THE Journal
OF THE AMERICAN CHESTNUT FOUNDATION
January/February 2011 | Issue 1 Vol.25

The Ghost Chestnuts of Herbert Hoover

How to Plant Bareroot Seedlings the Fun and Easy Way

27th TACF Annual Meeting in West Virginia Draws Near-Record Attendance!

October is annual meeting time and this year's meeting was one of the largest ever. More than 150 chestnut scientists, enthusiasts and foundation members gathered at the National Conservation Training Center (NCTC) in Shepherdstown, WV for the two-day event. A beautiful fall weekend drew folks from as far west as California and as far south as Alabama and Georgia.

Jamie Ross and Ross Spears, writers and producers of the acclaimed PBS television series "Appalachia" spoke at the opening session on Saturday to a packed auditorium and attendees were treated to scenes from the series that related to the importance of the American chestnut. This year's workshops touched on a wide range of topics including *Phytophthora*, chestnut education and learning boxes, defining chestnut restoration, an update on the West Salem chestnut stand and many others.

Clockwise from top left: 1. (l to r) Dr. Paul Sisco, Alex Day and Dr. Joe James proudly display the photo taken by Paul Sisco, that Alex won in the auction Saturday evening. 2. Filmmakers Ross Spears and Jamie Ross addressed the Saturday morning session. 3. Dennis Melican and wife, Lois Breaux-Melican stroll the grounds of NCTC. 4. Bernie Monahan (l) travelled the farthest -- from California -- to attend this year's meeting. Bernie is shown here with TACF Chief Scientist Dr. Fred Hebard. 5. A good time was had by all on Saturday evening. Shown here (l to r) are Brad Stanback, and Jim and Carolyn Hill from Georgia. 6. Cathy Mayes, outgoing Virginia Chapter president was honored for her efforts this year. George Thompson and Kathy Marmet flank her.

THE AMERICAN CHESTNUT FOUNDATION®

The Mission of The American Chestnut Foundation

The mission of THE AMERICAN CHESTNUT FOUNDATION is to restore the American chestnut tree to its native range within the woodlands of the eastern United States, using a scientific research and breeding program developed by its founders. The American Chestnut Foundation is restoring a species - and in the process, creating a template for restoration of other tree and plant species.

We harvested our first potentially blight-resistant nuts in 2005, and the Foundation is beginning reforestation trials with potentially blight-resistant American-type trees. The return of the American chestnut to its former range in the Appalachian hardwood forest ecosystem is a major restoration project that requires a multi-faceted effort involving 6,000 members and volunteers, research, sustained funding and most important, a sense of the past and a hope for the future.

About Our Cover Photo:

This issue's wintery cover photo was taken by Sara Fitzsimmons, TACF's Regional Science Coordinator Supervisor. The picture was taken at the PA Chapter orchard in Moshannon State Forest / SB Eliot State Park.

Corrections, Errors and Ommissions

Our November issue contained several errors regarding photo editing and photo credits. In "Every Picture Tells a Story" the photo was cropped incorrectly; please take a look at the photo (left) in its original format. In "Von Siebold and the Japanese Chestnut," the photo on page 18 was taken by Dr. Sandy Anagnostakis in Connecticut. The photo shows one of the first Japanese chestnut trees brought to the United States in 1876. Proper credit for the photo goes to Dr. Anagnostakis.

In our July issue, Hill Craddock should have been credited for the photo that appeared on page 9.

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Journal
OF THE AMERICAN CHESTNUT FOUNDATION

Inside This Issue:

Bringing in the New Year

by TACF Chairman Glen Rea

Here in Maine, we understand the meaning of cold. But to us New Englanders, we cherish, rather welcome, our long, cold winters. Come February and March though, cabin fever starts to set in and my mind starts thinking about spring planting, and warm spring winds.

As we celebrate the New Year, tradition holds that we reflect on last year's activities and reassess our direction for the upcoming year.

I am looking forward to 2011 with great excitement. Although the economy continues to take dramatic hits, TACF members keep the fires burning and stay committed to our mission.

TACF is a volunteer organization. Our state chapter network and the TACF members that support our efforts represent the backbone of the organization. Our vision is to grow TACF's membership roster to help us expand our programs. We use the best available science to drive our programs; however, without the support of our members and state chapters all this great science would exist in a vacuum.

Our efforts to expand our reach into the local community, to recruit volunteers, to support the state chapters, and to build membership are all high on the priority list for 2011. This expansion is absolutely critical. Fortunately, TACF's Branch program, first implemented October 2009, has proven to be a critical part of our operations and has set us on a course for growth despite hard economic times.

The TACF Branch concept is simple; host an event in your local community, usually a dinner or social, with the price of attendance which includes a one-year membership with TACF. The membership numbers from events held to date are impressive to say the least.

These Branch events will also help TACF continue to improve our financial situation. Fortunately, TACF is on solid financial ground thanks to our committed donors and members. For example, we were able to finish construction of the new laboratory without borrowing money, thanks to the generosity of long-time member Mrs. Mary Belle Price. And thanks to the Stanback family, Mary Belle Price, the Ohio State Chapter and the Norcross Foundation, we have secured the funding to equip the laboratory. In addition to equipment, we will have to bring on additional scientists to help us conduct the necessary science. The payoff in new scientific discoveries is something you can't easily assign a dollar amount. Financial stability of any organization is always a struggle, and TACF is no different. Substantial income growth is necessary now to support our long-term efforts.

TACF Chairman Glen Rea

Our new Annual and Life sponsor programs have proven a great success for TACF, and undoubtedly these new sponsorship programs have helped us weather this tough economy better than other nonprofits. And although the organization is built on the principles of volunteers and science, in reality it costs real money to run our programs in a responsible and professional manner. Without these new fundraising opportunities to support and grow our programs, we can't fulfill our mission.

As we expand our programs, we will also have to expand our finances. Now is the time to build our financial base to allow TACF meet our scientific goals. The coming year represents another year of testing for our first line of trees we call our Restoration Chestnuts. Although we hope that our Restoration Chestnuts have the blight resistance we are looking for, we need substantial testing to evaluate this line of trees. This testing will take time, but we are committed to using the best available science in our decision making process.

As an organization, TACF has accomplished many great things. But yesterday's success is yesterday's old news. We must focus on the road ahead to stay the course.

News From TACF

Pictured at right: Katy McCune, Mid-Atlantic Regional Science Coordinator

TACF Science Staff Expands

Mountain native Katy McCune has been hired as TACF's Mid-Atlantic Regional Science Coordinator. Previous to working with TACF, Katy was in Patagonia, Argentina, where she provided onsite planning, implementation and management of logistics and science for a British expedition company. With a dual degree in Environmental Studies and Sociology from Tufts University, her previous experience includes serving as a cartographer and GIS editor for the Virginia Department of Forestry, where she helped pilot a conservation project for the Chesapeake Bay watershed. Long-time regional science coordinator Sara Fitzsimmons has been promoted to Regional Science Coordinator Supervisor. Sara will be responsible for overseeing much of the work of the regional science coordinator staff—Kendra Gurney, Katy McCune and William White. Additionally, Dr. Fred Hebard recently received a new title—Chief Scientist for TACF.

Pennsylvania

The Raystown Branch of TACF hosted its first ever restoration event in August at the Raystown Lake complex. Led by TACF volunteers Jeff and Lori Krause, the event gave new TACF members a firsthand look at some of the work being done by the organization in partnership with the Army Corps of Engineers. The celebration began with an educational tour of the active American chestnut breeding orchard on Army Corps of Engineers property, followed by a social hour, speakers, raffles and auctions. Most exciting for the attendees was a limited amount of blight-resistant seed that was available for the first time to those holding sponsor-level memberships, which started at $350. This represented a unique and special opportunity for individual landowners to test and evaluate this great tree on their property, as well as to support the long-term restoration efforts of TACF.

Carolinas

September 11 has significant meaning to all of us. September 11 was also the date for the Carolinas Chapter's first TACF Branch event at Cataloochee Ranch in Maggie Valley, N.C. The Cataloochee Ranch already boasts an outstanding breeding orchard. A day-long event, Chestnut Saturday, featured crafts and vendors, live bluegrass music and dancing, orchard tours, hiking, horseback riding, fishing, horseshoes, kids' games and wildlife biologist Rob Gudger's captive wolves and the Branch's gala steak dinner that evening included entertainment and a live auction. The Carolinas Chapter is also planning three new events for 2011, one at the Daniel Stowe Botanical Gardens near Charlotte, N.C., another event in Asheville, N.C., and a third one in the Clemson, S.C., area.

Cataloochee Restoration Branch members present a check for more than $10,000, the proceeds from its first annual Chestnut Day Branch event to the Carolinas Chapter for chestnut restoration projects. Front row (l to r): Judy Ferguson, Judy Sutton. Anne Budde, Linda Boyd, and Judy Coker. Back row (l to r): Jon Taylor, Terri McCracken, Richard Coker, and Dr. Paul Sisco.

News From TACF

Tennessee Chapter Has First-Ever Orchard Screening

In April 2005, the Tennessee Chapter planted 574 chestnut seeds on the campus of Tennessee Technological University-Cookeville. This June, after five long years, the trees were ready to be screened for blight resistance. A small team of volunteers, including chapter president Sean Fisher and long-time TACF board member Hill Craddock, spent the day inoculating the trees with the chestnut blight fungus for the first time ever. Inoculating the trees means directly infecting them with the chestnut blight to judge how well they can fight off the fungus. Matt Harris, Amelia Harris, Ana Metaxas and Douglas Airhart first cored the trees for the blight fungi to be inserted, second, infected the trees with two strains of blight fungi and then, third, placed tape around the tree to keep the blight fungi moist and in place in the tree. Selections of the trees with the strongest resistance will be made later this year and in spring 2011.

Master Naturalists Use Skills to Advance Appalachian Trail (A.T.) MEGA-Transect Chestnut Project and Backcross Breeding in Virginia

Chestnut restoration efforts in Virginia have made a valuable connection with the Virginia Master Naturalist Program. Both past Virginia Chapter President Cathy Mayes and Chapter Secretary Adele Baker are Virginia Master Naturalists. The connection with the Master Naturalist program has grown this year, as three additional Master Naturalists were among the volunteers who helped plant chestnut orchards in early spring. A May pollination training program taught by Virginia Chapter Board president Jack LaMonica in Madison, Va., was also a training opportunity for six Master Naturalists who used their training to assist Virginia Chapter Board member Dr. John Scrivani with pollination of several mother trees in the counties surrounding Charlottesville, Va. Scrivani also served as lead trainer for two training sessions for the A.T. MEGA-Transect Chestnut Project. Of 45 participants training for the A.T. MEGA-Transect Chestnut Project so far this year, at least 30 are members of Master Naturalist chapters. MEGA-Transect volunteers are trained to recognize American chestnut trees in a trailside setting and to learn how to collect and record information about the American chestnut trees growing along the Appalachian Trail. These data are part of a long-term study that scientists hope will provide insights to inform future efforts to restore the American chestnut to its former place in the Appalachian forest, as well as identifying pollen producing trees that may contribute genetic diversity to the backcross breeding program.

Master Naturalist Wendy Maddox works to verify that an identified chestnut tree should be recorded for the A.T. MEGA-Transect Chestnut Project. Photo courtesy of Kathy Marmet.

In Memory of and In Honor of Our TACF Members

In Memory of

Arthur C. Peterson
Diane Dwyer

David R. Pencoske
Linda Paine Pfister

Larry Recknagel
Michael Garvey
Ivan and Kathy Kane
Carol Rooney
Janice McConnell

Rosella B. Hoar
William Smith

Please consider making a gift in honor of or in memory of a loved one. Gifts may be directed to TACF, 160 Zillicoa Street, Suite D, Asheville, NC 28801

What is "Restoration?" by Bryan Burhans, CEO

TACF President and CEO Bryan Burhans

The American Chestnut Foundation's (TACF) mission statement is probably one of the best written mission statements of any nonprofit organization. A mission statement states the purpose of the organization. Our mission is concise; restore the American chestnut tree to its native range within the woodlands of the eastern United States, using a scientific research and breeding program developed by its founders.

A question occasionally arises from this stated mission statement; when will TACF start restoring the chestnut? The short answer is we started restoration when TACF was established in 1983.

This simple word, "restoration," can lead to confusion. After all, some would contend, 'if we are still working to develop a blight-resistant chestnut, then we haven't started restoration.' The confusion over the use of the term "restoration" makes it an important term to clarify.

The Society for Ecological Restoration defines ecological restoration as an "intentional activity that initiates or accelerates the recovery of an ecosystem with respect to its health, integrity and sustainability."

Our breeding, testing, and eventual reintroduction efforts represent the scope of projects that we use to achieve restoration. Breeding, testing and reforestation represent the steps within the overall process of restoration.

Ironically, the term "reintroduction" is mistakenly interchanged with the term "restoration." However, reintroduction represents one more tool, or project, within our overall restoration process. And, as with the breeding program, the unanswered questions before us in how we actually implement reintroduction are just as complex and daunting as our breeding program.

Currently, TACF is testing our first lines of potentially blight-resistant trees, which we call our Restoration Chestnuts. And although we are confident that we have inherited some level of resistance to the blight, only time will tell if this first generation of trees will have the right stuff.

The current testing and evaluation of TACF's Restoration Chestnuts represent a tremendous milestone in our restoration program. We are finally able to start evaluating its effectiveness. After all, restoring a species is incremental; there is rarely a defined finish line.

Restoration, for any species or habitat, is always a moving target. This is especially true for the chestnut. Nothing we do is cut and dry. To help TACF address the myriad of questions involved in restoration, we recently constructed the Glenn C. Price Research Laboratory. Our scientists will continue to advance the Foundation's ability to refine our breeding program using the best available science. There are new and exciting scientific tools now available to TACF that we had limited access to just 10 years ago.

TACF's New York Chapter has taken a unique approach to developing blight-resistant chestnut trees. In partnership with the State University of New York and Environment and Forestry at Syracuse, university researchers are experimenting with methods to insert genes for potential blight-resistance directly into American chestnuts. The chapter's work culminated this year with the out-planting of their first "transgenic" seedlings for testing and evaluation. This represents a critical step in the New York chapter's overall restoration program. And like the Restoration Chestnuts developed through TACF's backcross breeding program, only time will tell if these current out-plantings will thrive in the wild.

TACF has a mission that will take 50 or 100-plus years to complete. But despite this reality, TACF's volunteers and partners are making dramatic progress towards our mission to restore the American chestnut to our eastern woodlands. The path we have decided to follow is fraught with challenges and disappointments. But we will succeed.

South Mountain Conservation Landscape Initiative

by Tracey Coulter

Throughout Pennsylvania, communities, organizations and governments are working together to drive strategic investment and actions around sustainability, conservation, community revitalization and recreational projects. Known collectively as the Conservation Landscape Initiative (CLI), these collaborations are being developed in landscapes where there are strong natural assets, local readiness, state-level support and a willingness to participate.

One of these landscape initiatives is focused on the region surrounding the terminus of the Blue Ridge Mountains. Known locally as South Mountain, this region is awash in history—from pre-Revolutionary settlements to the battle at Gettysburg.

A Special Place Steeped in History

If Brevard, N.C., is the Cradle of Forestry, then Mont Alto is the Cradle of Conservation in Pennsylvania. Visionaries Joseph Rothrock and Mira Lloyd Dock were instrumental in founding the State Forest Academy in 1903, nestled at the base of South Mountain. It was the first forest academy established solely to train foresters for state service and trained the first African-American forester, Ralph Brock.

South Mountain dominates the region and feeds world-famous trout streams, and some of the most fertile farmland in the country is found in the Great Valley at the base of the mountain. Further south, the valley is called the Shenandoah Valley, famed "Bread Basket" of the South during the Civil War.

Of course, a famous trail runs through the region, a trail whose history was recently celebrated at the new Appalachian Trail Museum.

Six Degrees of South Mountain Separation

Last fall, Alex Day, retired forester and Pennsylvania TACF president, met the president of the Appalachian Trail Museum Society, Larry Luxemburg. During the course of conversation, Alex learned about the society's effort to create a museum to commemorate the Appalachian Trail (AT), and Larry learned about The American Chestnut Foundation. Larry had thru-hiked the trail some 20 years earlier, and had remained fascinated with trail running through the heart of American chestnut country.

The shelter used by Earl Shaffer, the first thru-hiker on the Appalachian Trail was reconstructed using American chestnut logs. Photo Courtesy of Alex Day

The museum, Larry told Alex, was to open the following year and would be located in an old grist mill at nearby Pine Grove Furnace State Park. The centerpiece of the exhibit was to be a reassembled shelter built of chestnut poles by Earl Shaffer, the first thru-hiker of the AT. Over the years, a few of the logs had rotted and would need to be replaced. Could TACF help locate the replacements?

The Search Begins

Alex enlisted the help of Sue Oram and Sara Fitzsimmons, who sent a request out to orchard growers for dead chestnuts for the project.

The first volunteer to respond was former Pennsylvania TACF board member, Bill Montague. Bill delivered some of his logs to state chapter TACF treasurer Jim Egenrieder – three hours away. They determined that these logs were too large. Imagine! Chestnut logs too large.

The question of chestnut logs came up again the following spring at a South Mountain Conservation Landscape Initiative event. There, Larry reminded us that he was still looking for restoration logs.

This time, the request was sent to TACF members and chapters in surrounding states. Larry actually lives in New Jersey, and volunteers there collected three potential logs. Herb Darling of New York offered to ship them to Larry, but by then he had "more offers than he could handle."

How to Plant Bareroot Seedlings

Growing Your Own Trees is Fun and Easy

Growing trees from bareroot seedlings is the most common way planting trees for forestry projects. These trees are grown at a nursery and lifted in the winter after the trees go dormant and are then shipped to the customer in bundles. As the name implies, there is no soil shipped with the roots.

To keep the roots moist, roots are often dipped into a gel-type medium that helps keep the roots moist for long periods of time. As long as the roots are kept moist and stored in a cool environment, the seedlings can hold over all winter.

Once the chestnut has sprouted, it can grow in the pot until it's ready to be planted outdoors. To give your American chestnut seedlings the best chance for survival, choose one year old seedlings for planting. Photo Courtesy of Kendra Gurney.

Whether you are planting bareroot chestnut seedlings or any other type of seedling, storage and proper planting technique is critical to ensure a healthy and vigorously growing tree. Bareroot seedlings are typically planted by either of two methods: using an engine-driven augur to create a hole for the seedling, or by using an inexpensive dibble bar.

Although using an engine-driven augur is probably the ideal method, not everyone has an augur lying around the garage. The purchase price for a new augur is steep. However, an inexpensive dibble bar is very effective tool that will allow you to plant bareroot seedlings.

The key to success starts when you receive your seedlings. If you can't plant your seedlings immediately, you need to properly store them.

After You Get Your Seedlings

Check the roots to make sure they are moist. Mist the roots with water if they seem dry. Do not store bareroot seedlings in a bucket of water! They will die quickly.

Place the seedlings back in their original container and store the box/package in a cool, dry place that has a temperature of 70 degrees or less. Do not leave the box where the seedlings can freeze. The seedlings will be fine like this for a couple of weeks.

If you don't plan to plant the seedlings for a couple of weeks, place them in a cooler or refrigerator set at 40-45 degrees. As long as the roots are moist (make sure they are wrapped in the packaging they were shipped in) the seedlings will hold for several weeks.

Alternatively, you can "heal in" your seedlings by digging a small trench outside that is deep enough for the roots to fit into without bending. Do not break the bundles of seedlings. Cover the roots with soil to just slightly above the depth they were planted in the nursery. Water them as necessary and they will survive for several weeks like this. If you plant the seedlings before they leaf out, you will have a better chance of success.

Again, don't keep seedlings in a bucket of water since this will prevent the roots from getting oxygen and can kill the plant itself.

Dibble Your Trees

Treatment of your seedlings the day of planting is very critical. The key is to keep the roots moist and protected until they are planted. One common method is to take and saturate a towel and lay it on the ground. Next, remove the seedlings from their original packaging and lay them out on the wet towel. Finally, roll or fold the towel so the roots of the seedlings stay in contact with the wet towel. You can then place the towel and seedlings in a 5-gallon bucket for easy transport. The key is to keep the towel out of the sunlight to keep it from drying out. It doesn't take long for the roots to dry out so use extreme care. Ten minutes of air drying on a warm, sunny, breezy day can reduce seedling survival and growth by as much as 50 percent.

Take as many seedlings as you can comfortably plant in 10 minutes to your site. Leave the rest in a shady spot with the roots covered until you're ready to plant more seedlings.

Using a Dibble Bar

Note that before planting, seedlings should be dormant (planted between December and March), and roots should be moist and fibrous. Each seedling should be protected from moisture loss by keeping them covered and lightly watered. Do not root prune! A dibble bar is an effective tool for planting seedlings.

- Hold dibble bar vertically and drive blade its full length into the soil.
- Pull handle toward you 4 to 5 inches, then thrust in the opposite direction.
- Open a roomy hole; vertically place the seedling with the root collar level with the top of the hole.
- Drive the blade into the soil again, 3 inches behind the seedling and close to the bottom and top.
- Remove the bar and tamp with the "heel" to close the second hole.
- Grasp hold of the seedling. The seedling should not pull out of the ground easily.

Where to Purchase a Dibble Bar:

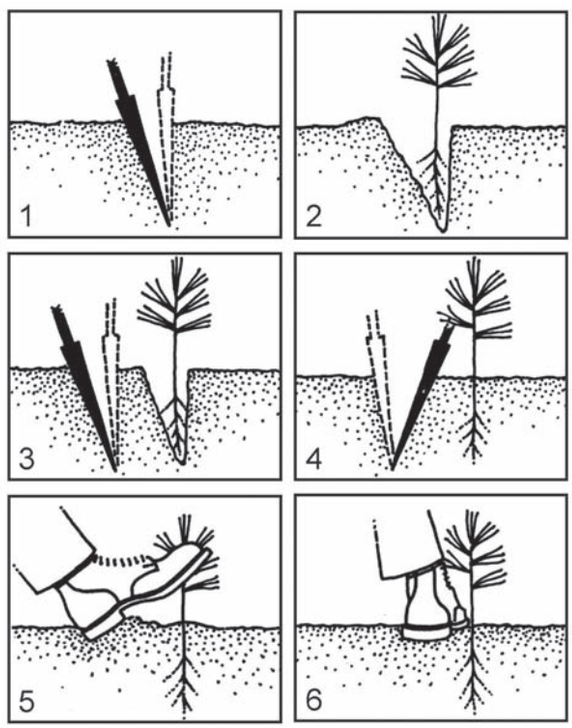
Forestry Suppliers Inc. has a great assortment of forestry products, including dibble bars. For more information, see their website at www.forestry-suppliers.com

Planting Tips

Plant seedlings just slightly deeper than they were in the nursery. You can tell the depth in the nursery by a slight color change on the stem of the seedling.

Make sure the hole is wide enough for the roots to spread out.

Place the roots of the seedlings straight down in the hole. There should not be any bending of the roots.



Top photo: Ami Sharp, Research Associate, University of Tennessee Tree Improvement Program shows how to use a dibble when planting bareroot seedlings.
Illustration courtesy of the Indiana Division of Forestry.

CHESTNUT CHAMPIONS

by Meghan Jordan, TACF

The New Hampshire champion chestnut tree located in Canaan is 87 feet tall and 101 inches in circumference. Photo by Kendra Gurney, TACF

There are big trees and then there are really BIG trees—the kind of trees that give us pause when we come upon them in the forest. Big trees have long fascinated even the most jaded "city folk" that walk among us. Strong trunks and graceful limbs impress, but most of all the often-astounding height of a truly big tree captures the imagination and makes us want to learn more about them. Many think of these special trees as champions of their species; and most states have established "Champion Tree" programs for the many species that populate the forest. From ash to beech to American chestnut, state foresters and volunteers seek and find the grandest of all of them.

The American chestnut tree, before the blight, was one of these BIG trees. It was the dominant hardwood within its natural range and accounted for a significant number of all hardwood trees in the forest. Today, with most of the chestnut population decimated, the hunt for a true champion tree is a challenge. Nearly all of The American Chestnut Foundation's (TACF) state chapters have a champion tree in their state, and these large surviving American chestnut specimens truly represent what the tree once was as well as what it will be again when TACF's restoration efforts hit their stride.

Some of these champions are covered in blight, some will only leaf-out and some will flower and produce nuts. But they are all champions.

So How Does a Tree Become a Champion?

Some champions are made and others are discovered. The state champion American chestnut in Alabama is one that was discovered. Scott Stevens, a forest technician with the U.S. Forest Service was walking in Talladega National Forest evaluating timber for an upcoming sale when he found himself looking up at a 74-foot tall American chestnut tree. The tree is estimated at 25-40 years old.

"I just accidentally found the tree," he said of the specimen that measures 41 inches in circumference. Once the tree was determined to be a pure American chestnut, TACF took pollen from the state champion tree for use in its research to battle the blight.

One of the earliest calls to find and save America's biggest trees came in the September 1940 issue of *American Forests* where Joseph Sterns, a concerned forester, published his article "Let's Find and Save the Biggest Trees."

Within the same issue, *American Forests* published a call to action that read: "WANTED! The Location and Measurement of the Largest Specimen of the Following American Tree Species." With the first nomination of the chestnut oak in Suffield, Connecticut, highlighted in the October issue, American Forests' members began their search for the largest tree species to be named champion.

The program that simply began as "American Big Trees" with 77 National Champions became the "Social Register of Big Trees" in 1961, with 355 National Champions in 42 states and the

District of Columbia. In 1969, a Hawaii edition of the register was produced, recognizing exotic American species and trees native to Hawaii. The Big Tree program saw another change in 1978 when the name of the program changed to the "National Register of Big Trees," and there was yet another increase in champions.

Over time, public participation has grown, drawing attention to the importance of preserving our living landmarks. Since the first full list of 228 species was published in January 1945, the program has thrived, most recently producing a Register with 733 of the largest tree species in the United States. After 70 years, the message of the Big Tree program remains the same: regardless of size, all trees are champions of the environment.

The American chestnut is a champion of the environment with its fast growth rate and its ability to efficiently sequester carbon. Today, there is real hope that these big trees will repopulate the Eastern forests within their historic range. Scott Stephens may have found the biggest American chestnut in Alabama, but it's not ready to claim a national title just yet. The current American chestnut record tree, at 70 feet tall, is four feet shorter than the Alabama champion, but much broader – a hefty 288 inches around. The champion is located in Clarkston, Wash., and remains in first place for the foreseeable future – or at least until someone walking through the woods comes across a bigger one. Keep your eyes out for an American chestnut on your next hike – it might just be a champion.

Is it Really a State Champion?

The table of each state's largest surviving American chestnut trees was gathered from state forestry agencies as well as private organizations. While these trees are recognized as state champions, there may be other, bigger American chestnuts that are known only to private individuals and scientists. A few of these state champions exhibit signs of moderate blight resistance, but most have escaped getting the blight and are, thus, lucky. The best example of this is the national American chestnut champion in Washington State. Most people assume that because the tree is so big and blight-free, that it must be resistant. Unfortunately, it has only survived because it's so far out of the range of the blight and the climate of Washington is very unwelcoming to the blight fungus. Dr. Fred Hebard, TACF's Chief Scientist says there could be many more large surviving American chestnuts, but they go unreported because the trees are often located in very isolated areas that are difficult to reach.

TACF Chairman Glen Rea stands near the Maine champion tree in Atkinson. Photo by Kendra Gurney

State	Location	Height	Circumference
Alabama	Talladega National Forest	74 feet	41 inches
Arkansas	Compton Gardens, Bentonville, AR	70 feet	49 inches
Connecticut	Salem, CT	55 feet	28.5 inches
Georgia	Hiawassee, GA	35 feet	45.5 inches
Indiana	Washington County, IN	71.5 feet	74 inches
Kentucky	Adair County, KY	47 feet	128 inches
Maine	Atkinson, ME	78 feet	107 inches
Maryland	Montgomery County, MD	35.5 feet	63 inches
Massachusetts	Conway, MA	65 feet	31 inches
New Hampshire	Canaan, NH	87 feet	101 inches
New Jersey	*	*	*
New York	*	*	*
North Carolina	Alleghany County, NC	68 feet	59 inches
Ohio	Erie County, OH	64 feet	41 inches
Pennsylvania	Sproul State Forest, Clinton County, PA	85 feet	57 inches
Rhode Island	Glocester, RI	30 feet	39 inches
South Carolina	Paris Mountain State Park, SC	29 feet	22 inches
Tennessee	Giles County, TN	57 feet	48 inches
Vermont	Washington County, VT	89 feet	86 inches
Virginia	Amherst County, VA	65 feet	71 inches
West Virginia	Lost River, Hardy County, WV	77 feet	37 inches

**Unknown, ** If you know of an American chestnut tree bigger than the one listed, please contact your TACF state chapter or your state forestry agency.*

CHESTNUT CHAMPIONS

How To Measure a Big Tree

The Indiana Champion, according to the state's Division of Forestry, is shown here as its diameter is measured. Photo courtesy of the Indiana Division of Forestry.

Before nominating a tree, you need to know three measurements: (1) trunk circumference (measured in inches), (2) vertical tree height (measured to the nearest foot), and (3) average crown spread (measured to the nearest foot). American Forests uses the following calculation to determine a tree's total points:

Trunk Circumference + Height + ¼ Average Crown Spread = Total Points

A nominee will replace a registered champion if it has more points. When two trees have scores that fall within 5 points of each other, they are listed as co-champions.

Trunk Circumference

Circumference is measured at 4 ½ feet above ground level, in inches.

If the tree forks, record, in inches, the smallest circumference between 4½ feet and the ground below the lowest fork excluding dead branches and epicormic sprouts. Also record the height above the ground line where the measurement was taken, in inches.

For more information on measuring trees on a slope, see http://www.americanforests.org/resources/bigtrees/measure.php

Tree Height

There are many tools that can be used to estimate the height of a tree including something as simple as a stick, but if at all possible, height measurements should be confirmed by an expert such as a local arborist or forester. The vertical height of a tree is measured in feet. It can be measured using an Abney hand level, a hypsometer, a transit, a clinometer, a relascope, a laser or other instrument designed for that purpose.

Alternatively, you can use the stick method. Hold the stick at its base vertically, making certain that the length of the stick above your hand equals the distance from your hand to your eye. Staying on ground level (or on the same contour as the base of the tree), move away from the tree while sighting the trunk base above your hand. Stop when the top of the stick is level with the top of the tree. You should be looking over your hand at the base of the tree and, moving only your eyes, looking over the top of your stick at the top of your tree. Measure how far you are from the tree and that measurement - in feet - is the tree's height.

Average Crown Spread

Two measurements of the crown spread are taken and recorded (in feet), at right angles to one another. The first is the widest crown spread, which is the greatest distance between any two points along the drip line of the tree. (The drip line is the outline on the ground of the outermost leaves of the crown.) Once the widest spread has been found, turn the axis of measurement 90 degrees and find the crown spread. The two crown spreads are averaged together.

CHESTNUT CHAMPIONS

One Man's Search for the Perfect Tree

By J. Michael Caskey

I was attending a forestry class at NC State University in 1970 when a student in the class mentioned a chestnut tree on Mountain Island on Mountain Island Lake west of Charlotte, NC. He said that it was an enormous tree, maybe 4 feet in diameter. It was still alive in the 70s, and no one knew why it was alive. Over the years, I had always wanted to see that tree and if it was still alive. In the 90s, I asked the City Arborist, of the City of Charlotte, if he had heard of the tree and he had not.

In 2005 I was given a sailboat and soon sailed to the island in search of the tree. The following is my Javelin Journal account of what I found.

We sailed to Mountain Island. The last 300 yards were aided by paddle. We noticed a NO TRESPASSING SIGN. A family, already on shore, read the sign to us saying that we were not to be there after dark. We landed on the north end of the island and followed a trail to the opposite side. There were many families landed and day camping on the island. There was an excellent view of the dam. We were looking for the American chestnut tree that I had been told about when I was at State. We hiked all the way around the island making side trips to the center to try to find the tree. We met a man that said he had been visiting the island for 30 years and had never seen a chestnut tree. He told us about a chimney from a house used to house men that built the dam in 1924. We saw the rock chimney, but there was no evidence left of the house.

We continued back to the boat. We had not seen the north tip of the island, so we headed north. About a hundred feet from the boat, I discovered a chestnut tree. It was about 15-feet tall and was quite healthy. We searched the area and found no other trees or chestnut logs or stumps. We brought back some leaves and a sprig off the tree to root. I may someday return to try to find the original tree stump. We did see a blue heron sitting in its nest in the top of a tall pine tree nearby.

photos of Mountain Island in North Carolina by Michael Caskey

I preserved some leaves in plastic laminate which I use for book marks. My attempt to root the branch did not work. I will occasionally visit the tree to see if it lives and if it bears fruit. If it came up from the root of the tree described to me in the 70s, it may also be fairly resistant. The island is uninhabited and completely covered with trees. Duke Power owns the island. It is used for daytime recreation by boaters on the lake.

George Bishop Sudworth, 1864-1927, & *Castanea dentata* (Marsh.) Borkh.

On the trail of the man who truly deserves credit for the scientific naming of the American chestnut.

By William Lord

Randy and Grace Knight of Vermont pollinate an American chestnut tree. Photo courtesy of TACF.

Based upon my investigation of the naming of the American chestnut, I have determined that George Bishop Sudworth is the man truly responsible for the now- established scientific name of that noble tree.

Sudworth was a scholarly professional who began working for the U.S. Forest Service in 1886. While travelling throughout North America during his tenure, he discovered and named a large number of new species and varieties of trees. His *A Checklist of the Forest Trees of the United States, 1898*, is an archival reference on the nomenclature and range of American trees.

In 1892, he gave special attention to the nomenclature of the America chestnut in an article in the May issue of the *Journal of the Torrey Botanical Society* titled "On the Name of the American Chestnut." His was a daunting task, requiring a review of the literature back well over a hundred years. He considered the American chestnut to be a separate species, but his contemporaries on both sides of the Atlantic classified it as a variety.

Binomial Nomenclature Emerges & Evolves

Prior to Carolus Linnaeus (1707-1778), plants had been organized according to medical, cooking or ornamental use.[1] Linnaeus brought matters a quantum leap forward with his book *Species Plantorum* (Species of Plants). Latin was accepted as the language for a binomial name consisting of the genus, which was capitalized, and a species name, usually not capitalized. Linnaeus categorized plants according to differing characteristics of the floral organs. His chestnut (European) was placed in class *Monoecia* (with male and female flowers separate but on the same plant); order *Polyandria* (plants with numerous stamens) and a binomial name of *Fagus castanea*.

The system was efficient, easy to master and gained wide acceptance. However, Antoine-Laurent de Jussieu (1748-1836) proposed a method that gradually replaced the Linnaeus system, except for its binomial name for genus and species. Essentially it used the morphology (form and structure) of the entire plant to form groups from the general to the specific. The mid-19th century arrival of Darwin's bombshell advanced the new "natural" order. Botanists, regardless of their religious beliefs, gradually devised a taxonomy aligned with natural selection. But the transformation to the new order was not immediate.

Chaos before Order

During the post-Linnaeus years, the prolific

discovery of new plants worldwide yielded to non-conformity. Some botanists published new scientific names in their own language, rather than Latin, and, often there was no universally-accepted scientific name.[1]

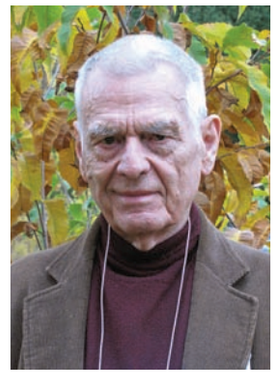
Sudworth recognized an "unsettled state" in the ongoing debate as to whether the American chestnut was a species in its own right. To Sudworth, the American chestnut was a separate species.

"Although most American botanists have been content to follow DeCandolle in holding the American tree to be only a variety, it is perhaps fully evident to many of those who have observed the living trees and herbarium specimens closely that they are wonderfully distinct in general aspect, in the habit and form of the leaves and the size, form and taste of the fruit. The leaves of the European tree are noticeably more erect than in the American. The latter has its leaves mostly pointed at the base; while in the type1 they are chiefly rounded or occasionally with a heart-shaped base. . ." Sudworth wrote.[2] His comments referred to Alphonse P. DeCandolle (1806-1893), a Swiss botanist who contributed to an ongoing botanical publication, *Prodromus*, which attempted to classify and describe all known species of seed plants. DeCandolle organized the first International Botanical Congress in Paris in 1867, during which his Code of Botanical Nomenclature was introduced and accepted.

Sudworth Brings Clarity

In the years between the Botanical Congress of 1867, which established the rule of priority, and 1753, Joseph Gaertner's epithet "*vesca*" was used by the famous French botany explorer Andre Michaux (1746-1802), who described the American chestnut as a variety of the European chestnut, *Castanea vesca: Americana*, in his book *Flora Borealis* in 1803. Andre's son, Andre Francois Michaux (1770-1855), came to America with his father as a teenager and returned again after his father's death. His *North American Sylva* refers to the American chestnut as a separate species, but uses Gaertner's *Castanea vesca.*

Harvard University's Asa Gray (1810-1888), the dominant American botanist of his generation, had gained the respect of those identifying plants with a hand lens and his compendious *Manual of Botany of the Northern United States.* In his first five manuals, through 1868, Gray described the American chestnut as a species, *Castanea vesca L.* (for Linnaeus). Sudworth took issue with Gray on both the scientific name and its author. Linnaeus was not the author, nor was Gaertner and Lamarck. However, the 6th edition has the American chestnut as a variety of the European, *Castanea sativa, Mill.var. Americana.*



Bill Lord, a retired veterinarian, is a naturalist and author who spends much of his time in libraries, researching material with a focus on chestnuts.

Sudworth's research on behalf of the American chestnut was recognized at a subsequent meeting of the International Botanical Congress wherein Humphrey Marshall was recognized as the first author to describe the American chestnut. "Employing, therefore, the earliest name identifiable with our Chestnut, I would propose that it be called *Castanea dentate*..." Marshall wrote. (Marshall, 1785)[2]

Sudworth does not mention Borkhausen in his 1882 article "On the Name of the American Chestnut." Nonetheless, there is strong supportive evidence that he had discovered both Marshall and Borkhausen by that time in his research. In 1898, six years after his article appeared in the *Torrey Journal*, Sudworth published his *A Checklist of the Forest Trees of the United States*, naming and giving the geographical distribution of 862 species, 228 varieties and 87 hybrids.[3] Many were newly named by him.

The American chestnut is listed as *Castanea dentata* (Marsh.) Borkh. This is the earliest date for Borkhausen that I have found. Perhaps you wonder about the fate of all the previous scientific names of the American chestnut? They are all retained in the category of synonyms: e.g., scientific names that have been rejected in favor of the approved scientific name because of priority, or from evidence that establishes a more accurate genetic relationship.

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The Ghost Chestnuts of Herbert Hoover

A President Among the Hemlocks in Shenandoah National Park

By John Hempel

At the entrance to Big Meadows, in Virginia. Photo courtesy of SNPA.

Herbert Hoover was our first president born west of the Mississippi (in Iowa) – well outside the range of the American chestnut – and from there he moved yet farther away (to Oregon and California). Therefore, to find his picture in this journal could come as a surprise. The explanation both starts and ends in Shenandoah National Park.

From well before my high school years, I've known the story of the American chestnut, as well as had a more-than-average interest in the Hoover presidency. These seemingly unconnected interests stem from the same place – Shenandoah National Park, where my parents used to camp at Big Meadows. It was there, at about five years old (~1955) and on the approach to that campground, that I first saw a chestnut ghost towering above the forest canopy. It may seem strange that I would be fascinated with a big, dead tree at that age, but now I think I understand why – climbing trees. Small boys come pre-wired for climbing, and my training tree had been a certain dead pine back home. My father explained that blight had killed all the chestnuts, and later I learned that the roots continue to live and send up shoots.

Early on, I also came to love the wonderful Lodge at Big Meadows, in part because it is built and paneled entirely from American chestnut. The focus of the park is nature, not buildings, but a few other buildings there immediately attracted my attention when I learned of them in my pre-teens.

The Ghost Forests of dead chestnuts found near Big Meadows in Shenandoah National Park. Photo courtesy of SNPA.

A Love of the Land

On assuming the presidency, Mr. Hoover bought the land and immediately began building his own presidential retreat, Rapidan Camp (aka Camp Hoover), on what is now park property. Surrounded by hemlocks where the Laurel Prong and Mill Prong meet to form the head of the Rapidan River, the site is less than four miles from the present Big Meadows. Its existence was of more than average interest to me after having heard first-hand stories of Mrs. Hoover from my mother.

Mr. Hoover held numerous conferences at Rapidan Camp, including one with British Prime Minister Ramsay MacDonald, famously discussing world disarmament while both sat on an enormous (likely chestnut) log in front of the massive outdoor fireplace. Other discussions held there are credited with contributing to a wide variety of conservation measures including preserving the scenic beauty of Niagara Falls, limiting overgrazing in western states, adding 2 million acres to the national forest system, and increasing national park acreage by forty percent.

Shenandoah National Park was in active development during the Hoover presidency. The legislation for the park had been enacted in the Coolidge administration, but without land acquisition. The concept of a "Sky-line Highway" was part of the plan, and its construction was started during the Hoover administration as a work relief project. The President, ever the engineer, commented to Horace Albright, then the director of the National Park Service, that the great quantities of dead chestnut trees on the ridge, left behind in the aftermath of the blight which he had recently passed through, were an issue to contend with. It can be surmised that they were riding near the perimeter of the Big Meadows area, as it is near the ridge closest to the Camp and because pictures from the period show ghost forests there at least as late as the opening of the Park in July 1936.

Leaving a Legacy

After his presidency, Hoover deeded the camp for use by future presidents, but when not in use by succeeding administrations, the public has been free to hike down from Big Meadows to see the site, something I did several times in the 1960s and 1970s with, successively, my parents, my Boy Scout pack and my wife. I distinctly remember looking for, and finding, evidence of fallen chestnut ghosts as

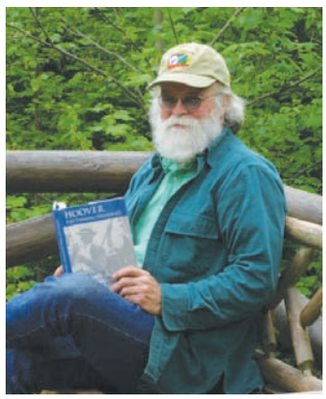
Rapiden Camp (Camp Hoover) has been enjoyed through the decades by U.S. Presidents, including, most recently, former President Jimmy Carter. Photo courtesy of John Hempel.

well as sprouts on a hike there in 1978 – at that time Vice-President Mondale's family was said to be particularly fond of respites there. Of special significance to TACF, Jimmy Carter was the last president to visit, spending a weekend in May, 1979.

Presently, no rotted remains of fallen ghosts exist, but on a visit this year I did find one relatively large (maybe 3"dbh) sapling in the throes of the blight, close to the big chimney at the "Five Tents" site where the camp's first temporary lodging was erected in 1929. I also counted no fewer than two dozen coppicing (reshooting from the stump) saplings in proximity to the trail, most on the higher slopes above this site, between the second and third crossing of the Mill Prong.

Letters and Photos Spur Investigation

An earlier trip had prompted me to read about Hoover's life and presidency. Knowing that American chestnut had been abundant in the vicinity of the camp, I wondered how aware he and Lou were of the chestnut blight. In addition to his comment about the numerous chestnut ghosts to Director Albright, Mrs. Hoover's awareness is also part of the historical record. In a letter dated January 27, 1929, to Larry Ritchey (Mr. Hoover's personal secretary, who had been scouting sites for the camp), Mrs. Hoover described the scene along the nearby Hughes River, "... There are innumerable, enormous dead chestnuts standing all over the place, so that it must have been a very different place after the foliage was out a dozen years ago. Also, along the streams and hillsides that we covered were many very large bare trees, mostly felled over a dozen or twenty years ago. We were told that they had been brought down only for their bark, not even the lumber being utilized! "



Author John Hempel on the deck of the President's cabin. Photo courtesy of Laurel Roberts

As I learned more about President Hoover, I also started trawling eBay for Hoover memorabilia (in this pursuit the general unpopularity of his presidency is not unwelcome as it keeps the competition down). Naturally, some of the things that interested me most were those relating to the Camp, and these don't surface often. A few relatively staged pictures from the Camp are easily found on National Park Service websites, including one of him and Lou on the deck of the Brown House, so when I saw the photo I wasn't immediately excited. But the listing provided an enormously enlarged view, and when I happened to look closely at the right side of the photo, there, in the large vase, were an unmistakable bunch of American chestnut branches, which have the appearance of coppiced shoots. It has been recorded that Mrs. Hoover enjoyed collecting plant specimens in the vicinity of the camp for her guests to identify, so there is no doubt in my mind that the presence of these branches was no mere coincidence.

Herbert and Lou Henry Hoover were both trained in the scientific arena, and for that reason would surely be thrilled both by the prospects of reintroduction of *Castanea dentata* to its native range and by the methods of reaching that end. Personally, I hope that some priority can be given to establishing some B_3F_3s on the slopes above Rapidan Camp.

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The Shape of Chestnuts to Come

Evaluating Morphology in Blight-Resistant Lines of American Chestnuts

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Abstract

Heritable variation in tree size and shape has important consequences for light capture and other aspects of competitive ability (Horn 1971). Tree form also has direct consequences for ecological associates, such as nesting birds (Martinsen and Whitham 1994). Importantly, geographic differences in forest community composition and climatic variables have also been found to favor different morphological traits in isolated populations (Friend and Woodward 1990). As the restoration of blight-resistant American chestnut progresses, there is increasing interest in quantifying and preserving natural variation in a wide variety of chestnut traits, including morphology.

In this study, we used morphometrics, the quantification of co-variation in morphological variables, to evaluate the persistence of architectural variation in two advanced-backcross lines from the American Chestnut Foundation's Meadowview Research Farm that originate from New Hampshire and Virginia, respectively. We were able to identify specific morphological traits that distinguish the two backcross-lines, one derived from an American chestnut tree native to New Hampshire, that exhibits longer internodal lengths and narrower branch angles, and one derived from Virginia chestnut trees that have shorter internodes and larger branching angles.

American chestnut trees appear to have evolved distinct morphologies that are likely to convey a competitive advantage under specific ecological conditions. Our analysis indicates that through the inclusion of diverse germplasms within its backcross-breeding program, the TACF Research Farms has successfully preserved at least two distinct geographic forms from American chestnut populations in North American forests. Considering the original geographic and environmental range of C. dentata, additional morphologies undoubtedly remain to be identified and the methods outlined in this study could be easily applied to the diverse populations tended by the numerous State Chapters of the American Chestnut Foundation, as well as the Meadowview Research Farms.

The goal of chestnut restoration is to produce blight-resistant trees that maintain the growth characteristics of the American chestnut. Local variation in chestnut morphology likely provides better competitive advantage at the local level.

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For the full scientific study, visit: http://www.acf.org/news_room.php

So You Think You Found an American Chestnut Tree?

There are several species of the chestnut family (*Castanea*) commonly seen in North America and by knowing just a few of the typical characteristics of the American chestnut, you may be able to help TACF find new sources of pollen and/or nuts. A few guidelines will help you distinguish among the various types of chestnut. There are also three non-chestnut species that are often confused with chestnut – chestnut oak, beech and horse chestnut.

TO SEND US A LEAF & TWIG SAMPLE:

1. If you think you have an American chestnut tree, send us a freshly-cut 4-6 inch twig with mature leaves attached. Leaves should be from sunny exposure, if possible.
2. Press leaves between pieces of cardboard to flatten and prevent curling as they dry.
3. To prevent mold, do not put the sample into a plastic bag. Crushed or bent leaves are much harder to analyze, as are leaves that are not freshly collected.
4. Spring or summer is the best time to collect samples for identification purposes.
5. Please don't send photos without mailing in a leaf sample as well. The pictures can actually help in the identification. We may not be able to ID solely from a picture, but it can add to the whole package of understanding your tree.
6. Please be sure to include the Tree Locator Form, so we can keep track of your sample and send you results. This form is vital for our inventory of wild trees. Results can take up to 3 - 6 weeks, depending where they are analyzed. You will get your results by mail or email.

Leaf samples will be evaluated by TACF scientists according to their region. For specific mailing addresses, visit http://www.acf.org/find_a_tree.php or call our national office at 828-281-0047 if you have any questions.

	Leaf Taper to Stem	Taper to Tip	Teeth	Leaf Underside	Twig	Bud	Nut	Taste	Resistance to Blight
Allegheny Chinquapin									
	Straight	Straight	1-3 mm, small, no hook	Sun leaves noticeably hairy	Hairy tips, purple or brownish-grey	Up to 3 mm, downy, dark red, pointed rather than wide, sticks out from stem	One nut, 1/2" tip pointed with a round cross section	Sweet	None
Chestnut Oak									
	Slightly Curved	Slightly Curved	Scalloped	Sun leaves somewhat hairy	Stout, brown in color	Brown, multiple buds, conical and pointed	Acorn, one nut, approximately 1" long	Somewhat bitter	High
Beech									
	Curved	Straight	Small teeth, hook	Sun leaves somewhat hairy	Slender, light brown in color	Up to 3/4" long, light brown, overlapping scales	Two nuts, 1/2-3/4" long, irregularly triangular, shiny brown	Sweet	High
Chinese									
	Curved	Curved	Large or small, no hook	Sun leaves obviously hairy	Hairy tips, tan to pea green, large, elliptical yellow lenticels	Hairy, tan, dull brown to black, rounded and flat against stem	2-3 nuts, 3/4 -2", rounded, hairy tip, blurred sunburst pattern, often light brown	Sweet	High (varies with variety)
American									
	Straight	Straight	6 mm, big, sharp, and often curved (hooked)	Sun leaves not hairy, long, sparse hairs only on midrib	Slender, smooth, hairless, reddish brown, small white lenticels	Up to 6 mm, smooth, reddish brown to yellow, pointed or longer than wide, sticks out from stem	2-3 nuts, 1/2 -1", pointed tip, 1/3-2/3 downy, sunburst at base	Sweet	Low to none

Chocolate Chestnut Torte

A Rich Dessert that Satisfies the Chocolate Lover

From Monique Siu and Kevin Gibson,
Castagna Restaurant - Portland, OR

Chocolate Chestnut Torte

Ingredients:

- 4 oz. bittersweet chocolate, melted
- 7 oz. cooked, peeled chestnuts (see note)
- 6 tbsp. cognac (divided)
- 4 eggs, separated
- 1 cup granulated sugar (divided)
- 1/8 tsp. cream of tartar
- pinch of salt

- powdered sugar
- whipped cream or ice cream

- Preheat oven to 350º F.
- Melt chocolate in double boiler, set aside.
- Purée chestnuts with 4 tablespoons cognac in a food processor until smooth.
- Whip egg yolks with ¾ cup of sugar and the remaining 2 tablespoons of the cognac until pale lemon yellow and the mixture forms a ribbon.
- Whip egg whites with the remaining ¼ cup of sugar, cream of tartar and salt until stiff, but not dry.
- Fold the yolk mixture into the chocolate, then fold chestnut puree into the yolk-chocolate mixture. Lastly, fold in the egg whites.
- Pour into an 8-inch spring-form pan that has been buttered and floured. Bake about 25 minutes or until a toothpick comes out clean.
- Sprinkle with powdered sugar and serve with whipped cream or caramel ice cream.

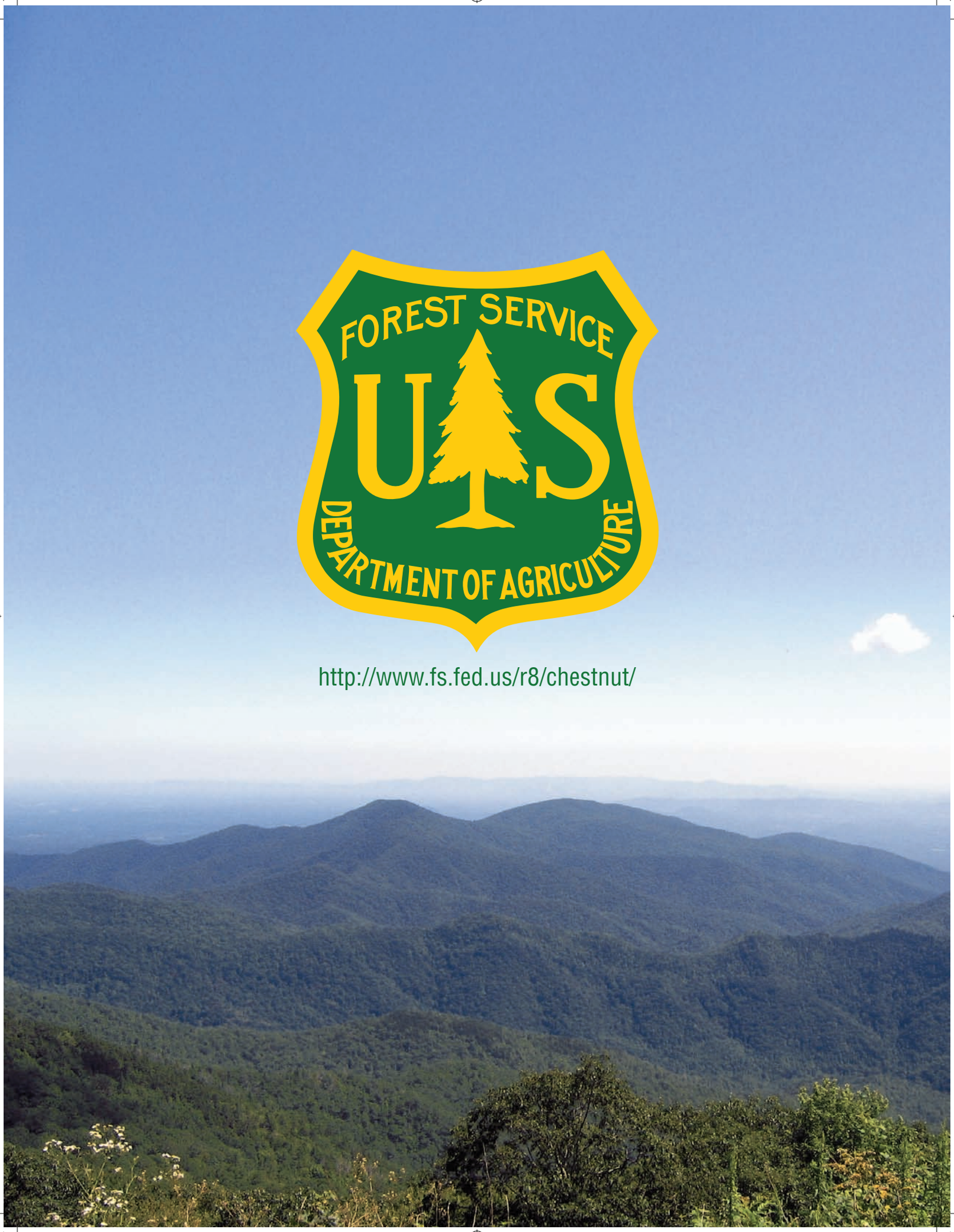
- **Note:** To properly boil chestnuts, cut an X in each chestnut and then place them in boiling water for 15 to 25 minutes or until tender. Chestnuts are done when the shell starts to peel away and the thin brown seed coat between the shell and the meat rubs off easily. If the seed coat sticks, cook the nuts a little longer and test again.

Nutrition Facts Serving Size: 1 slice of Torte

Calories	262 (7% protein, 67% carbohydrates, 25% fat)
Total Fat	7.7g (Saturated fat 3.8g)
Protein	5.1g
Cholesterol	106mg
Sodium	34mg
Total Carb.	46g
Dietary Fiber	1.1g

Ingredients: bittersweet chocolate, chestnuts, cognac, eggs, sugar, cream of tartar

The torte (above) is served on pottery made by Dan Finch of Bailey, NC. The plate features an impression of an American chestnut leaf.



http://www.fs.fed.us/r8/chestnut/