NEWSLETTER OF THE PIEDMONT CHAPTER OF THE VIRGINIA NATIVE PLANT SOCIETY

The Leaflet

Lincoln's Cottage Second Sunday Walk–Sally Anderson **SPRING 2017**

On a very cold and blustery January 8th, 16 people toured Lincoln's Cottage in northeast Washington D. C., led by Carrie Blair. The cottage is on a hill 3 miles from the National Mall. The site is exceptionally free of city noise, being surrounded by the Soldiers' and Airmens' Home (or Armed Forces Retirement Home) and adjacent to the campus of The Catholic University of America and Rock Creek Cemetery.

Luckily, we had an arranged tour of the cottage and the small museum and visitor center, so we were not out in the cold all day. I don't think most of us realized that the Lincoln family lived in the cottage during much of the Civil War, with the president riding horseback the 3 miles to town and back. They came partly to escape the war activity in the city, but just to the north of the cottage was a fort, a veteran's cemetery that was rapidly filling with new graves, and soldiers camped on the surrounding land.

The cottage, as you can imagine, is a bit larger and more elaborate that what usually comes to mind with that label. It was the original Soldiers' Home and dates to 1842. Sparsely furnished, the tour focuses on Lincoln's ideas and political writings, especially the Emancipation Proclamation. The cottage is currently surrounded by plantings of primarily native species of shrubs and several notable trees: a beautifully gnarled Osage Orange (*Maclura pomifera*), some fairly large Southern Magnolias (*Magnolia grandiflora*), Willow Oaks (*Quercus phellos*), White Pine (*Pinus strobus*) and several other (continued on page 2)

The Virginia Native Plant Society (VNPS), founded as the Virginia Wildflower Society in 1982, is a non-profit organization of people who share an interest in Virginia's wild plants and habitats and a concern for their protection.

The Piedmont Chapter is a geographically defined sub-group of VNPS in the northern point of Virginia east of the Blue Ridge Mountains. It includes Loudoun, Fauquier, Culpeper, Rappahannock, Warren, Clarke, and Frederick counties.

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The Chapter's email address is piedmontvnps@gmail.com

Lincoln's Cottage Walk (continued)

impressive native and non-native specimens. The trees of Washington are documented in City of Trees (3rd edition), by Melanie Choukas-Bradley and Polly Alexander, 2008.

From the cottage, we drove to Rock Creek Cemetery, with the first stop being the magnificent 'Glebe Oak'. This species is listed some places as a White Oak, but appears to actually be a Red Oak (*Quercus rubra*). A glebe is a parish-owned tract of land used to raise money for the church, and the tree sits beside St. Paul's Church, a pre-revolutionary war church (many times restored). We toured a section of the cemetery that was filled with Russian graves from the mid to late 1900s, where we admired a couple of large old Black Gum trees (*Nyssa sylvatica*), one of which had a somewhat weeping habit. The wind drove us away that day, leaving lots more for a future visit.

Virginia State Arboretum Second Sunday Walk–Carrie Blair

Marion Lobstein always draws a big crowd. Even on below-freezing December 11th., 37 people came to learn conifers. After a short introduction, Marion led us to inspect the trees, first on the Evergreen Trail , noting mostly European and Asian species, some of the oldest Blandy specimens, planted as far back as the 1930s: Incense Cedar (*Calocedrus decurrens*), Virginia native Bald Cyprus (*Taxodium distichum*), Japanese Umbrella Pine (*Sciodopitys verticillata*). The "true" European Cedars, Atlas (*Cedrus atlantica*), Deodar (*C. deodara*), and Cedar of Lebanon (*C. libani*), had small budding cones or last year's barrel-shaped erect cones splitting into separate wedge-shaped scales.

The front walkway to the Quarters and the high ground on the west side is the nucleus of the original plantings by the first director, Orland E. White. We inspected Norway Spruce (*Picea abies*), Douglas Fir (*Pseudotsuga menziesii*), Japanese Cedar (*Cryptomeria Radicans*), Atlas Cedar, Arbor Vitae (*Thuja* spp.), Arizona Cypress (*Cupressus arizonica*), and the deciduous Dawn Redwood (*Metasequoia glyptostroboides*) and Larch (*Larix* spp.),.

Marion taught Field Botany here 13 summers. She is retired after 36 years at Northern Virginia Community College but has continued to teach how to use the new Flora of Virginia, the book she inspired and worked tirelessly to support.

Second Sunday Walk at Smithsonian Conservation Biology Institute–Cathy Mayes

An intrepid group of women had an opportunity to explore the research plots on SCBI's Racetrack Hill near Front Royal February 12th, led by Kyle Rhodes, SCBI's land manager. The primary focus at SCBI is research on endangered fauna species, but several research projects on flora species are underway. The Virginia Working Landscapes project analyzes the diversity as well as nutritional value of native meadows versus typical forage pastures. Kyle established demonstration plots to observe the effects of different methods of controlling invasive and woody species on open land. On SCBI's Racetrack Hill, he planted eight half-acre plots with a mix containing 16 species of native plants and marked off a ninth plot as a control. Of the eight study plots, two are being burned regularly, two are being spot-treated with herbicide, two are being mowed regularly, and the last two are being hand-weeded. An effort is made to keep the cost of materials and man-hours roughly comparable among the plots. The demonstration has been in place now for two growing seasons, and the differences are noticeable. The control plot is a riot of autumn olive, virtually impenetrable. The experimental plots have attracted new plant species, so that now about 30 different species are growing in them and even in midwinter look like excellent bird and pollinator habitat. The effort to hand-weed plots this size is too great to be sustainable, and those plots now contain many woody species but not just autumn olive. The other three treatments have successfully controlled invasive and woody species, but fire obviously favors different species than does mowing and spraying. By trial and error, Kyle is developing how-to expertise he freely shares.

Racetrack Hill plots being prepared for planting

Virginia's Virtual Herbarium Project–Cathy Mayes

People have been collecting and pressing plants for hundreds of years—some personal collections have thousands of plants. Institutions (universities botanical gardens, museums) have stored many of these collections so millions of preserved plants are held in herbaria cabinets all over the world.

The largest herbarium in the U.S. is at the Missouri Botanical Garden with more than 6 million individual plant specimens. Virginia also has a rich collection of plant specimens because people have been collecting here almost from the first European settlement. Virginia's largest herbarium is at Virginia Tech. It houses 100,000 specimens, but it is only one of 25 herbaria in the state.

Preserved plants hold a wealth of information, but they are horribly inaccessible. To examine a specimen a researcher has to travel to where it is housed or arrange to have it mailed. High resolution imaging technology has now enabled the delicate specimens to be photographed and made available on line, opening huge new opportunities. For example, using on-line data, botanists can study the distribution of plant species over time and space, and laymen can use the images to identify plants. Of course, getting information from so many physical specimens onto a searchable database is a monumental task.

On February 12, Dr. Andrea Weeks, professor of biology and director of the Ted R. Bradley Herbarium at George Mason University, was the guest of Piedmont Chapter's special program at the Smithsonian-Mason School of Conservation campus near Front Royal on the status of the herbarium digitization project in Virginia. With National Science Foundation and Virginia Native Plant Society funding, Dr. Weeks launched a multi-year effort to digitize about half the herbarium specimens in the state. The GMU collection has been photographed. Her colleague Erika Gonzalez Akre led a (continued on page 4)

Virginia's Virtual Herbarium Project (continued)

similar effort at Longwood University's Harvill-Stevens Herbarium, and Dr. W. John Hayden is currently photographing the collection at the University of Richmond.

The two dozen attendees could log on to the database and learn how to digitize the label information from each specimen, critical information about who collected the specimen, when, and where. Most labels are hand-written, so only the human eye can transcribe them into a searchable database. Using citizen scientists like our members and Master Naturalists is the only way to get this phase of the project done.

Invasive Watch--The Grassy Thugs–Jocelyn Sladen

As if our natural habitats were not enough under siege from Japanese Stiltgrass (*Microstegium vimineum*), here comes Wavyleaf Basketgrass (*Oplismenus undulatifolius*). We need a broad-based effort to detect occurrences and, to the extent possible, check the spread of this highly aggressive and shade-tolerant grass from Southeast Asia. While we're at it, we should touch upon the Japanese Stiltgrass invasion again and Joint-head Grass (*Arthraxon hispidus*), a third invasive grass from southeast Asia that invades low disturbed habitats across the state and is especially common in the Piedmont.

Wavyleaf Basketgrass is a perennial, native to warmer regions of Southeast Asia and Africa. It was detected for the first time near a central Maryland landfill in 1996. In 2005, an 80-acre infestation was discovered in Shenandoah National Park. By 2009, it had become a rampant forest weed covering 200 acres. It has since been discovered at multiple sites in the northern Blue Ridge and northern Piedmont. In the past few years volunteers have been removing stands from Ovoka Farm in northern Fauquier County. The Digital Atlas of Virginia Flora lists it in 12 counties, including Warren and Fauquier, but notes that "populations are being detected with increasing frequency".

Wavyleaf Basketgrass has a branching, trailing habit, rooting at nodes along creeping stems but can grow up to 3 feet tall. Leaf blades are flat about one-half to an inch wide and up to 4 inches long, deep green with distinctive rippling waves across the blades. Leaf sheaths and stems have short hairs. When it blooms (mid-August into November) a sticky substance appears on the pointed awns (extended pointed tips of the flower bracts) that adheres to whatever brushes against them. The perennial growth habit and efficient seed dispersal system make it a serious threat to our natural landscape. Look for it especially in low, wooded areas, especially those that have been disturbed. It has been found among stands of Japanese Stiltgrass, as they thrive in similar habitats.

Japanese Stiltgrass, another import from Asia, has become all too familiar in our region. It is prolific throughout the region, its sprawling mats of delicate, pale green grass growing thickly along roadsides and trails or in ditches or making stealth attacks on our gardens, but most aggressively invading vegetation (continued on page 5)

Invasive Watch--The Grassy Thugs (continued)

in woodland areas. Highly shade tolerant, its dense infestations are associated with disturbed areas, with moist soils preferred. It can completely displace other vegetation, forming dense carpets. Like Wavyleaf Basketgrass, it is a sprawling plant but can grow over three feet tall. Its pale green, alternate, lance-shaped leaves have a silvery line down the center.

Joint-head Grass (*Arthraxon hispidus*), a third Eurasian invasive grass, has been quietly making itself at home across our region for a somewhat longer time. Less aggressive so far, it is nonetheless a troublesome weed of low, moist areas and is easily confused with the other two. They sometimes grow together. Note the clasping leaf base and conspicuous hairs along its leaf margins. It can be confused, with native Deer-tongue Grass (*Dichanthelium clandestinum*). Deer-tongue has a panicled seed head, lacking in *Arthraxon*. *Arthraxon* has stems that root at the nodes.

Controls–A small occurrence of any of these invasive monsters can be removed by hand. All three are shallow-rooted, although Wavyleaf Basketgrass has a survival advantage because it is a perennial. In hand removal, some care is important. Seeds can stick to you to be carried elsewhere. Disturbing soil by pulling rooted plants can create a fresh seed bed for new infestations. As for chemical control, do plenty of homework in advance, and observe the known cautions.

Invasive Watch--Oriental Bittersweet–Karen Hendershot

Winter is a good time to examine our woods and try to eradicate invasives. A particularly bad hombre is Oriental bittersweet (*Celastrus orbiculatus*). I used to enjoy its colorful orange berries in the fall until I saw how aggressive and tenacious it is. It quickly colonizes an area, and nearby native trees and shrubs don't have a chance.

How do you identify it? By now it has lost most of its berries and looks like a shrub at its base, but its whip-like branches grow long and twine around adjacent trees branches, which eventually are weighed down with a tangle of vines. If you pull back the soil at the base of the bittersweet, you will see an orange root.

What to do? The efficient way to deal with it is to make a fresh cut and apply a strong brush killer, which will go into its root system. Not being fond of poisons, I cut the branches to reduce spring growth and pulled out about 2-1/2 feet of its root. No I didn't get it all, but I know where it lives and I'll be baaack!

Thursdays Mar 9-Apr 6 6:30-8:30pm Meet your Trees! An Introduction to the Trees of Northern Virginia
Fauquier County. Earth Village Education, 9125 Lake Daniel Rd, Marshall. Piedmont Chapter Board member and Master Naturalist Carrie Blair will instruct on tree identification, forest ecology, and much more in sessions on five consecutive Thursdays. More information at http://earthvillageeducation.org/event/trees-3-17/.

Sunday Mar 12 1-3pm Blue Ridge Center for Environmental Stewardship Second Sunday Walk
Loudoun County. See vernal pool areas and the trees that help them function. Leader is Phil Daley. Limit 20; register at piedmontvnps@gmail.com.

Sunday Mar 19 2pm Winter Speaker Series: Edible, Medicinal and Utilitarian Uses of Native Plants
Fauquier County. Emmanuel Episcopal Church Parish Hall, 9668 Maidstone Rd., Delaplane. The speaker is Earth Village Education Administration Director and VNPS Piedmont Board member McNeil Mann. Free, refreshments provided. For more information, email piedmontvnps@gmail.com.

Saturday Apr 1 1pm G. Richard Thompson WMA Walk and Invasive Removal
Fauquier County. Bring gloves and drinking water. We will look for early signs of spring while we work. For more information, email piedmontvnps@gmail.com.

Saturday Apr 1 9am-3pm Morven Park Plant Sale
Loudoun County. Plant sale at Morven Park, Leesburg, sponsored by Loudoun Wildlife Conservancy. If you can help us by sitting at a Piedmont Chapter booth please let us know at piedmontvnps@gmail.com. More information at http://loudounwildlife.org/Calendar_April.htm#nativeplantsale

Sunday April 9 10am and 1pm Calmes Neck Bluebell Second Sunday Walk
Clarke County. A walk for VNPS members & residents of Calmes Neck only; register at piedmontvnps@gmail.com. At 1 pm we will caravan to sites along the Shenandoah River in Clarke County to look at more bluebells. Register at piemontvnps@gmail.com.

Tues & Thurs Apr 11 & 13 9am-2pm How to Use the Flora of Virginia
Clarke County. Blandy Experimental Farm. A 2 day class to learn how to use the Flora of Virginia to identify wildflowers, led by Marion Lobstien and Sally Anderson. Information for this and other spring programs at Blandy: http://www.virginia.edu/blandy/blandy_web/all_blandy/2017SpringPrograms.pdf.

Sunday May 7 10am G. Richard Thompson WMA Trillium Walk
Fauquier County. See Trillium and other spring flowers. Limit 20; register at piedmontvnps@gmail.com.

Saturday & Sunday May 6 & 7 Wildflower Weekend at Shenandoah National Park
Appreciate the diversity of wildflowers growing in the Blue Ridge. More than 1,300 species of plants thrive in Shenandoah National Park, a haven for native woodland wildflowers. Choose from among many activities at the Park website, http://www.nps.gov/shen/planyourvisit/event-details.htm?eventID=3747987-307230

Saturday & Sunday May13 & 14 9am-4:30pm State Arboretum Garden Fair
Clarke County. Another opportunity to help us by sitting at a Piedmont Chapter booth (includes free admission), contact piedmontvnps@gmail.com). Several native plant vendors and lots of information available.
See http://blandy.virginia.edu/our-foundation/fosa-annual-events for more information.

Saturday June 3 7am-5pm Garden Fest
Frederick County. Northern Shenandoah Valley Master Gardeners' annual festival at Belle Grove Plantation on US rt. 11 north of Middletown. Educational sessions, children's activities, and plants and other items for sale. Details at http://nsvmga.org/projects/garden-fest/

Recyclers of Nature: Fungi Decomposers Winter Speaker Series #1–Karen Hendershot

Dead Man's Fingers, Stinkhorns, Fairy Rings, these are some of the subjects of mycology, the study of fungi. Professors Rob and Ann Simpson of Lord Fairfax Community College kicked off the VNPS Piedmont Chapter's Winter Speaker Series January 29th with a rollicking talk on the good, the bad, and the ugly this wide-ranging topic. (continued on page 7)

Recyclers of Nature: Fungi Decomposers (continued)

Fungi are neither plant nor animal but are in their own Kingdom. Genetic studies show them to have more in common with us than with plants. The mushroom and other shapes we observe are actually the mushroom's fruiting, reproductive body. The actual mushroom is a filament structure in the soil or plant, called the mycelium. Even in the winter, the mushroom is still in the soil and can be seen beneath decaying leaves and as dried up brackets on trees or, in a few cases putting out active fruiting structures.

The most famous mushroom is the Fly Agaric (*Amanita muscaria*). This classic "toadstool" gained its name because, according to German legend, toads would sit on the mushroom to catch the flies that were attracted to it. In Europe it is red with white dots. In our part of the world it is yellow with white dots.

Fungi play an essential role in the regeneration of plant life. Without them, our forests would be littered with dead trees unable to decompose. Saprophytic fungi live off dead material or dung, helping to convert waste back into minerals and humus. Mycorrhizal fungi, on the other hand, have a symbiotic relationship with plants, from which an estimated 85 to 95 percent of plants benefit. The mycelium interact with plant roots providing water and minerals to the plants, while the fungi get sugars from the plant. Finally, a hostile relationship exists with *parasitic* fungi, which grow on living plants and can devastate entire forests or crops.

The world of fungi is unique. It contains the world's largest living organism – a Honey Mushroom (*Armillaria mellea*) that covers approximately four square miles in Oregon and is estimated to be roughly 2,400 years old. Other mushrooms form what have been called "Fairy Rings," some so big they can only be seen from outer space. Others are bioluminescent and glow in the dark.

Many mushrooms are nutritious, containing significant amounts of protein, minerals and Vitamin D. The Sulfur Shelf or Chicken-of-the-woods (*Laetiporus sulphureus*) might be considered the original "tofu", a tasty, non-meat substitute. Death or Destroying Angel (*Amanita virosa*), Jack-o-lantern (*Omphalotus illudens*), and many others are poisonous.

Uses of fungi are diverse. Ink or dye has been made from the Shaggy Mane mushroom (*Coprinus comatus*) and a stain for wood from the Green Elfcup (*Chlorociboria aeruginascens*), which is also known as Green Stain because pigment from the mycelium contain chemicals that stains the wood they are growing in. The Chinese have long used mushrooms for medicinal purposes, and the 1928 discovery in England of the antibiotic, penicillin, from a fungus was ground-breaking. On the other hand, a fungus found in peanuts creates a potent cancer-causing aflatoxin.

Slimy, disgusting, and deadly, or charming, tasty, and essential, fungi cover all the bases, playing a vital role in both human and plant life

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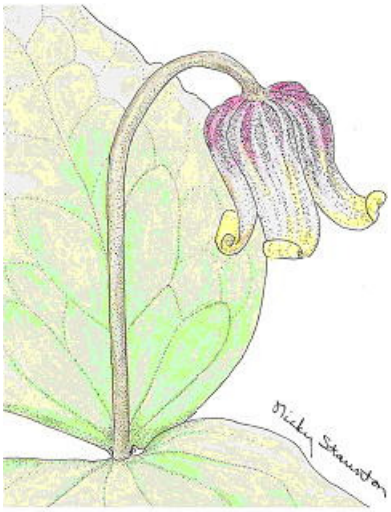

Curlyheads (Clematis ochroleuca)

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