

The



Leaflet

Banshee Reeks Walk–Karen Hendershot

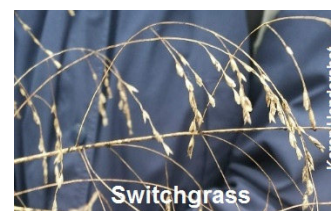
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On December 9 seven Piedmont Chapter members, led by Phil Daley, toured part of the 725-acre Banshee Reeks Nature Preserve, Seven miles south of Leesburg. From upland fields and forest to wetlands, occasionally flooded by Goose Creek, the site provides a variety of habitat. Phil explained the origin of the name. The early 19th Century owner of the property was a Scotch-Irish farmer. One windy night, he thought he heard banshees (female spirits) on the reeks (hills) – and thus the name was born.

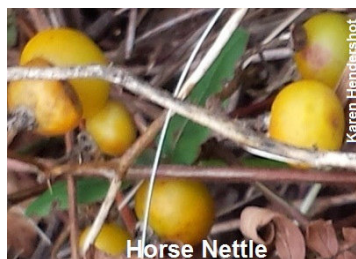


Indian Grass

As we entered the initial fields, past President Sally Anderson gave us some interesting lessons. She showed us that the awns (bristle-like appendages) of Indian Grass (*Sorghastrum nutans*) are bent nearly perpendicular to the stem and twirled. Switchgrass (*Panicum virgatum*), while native, originates in the Midwest and is aggressive here. The petioles (stalks) of the leaves of the giant American Sycamore (*Plantanus occidentalis*) widen at the base to wrap around next year's buds.



Switchgrass



Horse Nettle

Among the dull browns of the fields and hedges was a kaleidoscope of colorful berries. The yellow globes of Horse Nettle (*Solanum carolinense*) lay on the ground, while the purple fruit of the American Coralberry (*Symphoricarpos orbiculatus*) contrasted with the black berries of Japanese Honeysuckle (*Lonicera japonica*) twined around it. High in the trees hung Oriental

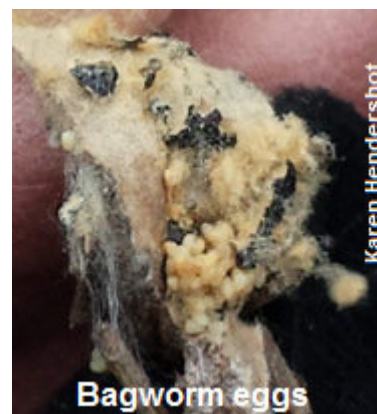


Coralberry & Japanese Honeysuckle

Bittersweet (*Celastrus orbiculatus*) and below it, Multiflora Rose (*Rosa multiflora*), both invasive.

And this was when Sally looked worried and began counting – counting all the aliens we had seen in a short distance. We tallied eleven – all common throughout the Piedmont (list at the end of this article.) We also saw evidence of goats brought into the Preserve to graze on the invaders. But goats are not dainty eaters, and scrape tree bark with their hooves, horns, and teeth.

Phil stopped to examine the interior of an egg casing of a Bagworm Moth (Order *Lepidoptera*; Family *Psychidae*) and showed us how the lifeless brown hull sheltered tiny eggs within.



Bagworm eggs



Bitternut Hickory

Our path led to a lower pond outfitted with a nesting box for ducks. Along the way we encountered a Bitternut Hickory (*Carya cordiformis*), distinguished by its bright sulfur-colored buds. On the ground were its round nuts, with the pointed tip.

As we descended to the flood plain, we were surprised to see deciduous leaves still bright green. Late-season greenery is often characteristic (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 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 Leaflet can be seen online in color at

www.vnps.org/piedmont

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Banshee Reeks Walk (continued)

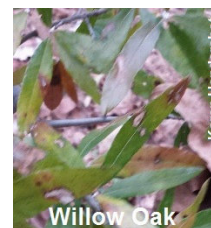
of alien species, but these were Willow Oak leaves (*Quercus phellos*). They love bottomland soil and tend toward evergreen in southern climates. “Are they in the Red or White Oak group?” someone asked. A bristle at the tip of the leaf places them among the Red Oaks.



Mary Keith at Goose Creek



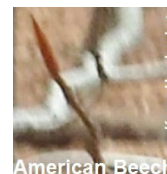
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Willow Oak

We reached Goose Creek to find numerous tiny footprints on its muddy banks. Mary Keith Ruffner knew the most about them. Those with five long toes and claws were likely a Raccoon (*Procyon lotor*) and those with four toes and no claw prints, a cat (*Felis sp.*)

A silvery-barked forest of American Beech (*Fagus grandifolia*) lined the trail back to the parking lot. Many thin, gray-brown leaves remained on the trees. Sheila Ferguson pointed out the long, shiny, cigar-shaped buds. Phil looked at his watch and sighed. The tour with native plant enthusiasts had taken a lot longer than his nature walks with energetic children. Yes, but wasn't it fun?



American Beech

Rogues' Gallery of Aliens at Banshee Reeks: 1. Autumn Olive (*Elaeagnus umbellata*), 2. Beefsteak Plant (*Perilla frutescens*), 3. Garlic Mustard (*Alliaria petiolata*), 4. Japanese Honeysuckle (*Lonicera japonica*), 5. Japanese Stiltgrass (*Microstegium vimineum*), 6. Mile-a-Minute (*Persicaria perfoliata*), 7. Multiflora Rose (*Rosa multiflora*), 8. Oriental Bittersweet (*Celastrus orbiculatus*), 9. Privet (*Ligustrum, sp.*), 10. Tree of Heaven (*Ailanthus altissima*), 11. Wineberry (*Rubus phoenicolasius*)

Winter Speaker Series: Historical Botany: Planning for the Future Towards Better Understanding Grasslands—Jocelyn Sladen

The theme of this year's Winter Speakers Series is Historical Botany. Clifton Institute Executive Director Bert Harris gave the first talk, looking at “Planning for the Future”. He shared insights on the topic of grasslands restoration, outlining programs under way at the 900-acre Institute he directs together with his wife Eleanor near Warrenton. The January 20 talk drew an interested audience and good discussions.

Fescue lawns and hayfields in our region would seem to indicate no shortage of grassy landscape, but conservationists are concerned by the major regional and national loss of the ecologically diverse grassland ecosystems that once supported many valued native plant and animal species. Fields of native grasses like Little Bluestem (*Schizachrium*) and Indian Grass (*Sorghastrum nutans*) have become scarce. As these grasslands are ploughed under, their biodiversity goes with them. Populations of native songbirds like grasshopper sparrows, bobolinks and dickcissels disappear, along with many plant and insect species once typical of grasslands habitats.

(continued on page 3)



Towards Better Understanding Grasslands (continued)

In opening words Bert stressed that a core of Clifton's mission is, "to open people's eyes to the incredible biodiversity around us..." Clifton Institute has launched a long-term BioBlitz, aiming to identify and inventory all the species that presently exist across the Institute's property: the birds, plants, mammals, reptiles, amphibians, insects and fungi and all the rest. Experts as well as citizen scientist volunteers using iNaturalist are participating. Results will largely direct its research and land management programs, including those involving grasslands.

Turning to Clifton's grasslands restoration initiatives, Bert described the Institute's roughly 200 acres of landscape that has been historically grazed by cattle. They will now be used for grasslands research with whatever restoration seems appropriate and possible. The Clifton Institute has applied for a grant from the National Research Conservation Service to restore the pasture. If they receive the grant they will divide the pasture area into separate paddocks and test the effects of different management techniques on grassland establishment: fire, herbicide spraying, seeding, mowing, along with a control plot. As a key part of the program, the Bioblitz, is now identifying what life forms are presently there in order to measure the effects of grassland management on native species. Bert expressed appreciation to our Piedmont chapter, whose band of volunteers turned up several days this past spring and summer to inventory plant species in fields slated for experimental programs. While obviously not complete, the resulting list has given a "general idea of the rough abundance in those fields" sufficient to move forward with plans. 169 species were identified, 60 of them alien. Two native plants, White-haired Panic grass *Dichanthelium villosissimum* var. *villosissimum*, and Rough Barnyard grass (*Echinochloa muricata* var. *microstachya*), had never before been collected in Fauquier County.

As well as highlighting biodiversity for its conservation and educational value, bio-blitzing will supply baseline data for restoration programs as well as its educational program. Bert emphasized that restoration programs need to be decided in terms of meaningful goals. While data on declining birds, for instance, prompts well intended action, we must choose species and natural systems "we can do something about."

Experts and visiting citizen scientists alike are invited to participate in bio-blitzing using the iNaturalist program. Each entry will be absolutely confirmed before added to the list. As an aside, it is perhaps not surprising that the bird list count has leapt ahead of others, as Bert is a non-stop birding enthusiast with impressive experience. The current bird count stands at 188.

Bert mentioned hopes for volunteers, not only for bio-blitzing, but for many of its ongoing programs, including the campaign to eradicate invasives. Days are set aside for this activity. The rewards of work include hours spent getting to know the beauty of Clifton's natural areas, with its plants and wildlife, native plant garden, two lakes and waterfowl. Those interested in events or volunteering are encouraged to find Clifton Institute on its Facebook page or telephone the institute at 540-341-3651.

The Lives of a Cell: Notes of a Biology Watcher by Lewis Thomas (1974, Viking)

Maybe you read this slim volume 44 years ago when it won the National Book Award and ecology was still a new-fangled word. Maybe like me you just picked up a crumbling copy at a garage sale. Either way you will find that these 29 short essays, first written for the *New England Journal of Medicine*, form a book of science as invigorating and perceptive as possible. From microbiology to computers, from entomology to anthropology, from medicine to music, this is a challenging, original, and prescient look at how humans connect to life on earth. And did I mention—Lewis Thomas makes me laugh out loud? [Review by Kristin Zimet]

Do you have a nature book you love? Send us a Short Take!



Invasives Control at Buck Hollow–Karen Hendershot

In a 2010 photo of the Buck Hollow Trailhead near Sperryville the forest looks depressed. Drooping trees were weighed down by Oriental Bittersweet (*Celastrus orbiculatus*). The shrub layer was dominated by Japanese Honeysuckle (*Lonicera japonica*). Native seeds failed to germinate in earth shaded by vines and tangles of Multiflora Rose (*Rosa multiflora*) and Garlic Mustard (*Alliaria petiolata*). Fortunately, this part of the forest found relief. Thanks to the decade-long effort of Shenandoah National Park Exotic Plant Management Biological Science Technician Jake Hughes and Master Naturalist Robin Williams, invasives have been removed, and native plants are flourishing. January 27, Robin gave thirteen people a tour of her work.



Buck Hollow Trailhead in 2010

Jake Hughes

The Buck Hollow Trailhead is classified as a Montane Alluvial Forest, rich with silt from higher elevations and occasionally flooded by the Thornton River. The relatively young forest suggests the area was cleared for farming until the homeowners left in the 1930s to make way for Shenandoah NP. A stone wall and old well are evidence of earlier human habitation. Fragile Fern (*Cystopteris tenuis*) has taken up residence inside of the well. It remains green as long as it has adequate moisture.



Fragile Fern

Richard Stromberg

Robin's removal activity occurs primarily in October to June, when vines are easy to see and seeds are less likely to be tracked in. Areas of sensitive ephemerals are avoided in the spring. Native vines, such as Greenbriar (*Smilax* spp.), Virginia Creeper (*Parthenocissus quinquefolia*), Eastern Poison Ivy (*Toxicodendron radicans*), Yellow Passionflower (*Passiflora lutea*), and Grape (*Vitis* spp.), are left in place to support wildlife. They do minimal harm to trees, in contrast to the strangling Oriental Bittersweet and Japanese Honeysuckle. Robin notes that the powerline through the area is an enduring challenge as maintenance trucks bring in seeds from other sites. Particularly frustrating to her, under the powerline is Chinese Yam (*Dioscorea polystachya*), which drops its potato-like fruits.

The Trailhead was originally so infested with invasives that it was thought that natives would have to be reintroduced by planting. But as the removal effort progressed, natives such as White Avens (*Geum canadense*) and Golden Ragwort (*Packera aurea*) returned on their own and tree and shrub saplings began to spring up. The resulting forest is supportive of woodland butterflies and moths. Northern Spicebushes (*Lindera benzoin*), Tulip Trees (*Liriodendron tulipifera*), Ash (*Fraxinus* spp.), American and Slippery Elm (*Ulmus americana* and *U. rubra*), Alternate-Leaf Dogwood (*Cornus alternifolia*), Black Walnut (*Juglans nigra*), and Common Hackberry (*Celtis occidentalis*) are all good host plants for caterpillars. By the river, we found a Smooth Alder (*Alnus serrulata*), with a nice display of male catkins. The Alder is among the hosts of the only carnivorous North American caterpillar, the Harvester (*Feniseca tarquinius*), which eats the Woolly Alder Aphid (*Prociphilus tessellatus*).



Smooth Alder
male catkins

Karen Hendershot



Hackberry

Karen Hendershot

The work of invasive control is never-ending. But Robin and her coworkers have at least now given the natives of Buck Hollow – as well as the butterflies and other wildlife supported by them – a fighting chance.



A (Mostly) Tree Walk at Blandy Experimental Farm—Sally Anderson

On a chilly but sunny February 12, our walk took place at the State Arboretum of Virginia at Blandy Experimental Farm. We gathered at Peetwood Pavilion, where there is some shelter and a view over a large part of the Arboretum. Our walk leader was board member and historical ecologist Emily Southgate.

Emily introduced the crowd to winter tree identification using buds, twigs, leftover fruits and fallen leaves. We began with pines (*Pinus* spp.) near the Pavilion, which come in two major groups, white and red, and differ in the number of needles that are grouped together (5 in white pines and 2 or 3 in red).

On the way to the picnic area we stopped at a group of ginkgo trees (*Ginkgo biloba*) and noted their stubby branchlets, and the persistent fan shaped leaves and mostly dried ‘fruits’ (not technically fruits, but fleshy cones that are not derived from the plant’s ovary) on the ground beneath. Though ginkgos grown today are Asian, there are ginkgo fossils from North America.

The picnic area has been planted in primarily native tree species, though some older non-natives are mixed in. We visited an opposite leaved (and twigged) red maple (*Acer rubrum*), whose leaves decay quickly. Next to that was another early successional tree, the tulip tree (*Liriodendron tulipifera*). The furrows of the bark are light colored, and the fruits remain on the tree, making identification pretty easy.



We sorted out the difference in two trees called gums. First we examined a black gum (*Nyssa sylvatica*), somewhat nondescript without its glossy red fall leaves. Then we looked at a sweet gum (*Liquidambar styraciflua*), with winged branches and spiky fruits.

While looking at several oak species (*Quercus* spp.), we learned about ‘sun leaves’ higher on the tree versus ‘shade leaves’ on lower and more shaded branches. The oaks in Virginia are either white oak group (without bristles on the leaves) or red oak group (with bristles). We looked at the related American chestnut (*Castanea dentata*) - in this case a Restoration Chestnut that was initially crossed with its Chinese relative and then backcrossed to get mostly American chestnut genes and characteristics. Oaks and chestnuts are both in the same botanical family, the *Fagaceae*.

Some non-natives we visited included a hawthorn (*Cretagus* sp.) and an ‘English’ walnut (the originally Persian species *Juglans regia*).

We also stood at the edge of the meadow looking at grass stalks and wildflower remnants, many identifiable. Emily discussed Virginia grasslands and some of the reasons to have these habitats, but that’s a subject for another day. Finally, we went to the farm’s Quarters building, where Cathy Mayes welcomed everyone with hot cocoa and Karen Hendershot passed out Valentine’s Day sentiments and cookies.





Sunday	Mar 10	1pm (Daylight Savings Time)	Sunday Walk: Weston Wildlife Management Area
Fauquier County. Virginia Department of Game and Inland Fisheries employee Ron Hughes will lead a walk at the Weston Wildlife Management area near Casanova to see Shumard Oaks and the back swamp forest community. For more information, email piedmontvnps@gmail.com .			
Sunday	Mar 17	2pm	Winter Speaker Series: Historical Botany: Evidence from the Past
Fauquier County. Emmanuel Episcopal Church Parish Hall, 9668 Maidstone Rd., Delaplane. Paleoecologist Dr. Emily (Russell) Southgate will discuss the theory and methods she uses to reconstruct past vegetation using pollen preserved in lake sediments and other evidence. Using her data and that of other paleoecologists, she will show how the vegetation in eastern North America has changed over the last 20,000 years, from full glacial time to the present. Free, refreshments provided. For more information, email piedmontvnps@gmail.com .			
Sunday	Mar 31	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. Rain date April 7. For more information, email piedmontvnps@gmail.com .			
Sunday	April 14	10am-noon	Calmes Neck Bluebell Walk
Clarke County. Join Botanist and chapter board member Dr. Emily Southgate and Master Naturalist and former VNPS President Sally Anderson for a guided walk to see early spring wildflowers along the Shenandoah River. Walk is moderate and a walking stick is recommended. Open to VNPS members and Calmes Neck residents only. Bring lunch, water and insect repellent. Limit 20, register at piedmontvnps@gmail.com to get driving directions.			
Sunday	April 14	2-4pm	Sunday Walk: Bluebell Walk Driving Tour
Clarke County. Drive along the Shenandoah River across from Calmes Neck; register at piedmontvnps@gmail.com .			
Sunday	Apr 20	1pm	Royal Shenandoah Greenway Walk
Warren County. Join Master Naturalist Richard Stromberg for a walk along the Royal Shenandoah Greenway in Front Royal to see spring flowers. Limit 20; register at piedmontvnps@gmail.com to get meeting instructions.			
Thursday	May 2	6pm	G. Richard Thompson WMA Trillium Walk
Fauquier County. Master Naturalist Sally Anderson will lead a walk to see millions of Trilliums and other spring flowers. Limit 20; register at piedmontvnps@gmail.com .			
Saturday & Sunday May 11 & 12		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, https://www.nps.gov/shen/upload/Wildflower-Weekend-Brochure.pdf .			
Saturday & Sunday May 11 & 12		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.			
Sunday	May 12	1pm	Sunday Walk: Sherando Park
Frederick County. Master Naturalist Sally Anderson will lead a walk to explore Sherando Park. Limit 20; register at piedmontvnps@gmail.com .			
Sunday	June 16	1pm	Sunday Walk: Canada Lillies at G. Richard Thompson WMA
Fauquier County. Master Naturalist Sally Anderson will lead a walk to Canada Lilies and other late spring flowers. Limit 20; register at piedmontvnps@gmail.com .			
Sunday	June 23	pm	Using Native Plants in Your Landscape
Fauquier County. Learn why native plants matter and how to use them in your landscape with Virginia Master Naturalist Diane Krumme and Master Gardener Alice Shelman at the John Marshall Library in Marshall. Information at piedmontvnps@gmail.com .			



(*Trillium grandiflora*) of the G. Richard Thompson Wildlife Management Area—Cathy Mayes
[PART 1--to be continued in the next issue of The Leaflet]

The beautiful *Trillium grandiflorum* is known by many common names. The species name *grandiflorum*, translates to large-flowered, and it is that—the showiest of spring wildflowers. So it is called large-flowered trillium but also white trillium, large white trillium, great white trillium, white-flowered trillium, common trillium, snow trillium and wake-robin.



Most *grandiflorum* flowers are opaque white when they first open, turn slightly transparent with age, then fade to a dull pink. But some open pink. Pink large-flowered trillium are rare in its northern range, but in the Blue Ridge you can usually find them. The name wake robin hints at when trillium emerge in the spring – just as robins return – but that name is commonly used for trillium generally.

A large-flowered trillium plant has a single flower. It produces copious yellow pollen which is present a day or two after bud-break. The odor and shape of the flower attracts insect pollinators—bees and flies. The flower is self-sterile, so a pollinator has to bring pollen from another trillium flower to produce seed.

The fertilized flower produces a berry-like fruit. When it ripens, it opens and spills its seed onto the ground below. Trillium seed have a tiny packet of oil attached called an eliasome. The oil attracts ants. They take the seed back to their nests, eat the oil and leave the seed to germinate resulting in large fields of trillium. Deer browse on the plant and disperse seeds to wider distances.



Trillium take several years before the first flower appears. The rhizome starts growing underground the first year after dispersal. Seedlings appear above ground the second year. Thus the plant spends two winters underground, double dormancy. In the third growing season, the plant produces its first true leaf, called a cotyledon. For the next two to four years it produces one leaf per year. Each year it is larger. These are its juvenile years. Then the plant produces three leaves for two to three years before flowering. These are its adolescent years. Finally, when the rhizome is sufficiently large, the plant will produce a flower. As long as the soil is fertile, there is sufficient light and water, and the plant is not damaged, it will flower for many years. Mature plants can persist in deep shade, but seedlings need some light.

Deer are fond of trillium. Browsing late in the season does not impact the plant significantly. However, browsing early in the season causes the plant to “regress” to an earlier developmental stage. In other words, if a deer bites off a trillium in early spring, the next year the plant will probably come out as an “adolescent” plant, with 3 leaves but no bud. If a deer bites off an “adolescent” plant in early spring, the next year it will come back as a “juvenile” with only one leaf. Repeated browsing, of course, kills the plant. Since deer prefer trillium flowers to leaves, they tend to browse the largest plants first.

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Curlyheads (*Clematis ochroleuca*)

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SPRING 2019



**Spring
is
coming!**