

Ohio Chapter of The American Chestnut Foundation Newsletter

August 2006

Chapter schedules 2006 fall meeting

The Ohio chapter of the American Chestnut Foundation has scheduled its next state meeting to take place on September 23rd in Columbus Ohio at the Ohio Department of Nature Resources complex. Please mark your calendar to attend this very informative meeting.

When: Saturday September 23, 2006

Time: 1:00 - 5:00 p.m.

Where: ODNR Complex - Fountain Square, Columbus, Ohio. Bldg i, room 1. (Directions are enclosed)

All are invited and encouraged to attend the chapter meetings. Our decision to schedule this meeting on a Saturday was in hopes of fitting more member schedules. One of the topics for the next meeting will be decisions on the State bylaws and chapter constitution. These documents need to be adopted, by way of a vote, to become a full state chapter. We need ample member representation in order to vote on these documents. The meeting will also provide a forum for discussions on many of the related topics involving the native chestnuts and ongoing activities of the state chapter.

New Chapter Website

Much thanks to Brian McCarthy for developing a website for our chapter. Visit the site often for announcements concerning our chapter activities.

www. <http://www.oh-acf.org>

Can you Help??

Have you ever heard the old saying "if you want something done, give it to a busy person to do" ? Most of the time this works pretty well, but as you read through the newsletter you will see that your chapter officers have been VERY busy this year. We could really use some volunteers to help with the running of the chapter. Do you have time to write a few thank-you letters to special people who have helped our chapter? How about contacting new members to say "welcome"? How about organizing a regional meeting in your area –we can help you with this. How about setting up chapter materials at a local tree oriented event or growing some chestnuts with a scout troop? If our chapter is to thrive, we really need to get MANY people involved. Anybody interested in helping with the newsletter? Please contact an officer if you can assist (in any capacity). Thank you...

Ohio receives full chapter status

In October 2005, an Ohio Chapter of the American Chestnut Foundation was given full chapter status by the Board of Directors. Ohio was one of the last states, in the native range of chestnut that did not have a chapter of the American Chestnut Foundation. We currently have over 325 members, and our chapter continues to grow. We are actively searching the state for any surviving American Chestnut trees in an effort to conserve Ohio's remaining chestnut germplasm. The gene pool of our native chestnut has been dwindling as chestnut sprouts have become more and more scarce. While there are many reports of sprouts across the state, there are very few fruiting and flowering trees left in Ohio. Carlene Emanuel, from the Nature Conservancy, is continuing to work with Ohio working with Rich Cappell from the Ohio Department of Resources to create a database of all surviving American chestnut trees larger than 6" in diameter. If you know of any flowering or fruiting trees, please contact Carlene (see contact list). Once the trees have been identified, the chapter will help to pollinate isolated trees and would like to recover nuts for an Ohio chestnut nursery. Several members and people from throughout the state have sent samples for identification, and many "pure" American chestnuts have been identified. If you have any trees that you would like to have identified, please bring twig and leaf samples with you to the Columbus meeting, or contact Greg Miller at the Empire Chestnut Company -- (empire@eohio.net).

Ohio's first American chestnut orchard

Concrete plans are finally afoot to establish Ohio's first American chestnut orchard! The goals will be to support the efforts of the national breeding program and preserve Ohio's vital germplasm. Brian McCarthy (forest ecologist, Ohio Univ., OH chapter VP), Carlen Emanuel (forest ecologist, TNC, TACF member), Tim Humphrey (ODNR, forest manager), and Andy Ware (ODNR, asst. chief, Div. of Forestry) met at Mohican-Memorial State Forest (MMSF) on August 25, 2006 to discuss the siting of this plantation.



Brian McCarthy, Carlen Emanuel, and Tim Humphrey (left to right) examine the new Mohican-Memorial State Forest interpretative sign at the demonstration forest and discuss plans for the siting of an American chestnut orchard.



Mohican-Memorial State Forest is a 4500 acre tract located in southern Ashland County, Ohio (off of I-71 midway between Columbus and Cleveland).

MMSF will be an ideal site for this plantation because it was within the original range of chestnut in the state, sprouts still remain in the forest, and the chestnut plantation will be integrated into the current demonstration forest (designed to show off best management practices for different types of vegetation and provide an interpretive trail for the public).

The Ohio chapter is quite excited to enter into an agreement with ODNR, who will provide the site and funding for the establishment of this orchard. They have been of considerable assistance in helping us to establish new initiatives in our fledgling (but rapidly growing) state chapter. Chapter members should watch their e-mail...we will be soliciting help for planting in the spring and fall of '07.

We would like to thank ALL of our members for supporting our chapter and for getting "the word out" about our reintroduction efforts. Several people included additional donations with their membership dues; one family even purchased a membership as a gift!

We would like to find a way of communicating with each other more frequently, but the newsletter is expensive to copy and distribute by mail. We would like to update you electronically, but promise not to inundate you with messages. If you did not receive an email from Carolyn Keiffer about the Sept. meeting, please email her with your contact information so we can update our files. THANK YOU!!!



Young Botanists find large surviving American chestnut in Mentor Lagoons. Photograph provided by Larry Smith.

Mine-land reclamation in Ohio using American chestnut

Brian McCarthy of Ohio University and Carolyn Keiffer of Miami University received a grant from the Ohio Plant Biotechnology Consortium to investigate the use of American chestnut for mine-land reclamation in southern Ohio. Early efforts at mine-land reclamation in Ohio emphasized the need to restore a grass cover on highly compacted and re-contoured soils. However, this combination has proven to be quite problematic. Natural succession is virtually arrested (for decades), non-native grasses continue to dominate, and no native hardwood forest cover has reclaimed the sites.

Later efforts involved the introduction of pine monocultures, which at many sites did reasonably well, but it did little to advance natural successional processes. In general, hardwoods have not performed well on these sites. Based on pilot studies initiated by Mr. John Sprouse of the Ohio Division of Mineral Resources Management, it appeared as if chestnut might survive and perform reasonably well. The addition of chestnut might help restore natural hardwood ecosystem processes and serve as potential foci for chestnut restoration efforts.



Overview of mineland reclamation site and chestnut seedlings planted in wire cages.

Robert Herendeen, a masters student of Dr. McCarthy and Jenise Bauman, a doctoral student of Dr. Keiffer have been collaborating on planting, harvesting, and assessing the growth and survival of American chestnut (both native and two BC3F2 lines from Fred Hebbard at Meadowview Farms). Herendeen is monitoring the aboveground performance of the plants, while Bauman is examining the belowground portion of the seedlings, along with mycorrhizal infection rates. These studies are being carried out at three reclaimed strip mine areas in southern Ohio: two in Muskingham County and one in Perry County. So far, both graduate students have found that chestnut is performing well and benefits from inoculation with mycorrhizae. Seedlings do best when they have minimal competition with surrounding herbs or grasses (planted on bare open mine spoil) and actually perform better when no fertilizer has been added at time of planting.



Chestnut seedling with electronic data logger attached. Dataloggers are useful for monitoring temperature, light, and/or moisture conditions for many days at a time and help to determine the environmental conditions that seedlings can tolerate.

Spotlight on Ohio Chestnuts

Janell Baron, Blue Owl Hollow Tree Farm
Newark, Ohio



We purchased our property, a former Xmas tree farm, in 1998. Only a portion of the property was devoted to conifers; about 85 of the 130 acres consisted of mixed native hardwoods. We purchased the property as an estate and it had been vacant for several years and not well managed for at least a decade before that. In fact, the real estate listing specifically noted that it was being sold "As is"! The woodlot had been less than professionally logged in the early 1990s and suffered from all the woes associated with that: erosion on logging trails, impenetrable piles of hardwood tops, thickets of non-native species, trunk-damaged low-value trees apt to come down in any wind storm or heavy snow. Nonetheless, we decided to take on the challenge and chose to include both conservation of native plant communities and the production of non-timber forest products as important forest management goals. Toward that end, in 2000 we contacted Rural Action's Sustainable Forestry Program for advice on how to sustainably manage our woodlot to make progress towards those goals.

Dave Schatz, a retired forester on Sustainable Forestry staff, came out to walk the woods with us and give us advice. In the course of our tour, he was instructing us how to do crop tree release for the species that were stump-sprouting (mostly oaks and maples) after the logging when he exclaimed over another stump-sprout close by. It was an American Chestnut. He said such specimens were still relatively common in this area, but rarely got much over a couple of inches in diameter before

succumbing to the blight again. This clump had half dozen or so 1- 2" trunks. He showed us how to identify the tree and gave us some background and growing behaviors before we moved on with the tour.

Excited by the prospect of finding such a rare species, we did some of our own research although we tried to remain pragmatic about the almost inevitable death by blight.

Later, as we cleared trails through the woods and became better acquainted with the various tree species on the property; we discovered several other stump sprouts, all quite small. Then one day, as we hiked along an old logging trail, my husband looked up and said he thought the leaf canopy looked an awful lot like Chestnut, but it seemed to come from a tree much bigger than any we'd identified previously. A little investigation revealed a single sizable trunk with few signs of blight, at least 8" in diameter. That was several years ago now. We've been monitoring this large specimen and several of the smaller ones over the course of the seasons, clearing back the brush and thinning out competitors. The largest one is now 10"+ in diameter and 2 of the others seem to have a good chance to follow suit at 3"+. These have outgrown their stumps and now generally look like individual trees. Although our own identification keys and research convinced us that it was almost certainly the "real thing", we've now had outside experts confirm that the trees are indeed pure American chestnuts and not a stray hybrid or planting.

We hope there are more to be found out there in the woods in areas off the beaten path. All four of the sites we've found so far are just off our trail system and easy to see, so odds are good there are others. Older folks in the neighborhood have confirmed that our woods used to produce a wealth of chestnuts, even for awhile after the blight went through. Whenever we are at work in the woods, we keep our eyes open, just in case. We've found that the best way to identify them is in the summer by looking for their distinctive leaf canopy or in the late fall by searching the leaf litter for the distinctive leaf shapes. Unfortunately, none of our trees are fruiting or the chestnut burs would make it a lot easier to find them!!

Backcross Breeding Has Begun in Ohio

By Greg Miller

Thanks to efforts of OH-TACF Board Member, Ray Gargano, the Ohio Chapter has joined in TACF's backcross breeding program. On property adjacent to Ray's home west of Warren, OH, he found three large flowering American chestnut trees. For several years, Ray has been collecting seeds from these trees and contributing them to TACF's seed and seedling distribution program. Ray secured permission from the landowners, begged the donation of bucket truck time from John Bowman, received pollination bags from Sara Fitzsimmons, and got pollen (PA125) from Fred Hebard. After bagging the trees at the appropriate time, Ray let me have the fun of doing the actual pollinations on 14 and 19 July. We've got our fingers crossed and have high hopes for a couple hundred seeds this fall.

The pollen we received from Fred was a second generation backcross (B2) to American of the Chinese chestnut cultivar, 'Nanking'. For those not familiar with TACF's methods and jargon here is a simplified pedigree of PA125. 'Nanking' was pollinated by an American father (F1). One of the resulting F1 offspring was crossed with a different American father (B1). And finally, one of these B1's was crossed with a third American father (B2). After being selected for blight resistance, one of the B2's, designated PA125, has become the first sire of Ohio's breeding program. Any seeds we obtain from these pollinations will be third backcross, or "B3" in TACF jargon. We also made some F1 crosses by pollinating one of Ray's American trees with pollen from the Chinese cultivar, 'Crane'. We hope to pollinate these trees again next year. We also need to locate and pollinate additional American trees. We need a minimum of 20 native Ohio American chestnut parents and could use 100 or more. So, we've got work to do!



Greg Miller Pollinating Ohio Chestnut Tree

Grafting Ohio's Surviving Chestnuts

By Marcia Coddington

A project is under way in Southwestern Ohio to graft scion of native Ohio trees. The grafted trees will be planted in the future Ohio tree nursery. Last spring scion taken from surviving trees located in Ohio were grafted onto other rootstock obtained from USDA, which was grown from seed obtained from Pennsylvania trees. Special thanks to Janell Baran and Ray Gargano for the donated scion wood, Dr. Ron Powell for instruction with grafting techniques, and all others that have assisted in this project. Our first trial at grafting in Ohio has produced one tree which will remain at the Miami University conservatory in Hamilton, Ohio until it is ready to be planted outdoors. We will be grafting again next spring and will again be looking for scion donations that will need to be collected this winter when the trees are dormant. The scion will need to be approximately 1/8-1/4 inch in diameter (a little smaller than a standard pencil) and must be taken from the newest years growth. If you have native Ohio trees and are willing to provide scion for grafting please contact Marcia Coddington at mcoddington@woh.rr.com or 937 232-9925.



Grafted Ohio Chestnut Tree

USDA Forest Service & American Electric Power Partner to Support Reclamation Research

by Jenise Bauman

In March of 2006, Miami University, U.S.D.A. Forest Service, and American Electric Power initiated a seed germination study near Zanesville, Ohio with the objectives of ascertaining field conditions and planting methods most conducive for the establishment of Chestnut Hybrids. Three site locations within the Avondale Wildlife Area were compared: 1) edge of an abandoned mine adjacent to a forest edge; 2) the center of an abandoned mine devoid of vegetation; and 3) adjacent to 10-year-old Virginia pines that contain a beneficial fungus (Pt) commonly used in mine reclamation projects. This fungus is known to assist in seedling establishment by colonizing the roots and aiding in water and nutrient uptake.

Of the three site locations within the mines, germination percentages were higher within the subplots adjacent to the 10-year-old Pt inoculated Virginia pines (48%) when compared to the center plots (26%) and to the forest edge (21%). In addition to an increase in percent germination, chestnut seedlings growing with the Virginia Pines also exhibited a healthier, more vigorous growth habit with less mortality when compared to both the forest edge and center plots.

Future work on this project will be to assess the fungi found associating with the Chestnut Hybrids. Fungi will be identified to species with molecular methods and materials provided by the U.S.D.A. Forest Service. Carolyn Keiffer and Jenise Bauman from Miami University would like to thank Shiv Hiremath and Kirsten Lehtoma from the U.S.D.A. Forest Service and Dean Berry and Brian Cox from American Electric Power for their support and assistance with this project.



Chestnuts Growing on Strip Mine in Zanesville.

USDI Office of Surface Mining Funds Chestnut Restoration Project

Brian McCarthy and Carolyn Keiffer learned in late August that their project aimed at reclaiming strip mines using American chestnut had been funded by the U.S. Department of the Interior, Office of Surface Mines.

This project will utilize brand new technologies in mine-land reclamation. In essence, they propose to rip up the surface of these highly compacted, re-contoured, grass-dominated, reclaimed soils using the methods proposed by ARRI (Appalachian Regional Reforestation Initiative; <http://arri.osmre.gov/>) and evaluate American chestnut survival, growth, and forest succession at an abandoned and reclaimed site on the Wayne National Forest (Athens District).

If reclaimed mine-land sites prove to be adequate for American chestnut establishment and survival, they may prove to be very important focal points for future efforts in chestnut restoration.

Chestnut planting will begin in March of 2007. Any member interested in participating is urged to contact Corie McCament (coriemccament@hotmail.com), project manager. We would love to have your help! This will be the largest planting of American chestnut on public land in the State of Ohio along with being the only demonstration site of the ARRI method of reclamation in the State.

TACF National Meeting

The 23rd annual TACF will be held in Meadowview, Virginia on October 20-22. For more information please visit the TACF website at www.acf.org.

We Need Your Help!

Being part of the local chapter can be a fun and rewarding experience. Volunteers are needed to help with the start up efforts and to recruit new members, help with fund raising, locating planting sites, and planting. We are actively seeking the location of any nut-producing (or flowering) American chestnut trees within Ohio...and we need volunteers. In addition to locating our remaining Ohio trees, we need to identify people or organizations that are willing to grow chestnut trees or to assist with local seed nurseries. We are very interested in educational outreach, and we have several guest speakers available. As a non-profit group, we need financial assistance to help fund many of our projects, or volunteers to help with planting and pollination activities.

Please visit our Ohio Chapter website [www. http://www.oh-acf.org/](http://www.oh-acf.org/)

Contact information:

NAME	Address	Telephone	Email Address
Keiffer, Carolyn Vice President	Miami University 4200 E. University Middletown, Oh 45042	513 727-3243	keiffech@muohio.edu
McCarthy, Brian Secretary	Ohio University Dept Plant Biology Athens, Oh 45701	740 593-1615	mccarthy@ohio.edu
Miller, Greg President	3276 Empire Rd Carrollton, Oh 44615	330 627-3181	empire@eohio.net
Ramser, Susan Treasurer	21369 Wooster Rd Danville, Oh 43014	740 392-2941	ramsers@axom.com
Carlen Emanuel Chestnut Mapping	44 West Main St. Suite B	740 380-6796	cemanuel@TNC.ORG

Membership – your dues and donations keep our chapter growing!

You can apply on-line to become a new member or to renew your membership at WWW.ACF.ORG.

Or contact : The American Chestnut Foundation, 469 Main St., Suite 1, P.O. Box 4044, Bennington, VT 05201.

(802) 447-0110 If you live in Ohio you will automatically become an Ohio member to receive newsletters and other chapter information.

CHESTNUT RECIPES (do you have any recipes to share? Please send to Carolyn Keiffer)

Boiled Chestnuts: Cut a V-shaped notch in each nut with small, sharp knife. Boil nuts in saucepan until just tender (about 15 minutes). Remove nuts from water and let them cool somewhat. Remove shell and papery brown skin while nuts are still warm. One pound of nuts makes about 2 cups.

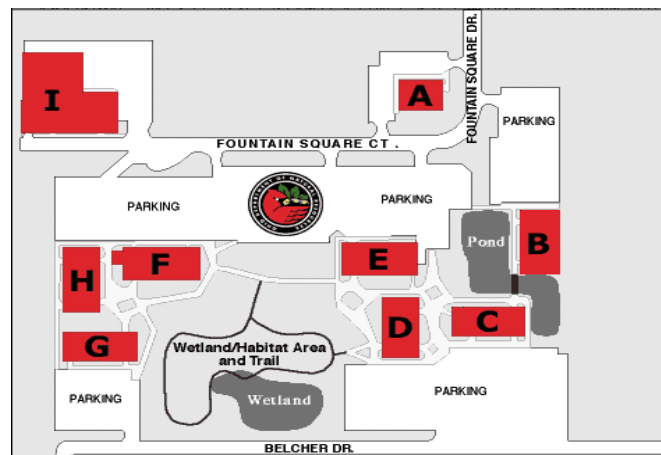
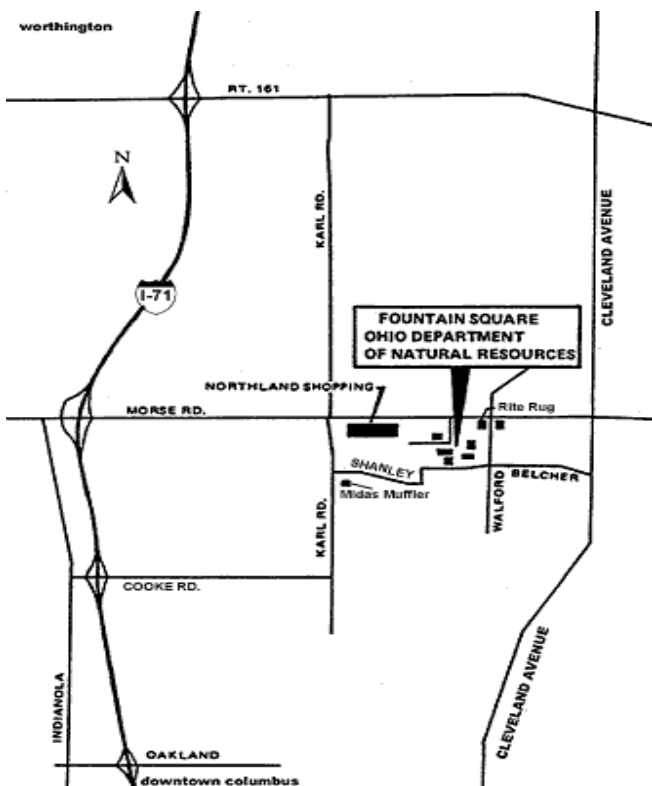
Roasted Chestnuts: Cut a V-shaped notch in each nut with small, sharp knife. Preheat oven to 350 degrees F. Place nuts on baking sheet and bake for 10-15 minutes, turning nuts at least once. Remove nuts from oven and let them cool somewhat as soon as nuts begin to release steam and the nutmeat possesses the soft, fluffy texture of baked potato. Remove shell and papery brown skin while nuts are still warm. One pound of nuts makes about 2 cups.

Chestnut Stuffing: (1) Cook 1/2 lb. finely cut Italian ham in large pan; drain and set aside. (2) Saute 2 chopped onions and 1 cup finely chopped celery in 1/2 cup butter until soft; add 2 cups sliced mushrooms, 1 teaspoon salt, 2 tablespoons finely chopped sage, 2 tablespoons finely chopped thyme, and 4 tablespoons finely chopped parsley, and saute until tender. (3) In large bowl, mix the above preparations together with 4 cups bread crumbs, 3/4 cup chicken stock, and 4 cups boiled or roasted, peeled, and quartered chestnuts. Makes about 10 cups. (Nutrition information per cup: 6 g protein, 30 g carbohydrate, 16 g fat [8 g saturated], 34 mg cholesterol, 365 mg sodium, 5 g fiber, 285 calories.)

SEPTEMBER 23rd MEETING = COLUMBUS, OHIO (Printable map -- [www. http://www.oh-acf.org](http://www.oh-acf.org))

Directions

OHIO DEPARTMENT OF NATURAL RESOURCES



From the North and South:

Take I-71 to exit 116 (Sinclair & Morse Road)
Take Morse Road East 1.7 miles to Keaton Road
Pass Karl Road and Northland Mall
Turn right at Keaton Road
Make an immediate left on access road (in front of Bob Caldwell Dodge)
Turn right at Fountain Square Drive and enter DNR complex

From the East and West:

Take 70 to 71 North to exit 116 (Morse Road)
Take Morse Road East 1.7 miles to Keaton Road
Pass Karl Road and Northland Mall
Turn right at Keaton Road
Make an immediate left on access road (in front of Bob Caldwell Dodge)
Turn right at Fountain Square Drive and enter DNR complex