

# CHINQUAPIN

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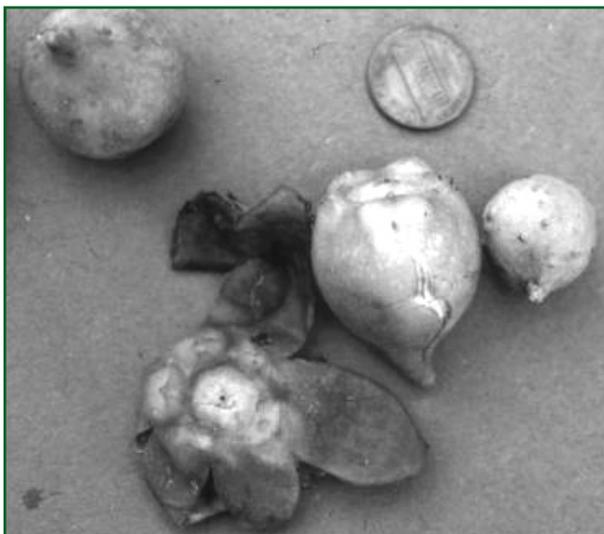


## Buffalo Nut, *Pyrularia pubera*

Lytton John Musselman, Old Dominion University

Plop! Plop! This was an unusual October sound in the forest in the mountains of South Carolina. Upon inspection I found it was the large, round seeds of buffalo nut dropping from the ruptured fruits. These are usually described in the literature as drupes but are actually a kind of schizocarp in which the fruit irregularly splits open releasing the hard seed ornamented with irregular bumps.

The fruits bear a fanciful resemblance to pears, reflected in the scientific name derived from the word for pear. The specific epithet, *pubera* (hairy), is an accurate description of the young leaves. But



Center is a mature fruit about to split, lower left is the empty fruit coat, upper right is the seed. The seed of buffalo nut is the largest of any parasitic plant in our region. (Hog plum, *Ximenia americana*, occurs in central and south Florida with a fruit somewhat larger).

what is the source of the common name? Are buffalo nuts one of the ghosts of evolution, perhaps once eagerly munched by now extirpated herds of buffalos? A less known common name is elk nut which gives some credence to its use as a food.

It is easy to grow from seed; I have germinated seeds collected in the Smokies in my garden in Norfolk, Virginia.

Buffalo nut is a fairly common shrub throughout the southern Appalachians reaching as far north as western Pennsylvania. At one time there was a botanical society in the western part of the Keystone State with a newsletter entitled *Pyrularia*, reflecting interest and curiosity over this plant.

It is curious because of its parasitism but otherwise this shrub

could fall into the informal taxonomic category as a blah bush as it has few features to distinguish it from neighboring shrubs. Seldom more than eight feet tall with alternate, deciduous leaves, buffalo nut is unkempt shrub with several branches, often straggly, and unisexual flowers. In other words the species is dioecious with each shrub being male or female. The flowers are also unremarkable, small and green borne on upright spikes in the spring.

The architecture of the plant may look unremarkable but the nutritional strategy of the shrub is fascinating. It is a root parasite forming attachments to a wide variety of woody angiosperm and gymnosperm hosts.

This behavior is the reason I was contacted by the West Virginia Department of Agriculture some years ago. During the 1993 growing season, the West Virginia forest authorities were notified of damage to species of fir (*Abies*), spruce (*Picea*), and pines (*Pinus*) grown in plantations in the Appalachian Mountains of southern West Virginia as Christmas trees. Trees were losing leaves, stems were dying back, and in heavy infestations trees were killed. Examination of the roots revealed white swellings assumed to be nematodes but were later found to be haustorium of an unknown parasitic plant. During a site visit in May, it was determined that the causative agent was buffalo nut. Because it is rigorously rhizomatous control is difficult as it is impossible to track down each small rhizome from which additional haustorium can arise.

*Pyrularia* has traditionally been placed in the sandalwood fam-



*Buffalo nut in flower in early June.*

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## From The Editor's Desk:

J. Dan Pittillo, Newsletter Interim Editor

Weather continues to be on everyone's mind and in the news lately. July this year has become the hottest month on record at 77.6°F, topping the 1936 peak of 77.4° according to the National Climatic Data Center in Asheville. Asheville, however, has proved to be milder with 11 days 90° or higher compared to its 2010 record of 35 days. Unlike the drought stricken western Georgia and most of the western part of North America, rainfall in the southern Appalachians and most of the Southeast has been normal. While our rainfall through July has been our average, many of the showers fell rapidly and tended to run off instead of soaking into the soil. When I dug a few potatoes, the soil was dry around them.

We have all heard of the American Chestnut Foundation's efforts to reestablish *Castanea dentata* to our forests. With this issue we provide an update on the progress being made as plantings are being made with both hybridized seedlings and seeds. Orchards are being established throughout most of the original forest areas from Alabama, Georgia, North Carolina, Virginia, Kentucky, and Tennessee.

Lytton Musselman's next entry of the semiparasitic *Pyrularia pubera*, a species quite familiar to me, should prove to be of interest to many. I had helped the late Leo Vernon with materials for his chemical analysis for the past couple of decades. This would be especially notable for anyone with a cancer potential.

## Book Corner

J. Dan Pittillo

Lytton Musselman, our current contributor, has managed to see two of his books published in less than a year: With David A Knepper, 2012, *A Guide to Wildflowers, Grasses, Aquatic Vegetation, Trees, Shrubs and Other Flora*, John Hopkins Univ. Press, hb. ISBN-13: 978-1-421-40497-4. For those who might like a list of Bible mentioned plants, *A Dictionary of Bible Plants*, Cambridge University Press, 2011, hb. ISBN 978-0-521-11099-0, might be of interest.

Buffalo Nut continued from Page 17

ily, the Santalaceae. However, extensive morphological and molecular studies on sandalwoods and their relatives by Daniel Nickrent and students indicate that buffalo nut is best placed in a new family of woody



*Haustorium*—the most conspicuous is the large one in the center of the picture on roots of Fraser fir.

parasites, the Cervantesiaceae and is the only representative of that family in our region.

The literature on the toxicity of the parasite is conflicting. Some references before to an edible fruit, others to a poisonous oil within the seed. Further complicating this is the presence of an apparently edible species in the Far East, *Pyrularia edulis*, the only other species in the genus.

**Ed. Note: Beginning in the 1980's I was asked by the late Dr. Leo P. Vernon of Brigham Young University if I could send fruits and other plant parts of *Pyrularia*. For a couple decades I sent to Brigham Young material where Dr. Vernon and associates were studying *Pyrularia* thionin that has been found to in combination to inhibit tumor formation or tumor metastasis of cancers. The material is now in testing. Ironically, in 2007 my wife developed a uterine cancer that metastasized resulting in her death in July 2011. Now if only the *Pyrularia* thionin proves to be a lifesaver for those developing cancers will our efforts be rewarded.**

# Dixie Mountain Breadroot: Further Explorations in Piedmont Prairies

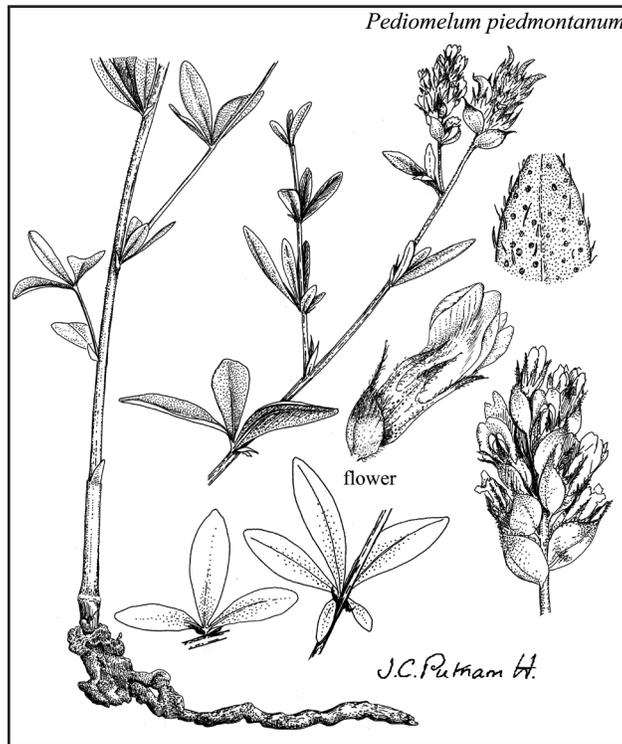
By Linda Chafin

A lot of us came of age botanically when Radford's, Ahles', and Bell's 1968 *Manual of the Vascular Flora of the Carolinas* was considered "the bible" if you were doing botany in the southeast. As with most sacred texts there was an unspoken assumption, at least among neophytes, that the revelation was final, the word had been spoken, and, to exaggerate just a bit, "neither a jot nor a tittle" would be added.

However, as Alan Weakley has made clear (Weakley 2011b), there were, in fact, plenty of plants waiting to be added to the southeastern U.S. flora, especially those surviving in "pocket" (versus "matrix") communities. Topping Alan's list of pocket communities, glades, barrens, and prairies have alone yielded 67 new taxa in the eastern US since 1960.

*Pediomelum piedmontanum*, or Dixie Mountain Breadroot, is a perfect example of a previously unexplored pocket community turning up a new species. It was described and named by Jim Allison, Wayne Morris, and Ashley Egan in a 2006 paper that documents the winding path to its recognition. Currently known from an eastern county in the lower Piedmont of Georgia and in two counties in nearby South Carolina, each of these populations occurs in prairie-like glade habitat with thin rocky soils and bedrock exposed near the surface. In Georgia, the exposed bedrock is serpentinite, a mafic rock that produces soils high in magnesium, chromium, and nickel and underlies several of Georgia's "pocket prairies." In South Carolina, the exposed rock is another metamorphic rock, phyllite, and the associated soils resemble those found around granite outcrops.

At all the known sites, the breadroot plants thrive in full sun alongside other drought- and fire-adapted species such as little bluestem, pinweed, longleaf pine, shortleaf pine, southern red oak, post oak, and blackjack oak. Dry, sunny habitats are typical of this recently derived genus, its evolution apparently driven by climate change during the last round of glaciations (Egan and Crandall 2008). There are about 25 species of *Pediomelum*, all perennial herbs endemic to North America, mostly the southwestern and midwestern regions. In the Southeast, we have only four species, all found in dry habitats with prairie affinities: cedar glades, longleaf pine savannas, and rocky woodlands (Weakley 2011a). Fitzpatrick et al. (2007), in a study of allozyme variation in *Pediomelum piedmontanum*, suggest its closest relatives probably occur west of the Mississippi River and, if so, "the Georgia and South Carolina populations



may be relicts, occupying their current locations for a very long time."

*Pediomelum piedmontanum* has erect, branching stems up to three feet high covered with tiny, stiff hairs and gland dots. The leaves are 3-foliate (or occasionally 5-foliate), up to 2 inches long, and are more than twice as long as wide. The petioles are very short or absent, and the petiolules are longer, up to 3 mm. The flower clusters are held at the tips of the branches and are 0.4-0.8 cm. long, densely crowded with cream and/or purple flowers with blade, keel, and wing petals typical of this group. The legume is elliptic to obovate, 6-7mm long and about 4 mm wide, covered with brown or amber glandular dots, and bearing a long, tapering beak.

As Allison et al. detailed in their 2006 article, these plants mystified botanists for years, refusing to be shoehorned into *Pediomelum*

*canescens* (Buckroot, Hoary Scurfpea), a fair look-alike but different enough to cause consternation. *Pediomelum canescens* shares many important features with *P. piedmontanum*, such as its erect, bushy stature (reminiscent of *Baptisia*), petioles shorter than petiolules, and a conspicuously beaked fruit. But there are significant differences, too. Among other more technical traits, *P. canescens* has a loosely flowered inflorescence and leaves with 1 and 3 leaflets on the same plant, while *P. piedmontanum* has a congested inflorescence and 3- and 5-foliate leaves. *Pediomelum canescens* occurs sporadically in sandhills throughout the southeastern Coastal Plain; *P. piedmontanum* is seemingly restricted to the lower Piedmont glades or prairies described above.

However, we know so little about Piedmont prairies, including where they once occurred, what types of bedrock and soils fostered their development, and their size and range. We know very little about the plants that once flourished there before agriculture and silviculture turned them under and fire suppression subsumed them into the surrounding matrix of oak-pine-hickory forest. An enterprising field botanist, brandishing a geological map or detailed soil survey and heeding Weakley's directive to "Go find 'em!," may very likely turn up more pocket prairies and more occurrences of Dixie Breadroot in the Piedmont.

## References

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Dixie Mountain Breadroot continued to Page 24

# BOTANICAL EXCURSIONS

## Red Cedar: Balsamic Remedy for Moths & Ghosts

George Ellison

*"No stone-walled hilltop too bleak, no abandoned field too thin of soil but that the dark and resolute figure of the red cedar may take its stand there, enduring, with luck, perhaps three centuries. In aboriginal America the red cedar probably formed extensive groves, sometimes excluding almost all other trees, and remnants of such are still to be seen occasionally on the limestones of eastern Tennessee and Kentucky, where the tree reaches a height of 100 feet."*

-- Donald Culross Peattie,  
*A Natural History of Trees of Eastern and Central North America* (1948)

I sometimes have occasion to drive I-81 up the Great Valley of Tennessee and Virginia to Washington, D.C. As soon as I pass out of western North Carolina into the terrain north of Knoxville, the dominant tree along the roadside becomes Eastern red cedar. Spread throughout abandoned fields and clinging to narrow ledges, they flicker alongside the roadside like green torches for hundreds of miles. I can never get enough of limestone country or the stands of red cedar that flourish there. And I never cease to wonder at the variety of shapes the tree can display within a short distance.

It has at least two distinct growth forms: narrowly conical and compact with branches growing up at a sharp angle; and broadly conical with branches widely spread. Some authors attribute the variant forms to age, with the narrowly conical young trees becoming broadly conical with age. Others suggest differences can be attributed to morphologically distinct characteristics, with *Juniperus virginiana* var. *virginiana* being narrowly conical and *J. virginiana* var. *silicola* being broadly conical. [www.fs.fed.us/database/feis/plants/tree/junvir/all.html]

We have red cedar here in western North Carolina where I live, of course, but not in the numbers found in the Great Valley. When out poking around in second growth habitats where it is found here, I have to remind myself that the tree is not really a cedar (*Thuja*) but a juniper (*Juniperus*). True cedars like northern white cedar have flat branchlets. True junipers have rounded branchlets. Eastern red cedar has the latter. It's the only native juniper that we have in any abundance.

The light reddish-brown bark of the tree peels off in fibrous strips. The reddish hue of the bark and the heartwood led the early French Canadians to call the species "baton rouge," meaning "red stick." Finding the same tree abundant in Louisiana, they assigned the name to the site that became their state capital.

The heartwood of red cedar has long been favored for closet linings, wardrobes, and chests due to its pleasing color, aromatic odor, and moth repellent properties. For many years, it also furnished the wood for making American pencils due to its lightness and the ease with which it can be sharpened. In 1900, more than 3,000,000



Painting of the narrow conical form by Elizabeth Ellison

feet of quality red cedar was cut in Tennessee and floated in great timber rafts to processing centers. With prime red cedar stands practically decimated in the East, pencil manufacturers moved on to a related species in the western United States.

Because the wood is decay resistant, it has also been widely used for fence posts and exteriors. Unfortunately, the tree serves as the host for cedar apple rust, a fungus disease quite harmful to apple trees, so that it has to be eradicated around orchards.

In winter, look for the dark blue, highly aromatic, berry-like fruiting cones that are used to flavor gin and provide food for mice and over-wintering birds. The tree spreads along fence lines where the birds perch and the rodents have runways due to their droppings, which contain seeds. The common name for cedar waxwings arose from their inordinate fondness for these berries.

In "Myths of the Cherokee" (1900), anthropologist James Mooney noted that, "With the Cherokee, as with nearly all other tribes east and west, the red cedar is held sacred above all other trees. The reasons for this reverence are easily found in its ever-living green, its balsamic fragrance, and the beautiful color of its fine-grained wood, unwarping and practically undecaying. The small green twigs are thrown upon the fire as incense in certain ceremonies ... as it is believed that the malevolent ghosts cannot endure the smell; but the wood itself is considered too sacred to be used as fuel. In the war dance, the scalp trophies, stretched on small hoops, were hung on a cedar sapling trimmed and decorated for the occasion. According to a myth the red color comes originally from the blood of a wicked magician, whose severed head was hung at the top of a tall cedar."

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# Mystery Plants

By Dan Pittillo

The correct identifications for the last issue (vol. 20, no. 2) was *Toxicodendron radicans* (no. 1) and *Parthenocissus quinquefolia* (no. 2). Getting both these correctly identified were Kadrin Anderson, Judy Dumke, Donna Ford-Wentz, Georgia Hall, Rick Norvok, David Taylor, and Jimmie Thompson. Jim Hull and also got the *Toxicodendron* correctly identified.

Continuing with 9 and 10 in this series of plant identifications, see if you recognize these two for an actual site to see what might be the future dominant species for the area after a storm. The final pair will be in the last issue for volume 20 this year. Many of our members are qualified to do this, even from distant locations, as has been demonstrated by many that have been able to identify rather cryptic photos in these pages over the years. But to make this little project easier for some others that have not tried to do this, let's see what you can do with this effort over the next two issues. I would like to award the best virtual identifier with the Mystery Plant Award a copy of the beautifully illustrated and detailed guide, Timothy Spira's *Wildflowers & Plant Communities*. The identifications should get somewhat easier as the list of species narrows for the project. So, get your submissions in soon as you get your newsletter!

For this project, I had a large forked, white pine's top split and broken out in two storms. I had planted this pine in an old pasture ridge about 20 feet above our creek when I first moved to Cane Creek valley in the early 1970's. Last summer I had the final standing log cut and removed along with the second branch of that I'm sawing up for firewood (actually I'm mixing it with hardwood for better burning in our stove). I live in an area of rich cove hardwoods so this will be the primary seed source for this site. To help you out, here are the species I have living nearby: Canopy trees

include *Acer rubrum*, *Aesculus flava*, *Betula lenta*, *Carya alba*, *Fagus grandifolia*, *Fraxinus americana*, *Liriodendron tulipifera*, *Prunus serotina*, *Quercus alba*, *Q. falcata*, *Tilia americana* var. *heterophylla*. Understory trees include *Carpinus caroliniana*, *Cornus alternifolia*, *C. florida*. Shrubs and vines include *Calycanthus floridus*, *Celastrus orbiculatus* (invasive), *Corylus cornuta*, *Parthenocissus quinquefolia*, *Toxicodendron radicans*, and *Vitis aestivalis*.



## A Different Way of Looking at Things

By J. Dan Pittillo

**Ed. Note: We all know that the internet is a significant source of information. Maybe those that read the printed page would like something in the traditional form: paper copy. Would anyone be interested in starting a column on "Plant Management" for our readers? To give you a few hints of how this might be done, I've written a starter suggestion on gardening, which many of our SABS members might find useful. These are not earth shaking but they might give some a few ideas readers might wish to try.**

As a Berea College freshman student in 1958, I took the late Waldemar Noll's physical science course. One thing I recall he stated is that science is "a different way of looking at things." Then as a graduate student enjoying the frequent lunch discussions with the late Eugene Odum, Odum introduced to me the idea that from a domesticated animal's or cultivated plant's value to increasing its population, with our domestication we help them to increase their

populations. Michael Pollan recently popularized this concept in his book, *Omnivore's Dilemma* and in the PBS television program, "Botany of Desire."

Now in retirement, I spend a lot of my day's organic gardening. With childhood experience of agricultural farming practice, I had developed some misgivings when I observed Atrazine dripped from our tractor sprayers caused a sterile spot to remain for years after the event. And whether cancer that has suddenly appeared in my late wife's family is related to her childhood from exposure to DDT in Panama or not, at least we decided to go the organic route in our food consumption.

Organic farming is labor intensive. The two main problems are fertility and pest control. Fertility can be obtained from recycled and properly composted organic material while pest control takes diligence in removing early infestations and use of natural chemicals

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such as neem oil or extracts from other organisms such as bacterial thunbergensis. The use of pheromones to attract and trap or kill pests continues to be promoted in research programs.

As a home gardener, I've learned a number of tricks for helping with the pest controls. One is to keep the plants upright and separate from problems lying on the soil where many of the pests are located. For example, tomatoes and cucumbers are often subject to soil-borne fungi. One of the more effective ways of holding them up is with metal baskets. One can purchase these but I find many of them flimsy and prone to bend over easily. A simple solu-



*These two baskets made of concrete reinforcement are stabilized with a locust stake. Note the wire/hemp trellis with pole beans to right.*

tion is to purchase concrete reinforcement fabric that is available in rolls five feet wide and with heavy gauge spot-welded wire in 6 x 6-inch squares. With metal cutters I cut nine to 11 of these squares and with pliers bend the cut wire ends to slide over each other to form the rolled basket. One precaution: the baskets placed over the developing plants will blow over in heavy winds and will need to be staked to the ground.

Or to support pole beans, I like to use tall stakes, wire and hemp string. For this operation two persons are needed. The stakes need to be 10 feet tall, burying them 2-3 feet and braced at each end of the row with a shorter stake. Stakes should be spaced about every 15 or so feet in the row. Eight gauge or heavy galvanized wire is used at bottom (6-10 inches above ground) and tightened with fence pullers (an extra claw hammer will work) and stapled in place. The upper wire can be wrapped on the end stake and pulled at the opposite stake. When the beans have begun to form vines, a spool of hemp string (I like it better than the plastic string as it can rot to form compost or burned in open fire) is simply looped around each wire once and tightened when about halfway between stake sections. Some local farmers cut and tie each string but this is extra effort than simply wrapping once around each wire to form "V's" up and down along the opposite wires.

Besides keeping growing the plants off the ground, controlling competitive weeds is a major concern of a gardener. Mulching is one of the better ways of doing this. One of our early gardeners in New York found using old hay a good way, but the trick is not to use weedy hay. If you happen to live in a farming area where

the first cutting leaves some weedless swaths missed by the balers, this can be a source for "clean hay." Or, if you have a larger lawn or source of lawn clippings, this is even better. And if you buy newspapers, save them all winter for use to cover the balks between rows. With hay or clippings in hand, lay full sections of paper (at least two thicknesses) and immediately cover with hay/clippings. Clippings should be limited to three-four inches thick to avoid weed seeds in the mulch. This method will keep weeds down (a few that make it through gaps can be hand-pulled) for a couple months.

Transplanting is always a consideration. Many of us use the little seed cubes to germinate plants early in the season. Not only getting the jump on the garden season, the cubes save wasting seed and easily controlling spacing. The method is fine but a lot of attention is necessary to keep cubes watered and protected in preparation to transplanting.

Suppose you would like to seed directly and transplant where there are some failed spots. Can you transplant corn, okra, or some other plants already established? With a little experience for different species try this: Uprooting will nearly always disturb the root mass, often removing a good portion. This is a shock to the plant being transplanted. So, balance the water draw on the roots by trimming the leaves. I find that in tomatoes, one can even get a foot-long branch to root by removing leaves except the very tip, undeveloped ones and deeply placing (a foot or so) the rootless branch



*Two rows of potatoes interplanted with field peas and mulched with grass clippings. The row with the bucket has just been mulched, the balk to the right yet to be mulched but a bean row was mulched before weeds germinated.*

to root and form a new plant in the garden. Corn can be cut back to about a third of the original blades and transplanted successively (it will be a little behind the planted cohorts though).

Whether these examples are "a new way of looking at" gardening for you will probably take a bit of experimenting. A gardener is always learning, no matter how young or old. As a partner with plants we have domesticated plants to suit our needs. With a bit of attention and determination we will be awarded. Science is not effective with only intellectual knowledge unless it is applied. If you have some techniques that have been useful, please share with me, preferably by email, and we can share with our readers.

# Highlights From the Southern Region— The American Chestnut Foundation

By Tom Saielli, Southeast Regional Science Coordinator

The work to restore the American chestnut is in high gear throughout the southern region. Since mid-May the southern chapters of The American Chestnut Foundation (TACF) have been busy pollinating chestnut trees throughout the region and at TACF Meadowview Research Farms in Virginia. Chapter volunteers collected pollen from 40 different sources of pure American chestnut from throughout six southern states and used them to pollinate 44 backcross chestnut trees at Meadowview. This resulted in approximately 2100 bags containing one to several female flowers that got hand pollinated. If we get good nut production followed by good germination and seedling survivorship, we will probably complete up to 29 genetic lines (25 – 50 mature trees that have the same blight-resistant grandmother) this year!



*This year, the Georgia Chapter of The American Chestnut Foundation established their first "Restoration Orchard" at Lake Altoona.*

Additionally, the various southern chapters of TACF have established several new orchards. The breeding program hinges on the successful establishment of chapter orchards where we plant nuts acquired both through pollination at Meadowview and controlled pollinations on large, surviving American chestnut trees all over the chestnut's range. Some noteworthy orchards include the new Ashbourne Orchard in Kentucky, where 347 nuts were planted in March. This orchard is similar to the other trademark orchards planned and managed by Anne Myers Bobigian, the Kentucky Chapter's Louisville Coordinator. Ashbourne Orchard is well designed and looks beautiful. It also has a lot of potential for experimentation with various orchard management techniques. Now Anne is working on a collaborative experiment studying the effectiveness of various cover crops. We hope this research will yield interesting and significant results for other orchards may find beneficial.

The Tennessee Chapter established four new orchards this year. In January, 30 backcross seedlings were planted in Carroll County, TN, to establish the Jeremy Gooch Orchard. This is only the second chestnut orchard to be planted in the western part of the state. The John Murray Orchard in Erwin, TN involved the establishment of 130 backcross seedlings in February. In March, 120

backcross seedlings were planted in the Dave Cantrell Orchard in Corryton, TN, and local Boy Scouts from White Pine, TN helped establish the Doug Scott Orchard, planting 126 seedlings.

In April the Carolinas Chapter established a seed orchard at the at Scott and Nancy Pryor's farm in Edneyville, NC, involving over 300 nuts. Seed

orchards are distinguishable from breeding orchards in that they do not go through a screening process but instead are allowed to open pollinate with one another. The nuts seed orchards produce are Restoration Chestnuts 1.0,

TACF's potentially blight-resistant American chestnuts. Also in April, breeding orchards were established at Apple Mountain near Spruce Pine, NC, and at the Big Tom Preserve, south of Pensacola, NC. The actual planting of these two orchards was largely done by a local troop of Boy Scouts from Spruce Pine and Burnsville, each orchard has about 100 chestnuts.



*Boy Scouts and family members work together to plant over 100 American, Chinese and backcross chestnut nuts at Apple Mountain near Spruce Pine, NC*



*The Lake Altoona Orchard crew: from left to right, Joe Nicholson, Jean Howington, Park Ranger Shea Sennett, Jimmy Stone, Charlotte Askew, Meagan Cipollini, Dr. Martin Cipollini, Elizabeth Sanders, William "Parks" Grooves*

In Alabama, the Alabama Fresh Water Land Trust (FWLT) Board of Directors member and Birmingham attorney, Jerry Lanning, offered to donate land for the 2012 Lanning Orchard atop Chandler Mountain. In February, 2012 a group consisting of Alabama Chapter volunteers and FWLT volunteers set to work on a brilliant and frigid afternoon planting 174 backcrossed chestnut seedlings.

Dixie Mountain Breadroot continued from Page 19

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## Results of the Election

For Membership Secretary: Michael Held.

For Member-at-large to Council: Mac Alford and Richard Carter.  
—Charles N. Horn

Chestnut continued from Page 19

In Georgia, in cooperation with the US Army Corps of Engineers, the Georgia Chapter established their first "Restoration Orchard" at Lake Altoona involving the establishment of 300 Restoration Chestnuts 1.0. This represents the first large-scale venture in Georgia into what is the "next phase" of the American Chestnut Foundation, reestablishing the trees back into the wild.

Also in Georgia, in February and March this year, 107 chestnuts from TACF, and 2300 oak, maple, dogwood and ash saplings donated by Pikes Nursery and were planted at Kennesaw National Battlefield Park by nearly 200 volunteers from four organizations: GA-TACF, Keep Cobb Beautiful, Marietta Rotary and Marietta Tree Keepers.

All of these orchards and chestnut plantings mark the achievements of our volunteers, without whom we could not exist as an organization. The land, the resources, the fieldwork, and even the local chestnut sources used in the breeding work are all donated. It is with this kind of dedication, enthusiasm and sacrifices that makes TACF's mission possible.

**Ed. Note: The American Chestnut Foundation and the USDA Forest Service are offering co-sponsorship of the 2012 American Chestnut Summit, Asheville, NC, October 19-21. See <http://www.acf.org/summit/>**

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