at the heart of every discussion, decision and action taken by this chapter for the last several years. Additionally, he has taken the lead in explaining the benefits the new germplasm agreement has for our growers, and is thinking big picture while looking at the regionalization of our efforts.

As I move to past president, I am glad to announce that the nominating committee has done an outstanding job in securing exceptional candidates for election this fall. I look forward to continuing my travels, meeting people and chestnut trees. A personal goal as past-president, is to secure grants for the chapter and national organization.

Thanks again! See you at the fall membership meeting!



# **Chapter Elections**

Every member of PA-TACF is a voting member and can also run for office. The Vice-President and three Executive Board Coordinators will be elected this fall. A nominations committee has recommended the candidates on this page. Nominations can also be made at the October 12th membership meeting. If you cannot attend the meeting, please mail your votes to the York office before October 12th.

All positions are for a two-year term. The Vice-President will become President after two years. The current President-Elect, **Bob Summersgill** will automatically move from PA-TACF VP to our President in January 2003.

There are many ways to participate in the Chapter other than serving on the Executive Board. Open positions are <u>underlined</u> on the organizational chart on the opposite page. If you are interested in serving in any of the open positions, please contact the York office.

# Candidate for Vice-President of PA-TACF: Tim Phelps

S ince my arrival to the central region of Pennsylvania and Penn State in 1998 I have had the chance to become very familiar with The American Chestnut Foundation and especially the Pennsylvania Chapter. My wife, Angie, and I came to Penn



State from southern Illinois when I filled a research assistant position for the School of Forest Resources vacated by Jim Zaczek. Jim, along with Drs. Kim Steiner and Henry Gerhold, had previously formed a partnership with TACF and began research related to the breeding program. In addition, they initiated silvicultural studies examining methods of reintroducing the American chestnut in a forest setting. I was fortunate to walk into this research program in progress, and have since worked to continue its progress and to develop new ideas in achieving our common goal of developing and reintroducing the American chestnut to its native range. I have served on the executive board of PA-TACF since Feb. 2001 as the Penn State representative. As Vice President and future President I hope to strengthen relationships between these two organizations, and also with other interested affiliates. Our Chapter's breeding program continues to gain strength and will be my main point of concern. I look forward to continuing my services to the Chapter and its membership.

WE ARE.....PA-TACF!!!

# **Board Finance Coordinator Lee Saufley** (Incumbant Candidate)

I have a BC3 orchard in Hummelstown, Dauphin County. I also have another hybrid orchard in Clinton County, established in a recent hardwood clearcut. It's exciting to see the tree in competion with oak seedlings and other native species in a natural forest set-



ting. I've had a long-standing interest in sustainable forestry and think the re-introduction of American chestnut is vital to making that a reality in Pennsylvania.

# **Board Data Management Coordinator Blair Carbaugh** (Incumbant Candidate)

I have a continuing belief that the breeding program of TACF as it applies to Pennsylvania will someday be successful. Hence, I am willing to stand for re-election to the PA-TACF chapter board of directors. It has been my pleasure to have served on the board for the past four years. I shall look forward to contributing to the chapter in the most positive manner I am able if I am re-elected.



# **Board Communications Coordinator Greg Yochum** (Incumbant Candidate)

A few years ago when I was walking through the woods in winter with a forester we were naming trees on a friends property and he asked me to name a tree that he pointed to and I said "maple". I was wrong and to my great surprise it was an American chestnut. I had just joined PA-TACF a month or two earlier and had gone to the fall meeting. There I



learned a lot but I did not see the bark of a tree to know what it looked like. So I failed the test of the forester and was embarrassed which made me determined to learn about this tree. At the spring meeting I was even more inquisitive because of the new find, made new friends, and learned much more than at the fall meeting. I had and have a passion for this king of the forest and want to see it survive and flourish as it had once before. Thanks to PATACF I have come to recognize and love the chestnut tree and its attributes. These experiences alone are enough to want to be a board member of PA-TACF.

#### CAN YOU HELP US??

By Larry Patchel, Grants Chairman

ften I hear from members the question, "What can I do to help?" In this article I'd like to list specific areas in which you can make a contribution of your special talent or resource. I will not address the usual chores that we ask all members to do such as seeking new members and looking for flowering American chestnuts.



We need help in writing grants. You may know a foundation trustee who might support our cause. Perhaps your employer may be linked to a foundation that favors environmental projects. Most grant applications consist of forms and are not difficult to fill out. I would be willing to provide any help or support you would need. If interested contact me at 412 824-5019 or Lcpatchel@cs.com.

We could use an artist to create graphics to help explain a principal or procedure. When we receive a grant the grantor often requires a sign giving recognition to their contribution. We spend a lot of money on signs so we could use a volunteer sign painter. If you are a musician or a singer, you're lucky, because we have no idea how to use those wonderful skills. Perhaps a performance at our annual meeting?

You can donate money toward the support of essential research projects. We are looking for a proud Penn State graduate who might be interested in supporting Dr. Carlson's project of identifying markers that would tell us if a tree is resistant. That certainly would save us years of work. Dr. John Carlson is a molecular geneticist at Penn State and needs about \$200,000 to carry out this project. There may be someone or some corporation out there that does have the money and realizes the importance of this research. Other Penn State researchers with on-going chestnut research include Drs. Rick Bates, Larry Kuhns, and Kim Steiner.

For those that cannot come up with funding for research at Penn State, you may want to direct your contribution to some other projects.

TRANSPLANTING SUPERIOR MOTHER TREES: In the next few years we will need to move selected trees from our orchards scattered throughout Pennsylvania to a single location at Penn State. These trees are our breeding stock. They need to be placed in one location so they can cross pollinate. The moves performed this year were supported, in part, by a grant from the **Hardwood Forestry Fund.** Tree moving will cost us about \$3,000 per year over the next six years. Help send our finest to college.

SUPPORT FOR NEWSLETTER: One of our members, Barney Barnhart, owner of The News Printing Company, provides the printing for us at no cost. There are other expenses that are not covered such as postage and supplies. Any individual or organization that donates \$1,000 to support our news letter will be acknowledged on the front cover of the news letter. Thanks to Merlin Kister, President of of 3 Springs Water Company for support of this issue.

FORESTRY INTERN STUDENT: We need to hire a knowledgeable person that has the skill to recognize trees with the most desirable breeding traits. \$3,000 could get us a summer intern. Perhaps you know a forestry student that may be interested in spending time with us.

BASIC SUPPLIES AND FENCING: Basic supplies include trees stakes, tree tubes, fertilizer and weed control. The cost for these supplies cost about \$4.00 per tree. You can support this essential task by buying supplies for as many trees as you like at \$4.00 per tree. Many sites require fencing against deer as well. Thanks to the **Mason Dixon Chapter of the National Wild Turkey Federation** for their contribution of \$2,500 this spring.

Reality tells me that we will not have too many donations of \$200,000 for Dr. Carlson's research at Penn State. \$200,000 is a lot of money even for a Penn State graduate. We need your help in many ways but money is the most versatile resource and what we need most. You do not have to fund the full amount for any of suggested items Any amount you can contribute will be greatly appreciated and will go a long way in helping our mission.

## Branching Out – Opportunities to Plant Seeds without Breaking a Sweat By Tracey Coulter

When the chapter applies for grants, one of our greatest strengths is the large number of volunteer hours we can claim as "in-kind" contributions. As a chapter, we are fortunate to have a bounty of enthusiastic, talented and dedicated volunteers. If you have been to any meetings, you will know that another of the things we are really good at (besides growing trees) is *talking* about chestnuts.

For those of you who work best one-on-one, but would like to help with outreach, we need someone to coordinate the speaker program, who can act as a contact for organizations seeking speakers and can facilitate the transfer of materials throughout the state. Next, we need someone to manage the public education program. You don't have to be an educator by trade to fill this niche – creativity, enthusiasm and *interest* will go a long way toward generating future growers and volunteers. Finally, we need a historian to assist in documenting the path from the loss to the regeneration of our chestnut forests.

Other opportunities for outreach include attending displays at fairs, AG Progress Days and at the Farm Show. When you spend a few hours talking to visitors, it's guaranteed you will learn something new, maybe see old friends or, at a minimum, have the opportunity to sample some really tasty food!

For those of you already engaged in speaking or interested in volunteering as a chapter speaker, we would like to hear about your presentations and interests.

To sign up as a speaker, to volunteer as a manager for any of the programs, or to log volunteer hours, please contact Tracey Coulter via email at tlc220@psu.edu or phone at (814) 235-9847.



# Breeding Program Update By Ann Leffel Breeding Program Coordinator

Bob and I and 15 other people from over PA got involved in initiating the regional breeding program of The American Chestnut Foundation in PA. It has been a very exciting and challenging project, to say the least!

I always heard that husband and wife reached Nirvana (Heaven that is) when the mortgage was paid, the kids finished school and moved out, and the dog died! Well, that all happened quite a few years ago. My husband Dr. **Bob Leffel** retired(?) from USDA as research agronomist (plant breeder). Since then, we sold the house and moved to our 44 acre farm near Brogue, PA. At my father's death, my mother came to live with us (that was 12 years ago and she's now 94 and still kicking but also requiring more care). My son gave us two dogs just before he got married in 1991 (to reduce the pressure from me for grandchildren), and then he and wife had five children in seven years! Daughter moved twice with guess whose help. And we have about 800 chestnut trees to care for. **So this is Nirvana!**?! Life does get busy for retirees.

I've got to confess!! My get up and go, has gotten up and went! Especially with the heat and drought of this summer. So neither Bob nor I have gotten around the state to see other than a few of all these wonderful orchards that you folks have planted and are working so hard to keep thriving for the chapter and for the mission to restore the American chestnut tree. On behalf of all the members and supporters of this chapter, I salute the volunteers who grow these breeding trees - American, F-1, BC-1, 2, 3, & even some BC4's. All are important to the total project. We know very well the time, energy, equipment, and money expended to nurture these trees. You are truly generous people.

A brief review is in order. Bill Peifer, Dornsife; Tom Pugel, Reels Corner; and Bob and I, in Brogue, planted the first PA-TACF BC3 orchards in spring of '96. To give you a flavor for the progression of events, I'll summarize what has happened at our orchards in Brogue, York County. A total of 800 trees (about half American and half BC3) were planted over 4 years, 1996 - 2000. Our first BC3 orchard consisted of 156 BC3 plus checks, a total of 180 trees. After challenging them by inoculation with the blight, Dr. Fred Hebard visited the orchard on two occasions to make the selections. Of those 156 BC3 trees, we have kept 6 BC3 on site, and experimentally dug and transported 3 others to PSU this spring. Those three trees are the beginning of a consolidated Clapper BC3 orchard. It will eventually contain selected BC3 trees derived from at least 30 different American mother trees from across Pennsylvania. The consolidated orchard is located at the Horticulture Farm and is managed by Dr. Larry Kuhns and technician Tracey Harpster. Moving such large trees is both difficult and expensive. If the move is considered successful, other selected trees from other orchards will be moved as selections become available. The 30 lines will intercross over the next five years producing the fifth generation of the 6 required in the program. **Tim Phelps**, Larry Kuhns and **Strathmyer Landscape Co.** were the essential folks in arranging for the digging, transport, transplanting and caring of those three trees. Nature sometimes works against us. Three hard freezes in Mid-May (one night 22 degrees) took their toll on the vulnerable transplants, but Dr. Kuhns reports that they are recovering. Additional funds will be needed each year to continue building the consolidated orchard.

More excitement ensued this spring. The Chapter's spring meeting was at Brogue, and was a huge success with 90 folks in attendance. In May, some of the 6-year-old BC3 trees at the Brogue orchard produced both male and female flowers for the first time. There were also male and female flowers present in the '97 BC3 orchard. Over a three-week period (some of the many really hot weeks this spring and summer) volunteers came in to apply 850 protective bags on flowering trees and returned to pollinate them, and consumed cases of root beer and lots of water. About 300 bags were placed on BC3 trees to attempt the first BC3F2 seed production in Pennsylvania. With any luck at all we should have fifth generation seed to harvest this fall. Once again, we may not have very good luck. The extreme heat, drought, and blight have greatly stressed these young trees. Pollinations within over 1000 bags happened chapter-wide this spring. Although 1,000 is a large number, it is not quite up to our usual numbers because of the unpredictability of flowering this strange year. No one ever said this project would be easy!

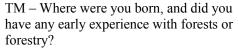
In general, the breeding program is progressing beautifully, only a little more slowly than we had hoped. We were hoping for 5-6 years per generation. It appears it may be more like 5 - 8 years. The breeding program has become too large for Bob and I to handle. We can't perform the important job of visiting and gathering data from all the orchards in the PA chapter regional program. With help from the membership, the chapter will hire a staff person to take over the coordination of the breeding program in PA. Bob and I will continue to maintain our orchards, and serve the chapter in any way that we are able, Bob as Science Advisor, and Ann on the Executive Board until she is challenged by a newcomer. All challengers are welcome! It is the most exciting restoration project I know of. Our forests are critical for all life. What could be more satisfying than to help lend a hand in developing a forest tree for future generations? And we can watch the progress right outside our back door.

Please also visit our web page (http://www.patacf.org), which was recently updated with articles on a few of our many volunteers, including chapter co-founders Rodney Clapper and Barney Barnhart, 16 year-old volunteer Adam Karl, and 14 year-old grower Steve Yakamook.

#### Interview with Dr. Kim Steiner

Professor of Forest Biology Director, The Penn State Arboretum Academic Interests: Conservation of biodiversity; dendrology; forest genetics; oak regeneration; tree growth and form

By Timothy McKechnie



KS – I came from a small town on the Mississippi river. Although there were woods along the river, the natural part of the landscape was dominated by tall grass prairie. I decided to devote my life to forestry in the tenth grade, but that interest came mostly from my reading.

TM – In your talk at our spring meeting you mentioned your long-standing interest in regional differences among populations of forest trees. Many of your examples were on green ash. Was your Ph.D. on that species?

KS – No, I worked on about eight species as I recall. My advisor at Michigan State, Jonathan Wright, had set up lots of range-wide provenance tests of various species. I looked at phenological differences, i.e., the timing of events such as bud break, fall coloration, and date of flowering. I wanted to know if these characters varied according to the geographic origin of the trees, and they did. I also was interested to see if geographic variation patterns were common among species. There were some anomalies, but the patterns were remarkably similar, especially within a genus.

TM – This spring you mentioned the possible importance of regional differences to the chestnut restoration. For example, moving tree accessions north of their origin carries the risk of winter injury. In this vein, are there any observations our members could make on American chestnuts that would be of interest?

KS – Not really. In order to draw any conclusions, it's necessary to have lots of trees from different areas all in one place, in other words a "common garden" or provenance study. This sort of thing will be more appropriate when TACF is ready to test the BC3F3 trees from the Virginia and Pennsylvania breeding programs.

TM – In your talk, you described the three major Pennsylvania forest zones and the five subzones. I understand the DCNR will soon be required to distribute its tree seeds or seedlings according to these zones. In other words, the trees planted in each zone will have to come from parent trees in the same zone. When will this plan be enforced?

KS – To my knowledge, the forest zone plan is already being enforced by the DCNR. You have to realize that quite a bit of judgment is required in these matters, according to what is possible. Sometimes there are conservation objectives more important than genetic conservation, but it is the intention of DCNR to follow our guidelines for genetic transfer.

TM – The DCNR being supply side, are there any regulations that apply to the demand side of the picture, such as the Game



KS – No. There are no state laws that regulate tree planting according to place of origin, either on public or private land. Actually the Game Commission has it's own tree nurseries.

TM – So to a great extent, such an effort depends on public education?

KS - That is exactly right.

TM – This spring you mentioned that oak decline in the eastern US could be due to genetic effects related to environmental adaptations and the loss of chestnut. Please say more about this.

KS – Tree decline, of course, is a complicated subject. I was applying concepts that are pretty well established in the literature, together with the results of our research on oak. One of the main concepts to keep in mind is that the forest is usually a highly heterogeneous environment. Trees adjacent to each other may be experiencing rather different soil conditions, for example. It is also the case, with oaks at least, that individual stands contain a great deal of genetic variability. In order for a tree to persist in a given micro-environment for well over a hundred years, which is the norm for chestnuts and oaks, it should be the winner of a cohort of dozens or perhaps hundreds of seedlings that might have survived there. the best insurance that each tree is well adapted to the site it is growing on. When the chestnuts died, the oaks that replaced them may have been able to exploit the new openings in the forest, but they may not have been well-adapted to those sites in terms of long-term survival potential.

TM – Could you recommend any books on regional differences and tree breeding for our members?

KS – Jonathan Wright's book, <u>Introduction to Forest Genetics</u>, is the first that comes to mind, and deals with the issue of geographic variation. Another good one is a book by Kristian Morganstern called <u>Geographic Variation in Forest Trees</u>, <u>Genetic Basis and Application of Knowledge in Silviculture</u>.

TM – In this newsletter, we are mentioning the need for additional financial support from our members. Will the effort at the Penn State Arboretum (the Clapper BC2F2 selection orchard) need additional financial support?

KS – No. We will probably have sufficient funds from the Robertson Endowment. However, we will certainly need lots of volunteer labor to complete the Arboretum phase of the breeding project.

TM – Other species of eastern trees are now under attack by exotic diseases and insects such as hemlock and beech. Do you think a breeding program similar to chestnut will ever be needed for such species?

KS – Perhaps not. The wooly adelgid and the European beech scale/Nectria complex are serious problems, for example, but no disease or insect has had as great an effect on such a wide-spread, common, and economically important tree species as American chestnut. The loss of chestnut was of a different order of magnitude than what we have experienced with any other tree species. That is not to say that breeding programs would not be useful for other tree/pathogen combinations, but I just cannot imagine a huge grassroots effort emerging for any of our present diseases like what we have had for chestnut blight.

# PA-TACF Strategic Planning

By Dave Armstrong

I t's been a long time since we've reviewed and evaluated our mission, the breeding program, the resources and the support of our various Chapter activities.



Realizing this, the PA-TACF Executive Board appointed a Strategic Planning Committee at their July 2002 meeting. The Co-Chairmen are **Bob Summersgill** and I with members **Ann Leffel, Phil Gruszka, Tim Phelps** and **Tom Pugel**. Our chief scientific advisor is **Dr. Bob Leffel**. We are very fortunate to have on our committee folks who represent the current and future leadership of the Pennsylvania Chapter as well as a wealth of experienced tree planters, breeders and growers. The committee will present a proposed PA Chapter Strategic Plan to the Executive Board and members for approval this autumn.

Most of our committee work will be accomplished by email with a rare meeting once in a while as needed. We have already started the task by jumping on our basic purpose – the Mission of the PA Chapter. This will set the focus for the next huge topic, the future Chapter Breeding Program. After the committee is satisfied with these two topics, we have a framework to begin planning the support that will include:

- Data Management for the Orchards and Administration.
- · Chapter Organization for effective and efficient management.
- · Chapter Operations Office, Staff, Administration, Communications and Education.
- · Financial Support.

As of this writing, we have settled on a mission statement that is:

We, the members of the Pennsylvania Chapter of The American Chestnut Foundation seek to develop blight-resistant American chestnut trees, via backcross method of breeding, for the restoration of locally adapted breeding populations of the species to the forests of Pennsylvania. This mission will emphasize the participation and coordination of our members at state and local levels.

We have narrowed the current scope of our mission to Pennsylvania but we still highly encourage orchard growers and members from other states to participate in the PA breeding programs. Also, our mission focuses on backcross breeding because we have the most experience with this method and confidence in its potential for success.

Our Strategic Planning Report will place renewed emphasis on our future activities at the local level, County and Regions, where we have achieved the most success in growing, pollinating, planting, harvesting and maintaining membership over the years.

As we start to evaluate the present and future-breeding program, it is apparent that we will have a lot of challenges in completing the current TACF Clapper and Graves Regional Breeding Program with orchard maintenance, inoculations, selections and pollinating.

It seems logical and probable that we will begin an exciting new Pennsylvania Breeding Program that will introduce new lines of resistance and use native American trees from Pennsylvania at all levels of the backcrossing process rather than one. The Cytoplasmic Male Sterility (CMS) method currently being evaluated by Dr. Leffel is a leading candidate for this PA Backcross Breeding Program.

# Chestnut Trees and Mastodons .....and Elm Trees? By Dave Armstrong

R emember that block of wood that I wrote about in the last issue of *The Chestnut Tree*? Well, the saga continues.

In summary for those who didn't see the article, the PA Chapter received a large block of wood from the International Wood Collectors Society that was found at a geological dig in eastern NY where mastodon bones were being extracted. The bones were at the 9,000-year level and the log was determined by that geological team to be American chestnut of the same age. I was really excited to have it and it was a great story to tell as I showed it around the PA Farm Show and many other displays and presentations over the past year. Everyone was impressed.

The block of wood was soaking wet from being in a bog all those years and we asked the wood experts at Penn State University to use their equipment to slowly dry it to prevent splitting.

You're probably guessing by now where this is go-

ing! Yes, there is good news and bad. The drying went well – no splitting. However, PSU Senior Research Associate **Lee Stover** preformed microscopic analysis and revealed that it is clearly <u>American elm</u>. Well, there goes my great story and chestnut prop.

I notified the Elm Research Institute in Westmoreland, NH that if they were interested I would happily donate it to their cause.



The Liberty Elm is not a hybrid. The American Liberty elm is actually a group of six genetically different cultivars.

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**The Chestnut Tree Newsletter** 

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## **Address Service Requested**

#### PA-TACF Fall Meeting - October 12, 2002 Ag Progress Days Site, State College, PA 9:30 am - 3:30 pm

The fall membership meeting will be held at Penn State's Ag Progress Days site on Saturday, October 12. It's the first time we've had a meeting in State College, and we hope the central location will attract a broad base of members, as well as bring in some new faces with interest in the American chestnut.

Cal DuBrock of the PA Game Commission will give a presentation on elk management and provide insight on how chestnut plays a role. He has served as the Game Commission's Wildlife Management Director since January 1991. As a member of the agency's senior management team, he is responsible for directing the planning and operations of the agency's wildlife research and management programs statewide, including all game, non-game, and endangered and threatened wildlife species, as well as the pheasant propagation program.

The morning session will conclude with an update on the chapter's strategic plan and election of officers.

The afternoon session will feature tours of the nearby Stew-

ardship Demonstration Woodlot, the adjacent Graves B3 (Phelps) Hybrid Chestnut Orchard, which is the largest chestnut orchard in PA, and the Pasto Agricultural Museum. **Dr. James Finley**, Associate Professor of Forest Resources, will give the tour of the Stewardship Forest and describe how to actively manage woodlots in a productive and environmentally sound manner. **Tim Phelps** will give the tour of the Graves B3 orchard and discuss orchard maintenance. These two tours will each be one-hour, and groups will switch from one to the other so everyone can see both. For those attendees more inclined to stay indoors, **Dr. Darwin Braund**, volunteer curator of the Pasto Agricultural Museum, will give a private tour of the museum and feature equipment made of chestnut.

There will be a \$5 registration fee to help cover the cost of a catered lunch.

A block of rooms has been set-aside for our group for Friday evening (Oct. 11) at the Super 8 Motel located at 1663 South Atherton St. (HWY 322 Bus.), State College – phone 814-237-8005. When reserving, mention the American Chestnut Foundation to receive our discounted rate of \$69.00. Rooms need to be reserved by Sept. 27 to receive the discount and secure availability. Hope to see you there!

The meeting will take place at the Special Events Building on the grounds where Ag Progress Days is held. From State College, take HWY 26 west to HWY 45 (alternatively, HWY 322 Bus. intersects with HWY 45 in Boalsburg). These two highways join SW of State College and split in Pine Grove Mills. From Pine Grove Mills, continue heading West on HWY 45 for about 6 miles. Look for the Ag Progress entrance (gate K; south side of road) located within the small village of Rock Springs. Proceed through the gate and follow that road for ½ mile to the Special Events Bldg.

