In England: Their 500-Year Forest

In Buckinghamshire just west of London, the Burnham Beeches Forest is one of the loveliest and most ancient of English woodlands. According to their website, “The area has been wooded since the last Ice Age, but today’s landscape was created by people. Indeed, one of the three Scheduled Ancient Monuments shows the area was inhabited as early as the Iron Age. The woodland’s character has also developed through centuries of wood-pasture management — where livestock graze beneath trees which are regularly pollarded (branches cut above head height). The Doomsday Book records Burnham Parish as having ‘woodland enough to feed 600 swine’.

The head ranger, Andy Barnard, has presented a 500-year plan for the management of these woods. He points out that 500 years is just a generation in the life of a beech tree. One aspect of the plan focuses on recognizing that the climate may warm. Should average annual temperatures increase by only a couple of degrees Centigrade (3.6 degrees Fahrenheit), the beech trees will wither. The plan calls for beech being supplemented by sycamore, a more adaptable tree for a warmer climate.

Wanted – A New Leader

As sure as each of us relies on the fact that all things change, every organization will replace its leader. Within the next 18 months we plan to do this at the 500-Year Forest Foundation.

We are looking for someone who loves aging forests, who will develop a kinship with the owners of our forests, who appreciates the strains these forests are experiencing (such as the encroachment of non-native invasive plants), who concurs with our efforts to record the changes in these forests (the results of which over the long term will be a benefit to our and other forests), and who is willing to devote about half of his/her time as a volunteer leading our organization. Our new leader will have the support of a great group of directors and, perhaps most of all, the enduring satisfaction of knowing he/she is making a wonderful contribution to our fragile environment.

If you have an interest or know of anyone who might, please contact one of our directors: Lincoln Brower, brower@sbc.edu; Ted Harris, highview@ntelos.net; David O. Ledbetter, DLedbetter@hunton.com; William H Martin, whm3@insightbb.com; Steve Nash, snash@richmond.edu; or Kay Van Allen, wkvan@earthlink.net.
We thought it would be a good idea to have a meeting at which all our prospective 500-year forest owners could gather to hear our message and to meet one another. Our meeting was held on the 2nd of May at the home of Hal and Jean Kolb, owners of a 500-year forest. The meeting lasted from ten to two with a picnic lunch. Our list of invitees included seven couples, five of whom attended.

It was quite a lovely day. The arrivals were welcomed by the Kolbs. Prior to our meeting the guests walked around in the enclosed wildflower garden area behind the Kolb home. The spring ephemeral wildflowers were in various states of bloom.

When we gathered inside, everyone spoke about their forest. Their comments revealed their tremendous conservation ethic and love for forests. All had one important condition in common: a conservation easement protects their forest.

The Foundation had prepared a handout that included:

- our brochure;
- 500-year forest language which could be inserted into their easement;
- a copy of the 2009 annual plan agreement for grant funds between the Kolbs and the 500-Year Forest Foundation for invasive plant control;
- plant inventory information from one of the permanent plots located in the forest;
- a map prepared by the Foundation showing the location of special trees and the paths through the forest; and
- photos of four of our most virulent non-native invasive plants.

During the morning session we talked about the material in the handout and answered questions from the group.

Hal Kolb told about the possibility of an additional tax benefit when owners restrict all timber harvesting in their forests. In their easement recorded in 2005, the Kolbs gave up all rights to harvest timber. Yet, in the appraisal, only the value of the land was (and typically is) used in calculating the actual donation the Kolbs made by giving up their timber rights. Thus no value was given to the timber in the appraisal. After a long process of convincing appraisers of the relevance of the timber value, Hal and Jean were able to increase their donation amount to include the stumpage value of their timber and thus take advantage of additional federal and state tax benefits. Hal and Jean's breakthrough provided great excitement to everyone as a further opportunity to support old growth.

Following lunch on the deck of the Kolb house, talks on controlling invasive plant species in the forest, specifically garlic mustard and oriental bittersweet, were on the agenda. Jean Kolb presented her techniques for eradicating garlic mustard, including breaking off and bagging the flowers of mature plants, pulling the plants, and using precise spot applications of Roundup in larger infestations. Peter Mehring, who has helped Hal with removal of oriental bittersweet from the forest, displayed samples of bittersweet and noted differences with American bittersweet. Peter's environmentally friendly method of bittersweet control includes cutting the stem near the ground and applying a few drops of Roundup from an acid bottle onto the severed stem.

The Forest Field Day was a solid success. We have already visited the forest of one couple who attended. They are very interested in having their forest become a 500-year forest.
The Gilvary forest is a significant natural heritage area because it contains approximately 150 acres of old-growth forest with some trees exceeding 400 years of age. Several years ago, Bob and Darinda Gilvary, owners of a 233-acre tract in Giles County, donated their development rights to the state of Virginia. The Virginia Land Conservation Fund granted the Gilvarys $224,000, a one-half payment for the stumpage value of the timber in this forest. The 500-Year Forest Foundation was the key player in the success of this transaction. The donation of the forest and other development rights means that no timber will ever be cut and no development will take place on the property. Because of its very special significance, the Gilvary forest has become one of Virginia’s Natural Area Preserves in addition to being a 500-Year Forest.

The 500-Year Forest’s Foundation’s program is designed to keep detailed records of the flora and fauna in our forests. We create permanent plots for renewed inspection every ten years. As time passes, the record will reveal both subtle and significant changes that will help in the management of our forests and other forests.

We have hired Curtis Environmental of Pittsboro, N.C., to do the biological inventory in the Chestnut Ridge Natural Area Preserve. Shay Garriock, zoologist, and Kevin Caldwell, botanist, will team up to do this study. The process will bring these two men into the forest for three individual three-day periods during the growing season. Their first effort will begin this summer and the second effort will take place in the fall. The project will be completed next spring. Their final report will be sent to us and the Natural Heritage Division of the Virginia Department of Conservation and Recreation. The Natural Heritage Division will prepare a management plan for this very special forest.

The proposed inventory will sample vascular flora and vertebrate faunal groups using both qualitative and repeatable, quantitative methods. The survey will serve as a baseline biological inventory showing existing conditions. Permanent inventory plots set up for the survey will provide opportunities to measure changes in the forest over time. The inventory will also identify and map unique habitats, natural communities, rare species locations, water resources, and threats to forest health from invasive and pest species.

Old-Growth Forest Inventory
for Chestnut Ridge Natural Area Preserve
aka The Gilvary 500-Year Forest

Shay Garriock

Kevin Caldwell

Albemarle County Initiative

As a result of our experience, we have discovered our best prospects are the landowners with their lands already under conservation easement. You may recall from an article in our newsletter a year ago that we uncovered four potential prospects in Amherst County with the help of a Sweet Briar intern, Megan Maloney.

Last year we asked the Virginia Outdoors Foundation (VOF) to help us identify potential 500-year forest owners in Albemarle County. We were looking for lands under easement to VOF with over 100 acres of forest. VOF furnished us with a list of 108 easements that met these qualifications. Further, VOF located these easements using ArcView, a GIS software, which shows the landscape as if being viewed by satellite. ArcGIS Explorer, an interactive web site program, also gives us the ability to move in on the terrain to a close vantage point allowing views of large individual trees.

We sent a letter to 60 of the easement owners explaining who we were, telling them our purpose and including two of our last newsletters. Through this effort we uncovered three owner prospects. Two of them came to our Forest Field Day on May 2. We have already visited the forest of one couple who attended our Forest Field Day. They seem quite interested in our program. A third forest owner who could not attend has invited us to visit his forest.
A Non-Native Invasive Plant: Oriental Bittersweet

This is the fourth in our series about non-native invasive plants. Oriental bittersweet, *Celastrus orbiculatus*, is a rapidly spreading demon, engulfing other vegetation and slowly killing it in our forests. *A la Jack’s beanstalk* made famous in folklore, it does not take long for oriental bittersweet vines to make it to the tree’s crown. It might be difficult to imagine a vine killing a tree, but oriental bittersweet vines have slain many a giant. Capable of reaching as much as ten inches in diameter, oriental bittersweet vines wrap so tightly around their victims that the trees are strangled in a girdling process. Even when oriental bittersweet vines aren’t strangling a plant, they envelop it in so much shadow that they rob the plant of the sunlight required for proper photosynthesis. Uprooting can occur as the trees’ root systems are unable to contend with the massive weight of entrenched vines.

Coming to the U.S. from Asia around 1860, oriental bittersweet was originally an ornamental plant. Not to be confused with American bittersweet, its non-invasive cousin, oriental bittersweet escaped its ornamental beginnings to become naturalized throughout the eastern US. The two plants look a lot alike. The main difference is that the native variety has a smooth bark and the oriental plant has thorns. The oriental variety is so dominating its American cousin that the American version is becoming endangered.

Bittersweet, either male or female, is a deciduous plant. Bittersweet blooms in mid-spring, and produces berries that ripen to red and orange in late summer and remain on the vine through winter. Birds eat the fruit and widely disperse the seeds. Because up to 95 percent of the seeds germinate and because the vines’ roots can produce suckers, bittersweet can take over a wooded or open space in short order making it reminiscent of kudzu.

Every plant has a redeeming grace and bittersweet’s is that the female plant has lovely red berries in the fall that make for beautiful dried arrangements.

Control is quite a challenge. Grubbing (using a mattock) removes vines and any sprouts in environmentally sensitive areas. A reasonable and environmentally-friendly way of control is to cut any vine of size close to the ground and add several drops of Roundup to the cut stem. Young vines can be removed by pulling. The woods will have to be checked on an annual basis to keep new infestations under control.
Donors - Thank You

What we do is only possible with the support of people you see on this list.

The following gifts were received from November 1, 2008 to April 30, 2009:

**FOREST FRIEND**
- Jenna and Mitch Haynie
- Steve and Linda Nash
- Kay and Kent Van Allen

**SOIL SAVER**
- David and Audrey Franks
  - in memory of Tisa Franks
- Lewis B. Goode, Jr.
- Gordon H. Leggett, Jr. and Madeline Miller
  - in honor of Ted Harris’ 80th birthday, great friend
- David Ledbetter

**STREAM STEWARD**
- Allen Family Foundation, Inc.
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- Matt and Susan Foster
- Peter and Leslie Mehring
  - in honor of Ted Harris and his work with the 500-YFF
- Dr. and Mrs. James S. Redmond, Jr.
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**FLORA FANCIER**
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**Tree Tender** ....................................... $30
**Student or Senior** ................................. $15
President’s Letter

Being involved with this organization since its inception has been a truly wonderful experience for me. When we locate the right person to take over, I hope to stay involved with The 500-Year Foundation for as long as I can be helpful in a supportive manner.

The success of our Forest Field Day at the Kolbs will ultimately be measured by how effective we are in signing up new 500-year forest owners. Initially, we were quite pleased with the response.

When I walk through various woods, I see beachheads being established by the non-native invasive plants. Every forest owner needs to understand the real threat these plants present. With our non-native invasive plant articles we are trying to raise the level of awareness of the other kudzu-like scourges.

Every now and then someone asks us how we picked our name. We thought that a large number would more effectively convey the meaning of our effort. So it was quite a thrill when we learned that an English old-growth forest had constructed a 500-year plan.

Thanks to each of you for your interest and support in promoting and helping sustain old-growth forests.