

# The Leaflet

Plants in Pairs at Sky Meadows—Karen Hendershot

WINTER 2020

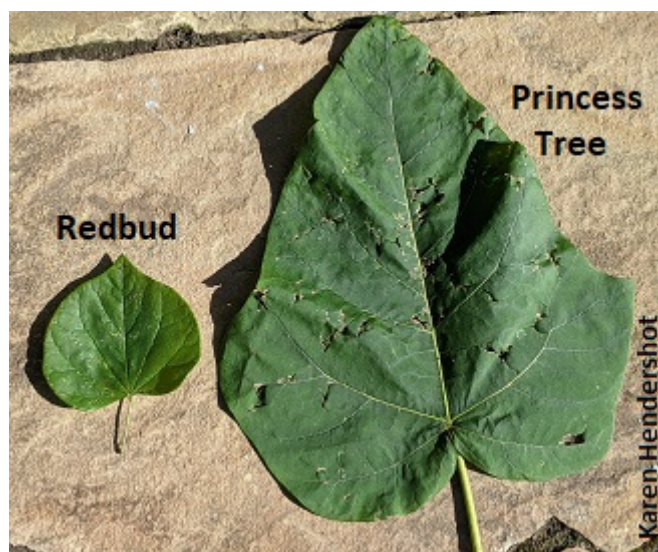


How do we reach a wider audience when coronavirus restrictions limit our activities? An answer was found in the Piedmont Chapter's first-ever self-guided, flagged walk September 4-13 at Sky Meadows State Park. Sally Anderson created a brochure for a 10-station, 0.3-mile exploration of the Hadow and Corporal Morgan trails for people looking for healthy outdoor activities. The walk focused on Plants in Pairs (ones that shared a similarity) and also on a few of the Park's common plants. Sketches from the *Flora of West Virginia*, which are not subject to copyright, were used to help depict the plants.



The first station flagged two trees that produce edible fruits. Both also tend to form groves because of their suckering habit, usually making them genetically identical within a grove. The bright orange fruit of the American Persimmon (*Diospyros virginiana*) is sweet when fully ripe but can be astringent if eaten too soon. The pale green fruit of the Common Pawpaw (*Asimina triloba*) has a mild flavor.

Next were plants that are sharp. The leaves of Rice Cutgrass (*Leersia oryzoides*) can slash one's skin, if not handled with care. Arching over it was a Hawthorn tree (*Crataegus* sp.), with pointed thorns.



The third and fourth stations compared two native trees with two nonnative invasives. The heart-shaped leaves of the native Redbud (*Cercis canadensis*) are much smaller than those of the alien Princess Tree (*Paulownia tomentosa*), which can approach 12 inches in length. The pinnately compound leaves of the Black Walnut (*Juglans nigra*) and the alien Tree-of-heaven (*Ailanthus altissima*) might look similar from a distance with many leaflets per rachis -- up to 23 for the Walnut and as many as 41 for the Tree-of-heaven. A quick way to distinguish the Tree-of-heaven from other trees with similar compound leaves is by the presence of one or several "toes" on the lower part of the leaflet.

By the fifth flag we had reached two large Tulip-trees (*Liriodendron tulipifera*) of differing ages. The bark of the older tree had become rough with age. (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 on-line in color at [www.vnps.org/piedmont](http://www.vnps.org/piedmont)

The Chapter's email address is [piedmontvnps@gmail.com](mailto:piedmontvnps@gmail.com)

#### OFFICERS

**Emily Southgate, President,**  
[ewbsouthgate@gmail.com](mailto:ewbsouthgate@gmail.com)  
vacant Vice Pres.

**Diane Krumme, Treasurer**  
[diane.krumme@gmail.com](mailto:diane.krumme@gmail.com)  
**Sally Anderson, Secretary**  
[rccsca@comcast.net](mailto:rccsca@comcast.net)

#### DIRECTORS

**Brenda Crawford**  
[brendacrawford90@gmail.com](mailto:brendacrawford90@gmail.com)

**Ellie Daley**  
[pedaley@verizon.net](mailto:pedaley@verizon.net)  
**Karen Hendershot**  
[wysfulthinking@gmail.com](mailto:wysfulthinking@gmail.com)

**Phoebe Muenger**  
[PJM Wenger@gmail.com](mailto:PJM Wenger@gmail.com)

**Bryan Payne**  
**Mary Keith Ruffner**  
[cootehillfarm@aol.com](mailto:cootehillfarm@aol.com)

**Jocelyn Sladen**  
[jsladen616@gmail.com](mailto:jsladen616@gmail.com)

**Richard Stromberg**  
[richsybi@gmail.com](mailto:richsybi@gmail.com)

**Blanca Vandervoort**  
[blanca@nelsoncable.com](mailto:blanca@nelsoncable.com)

**Robin Williams**  
[robinspony2@gmail.com](mailto:robinspony2@gmail.com)

**Kristin Zimet**  
[kristinzimet@yahoo.com](mailto:kristinzimet@yahoo.com)

## Plants in Pairs at Sky Meadows (continued)

Flags six and seven compared various vines. The native Grape (*Vitis sp.*) with lobed leaves and tendrils not only offers ripening fruit but its bark peels in strips and is used by nesting birds. The round leaves and smooth vine belonged to Oriental Bittersweet (*Celastrus orbiculatus*), a very destructive invasive species. Two native vines with berries good for wildlife were next. Virginia Creeper (*Parthenocissus quinquefolia*) has five leaflets but watch out for the one with three leaflets, Poison Ivy (*Toxicodendron radicans*)!



Flags eight and nine introduced three native plants common to the Park. The pale purple flowers of Field Thistle (*Cirsium discolor*) provide nectar for pollinators, seeds for birds and insects, and fluff for nesting.



Look for the white hairs beneath its small leaves. The magenta flowers of Upland Ironweed (*Vernonia glauca*) contrasted with the golden flowers of Crownbeard (*Verbesina occidentalis*), seen throughout the Park.

The walk concluded at a bench beside Gap Run, shaded by two ancient White Oak trees (*Quercus alba*). Just beyond the bench was an American Beech tree (*Fagus grandifolia*), laden with prickly, ripening nuts.



Maintaining this trail was a team effort: Phoebe Muenger, Mary Keith Ruffner (and mascot Zoe), Sally Anderson, Karen Hendershot, Emily Southgate, Doug Morris, and Blanca Vandervoort (not pictured). Our effort met with great



success. More than 100 printed brochures had been used, others may have been downloaded or read from a smart device, and we received enthusiastic feedback from participants.





## Piedmont Chapter Annual Meeting—Sally Anderson

The meeting was held at Northern Fauquier Community Park. It began around noon with participants bringing their own lunch and socializing in the Lakeview Pavilion. Thirteen members attended the lunch and meeting and two more joined us for our walk around the park afterwards. The park is planted with native trees and shrubs. Two of them are pictured at the end of this article. It has plenty of un-mowed locations, often in low areas, that have a variety of herbaceous plants as well.

In the business meeting President Emily Southgate gave a recap of our activities from the past year, including: Wildflower of the Week that Emily Southgate and Kristin Zimet produce (in its 26<sup>th</sup> week at the time of the meeting); Zoom and in person board meetings; several small and in person walks plus our flagged walk at Sky Meadows State Park; donation to summer camp programs at Clifton, Blandy Farm and Bull Run Mountains Conservancy; the quarterly newsletter; Emily is on the Chapter and State committees about native planting recommendations.

Then officers and directors shown in the box on page 2 were elected unanimously.



## Remembrance of Cathy Mayes—Jocelyn Sladen

“Cathy Mayes joined the VNPS Piedmont Chapter in 2006 and never left,” commented friend and fellow member Carrie Blair. Carrie’s observation comes to us edged with sadness as we accept the reality that our good friend Cathy has, in fact, left us after a determined fight with the cancer she resisted so successfully for so long. She just kept going and kept us going.

Reflections of friends and VNPS members have come from many directions. “When the Piedmont Chapter was asked to host the 2019 VNPS Annual Meeting,” writes Karen Hendershot, “most of us worried that we were too small a group to take on such a big endeavor.” But Mary Keith Ruffner remembers that Cathy responded by saying “We may be small but we are mighty.” That, in fact, “was a very good description of Cathy herself,” adds Karen. “She chaired our Annual Meeting Committee with a steady hand, abundance of ideas, and a whole lot of good humor, only a small example of Cathy’s steady handling of our Virginia Native Plant Society chapter efforts across a number of years...we have lost count.”

Our Piedmont Chapter shared Cathy’s skills and ever-welcome presence with other groups engaged in plant and habitat conservation. Over many years, she contributed leadership and hard work to the America Chestnut Foundation, running its regional office in Marshall, Virginia. A grove of experimental chestnut trees at the Smithsonian Conservation Biology Center facility near Front Royal was recently dedicated in her honor.

Colleague and friend Marjorie Prochaska recalls working with Cathy to mount a chestnut branch herbarium style, as a gift Cathy wanted for a landowner in thanks for making land available for Chestnut regeneration. “She remembered that I had spent a year or so in the Botany Department at the Smithsonian,” recalls Marjorie, “and that one of my duties had been the mounting (continued on page 4)



## Remembrance of Cathy Mayes (continued)

of plants. It was a beautiful spray of Chestnut growth. The tree was blooming when the collection was made, so you can see the elongate catkins against the silvery underside of the leaves. She even captured a tiny feeding insect.” She and Cathy found a way to fit it on an herbarium sheet. “It was such fun working with Cathy, that the experience remains one of the bright spots of my summer,” Marjorie adds. “But when has working with Cathy ever not been a bright spot? Rest in peace, dear friend.”

Jocelyn Sladen has similar recollections of the fun of working with Cathy. Over several recent years, they volunteered together for Virginia Working Landscapes plant surveys, a challenge that involved compass skills for locating designated survey plots in widely scattered fields across the region, and patience for identifying each plant within a plot while losing pencils and eyeglasses in the briar patches, often in summer’s hottest days. Earlier in the year surveys were just as dicey, detecting the botanical differences between newly sprouted leaves on plant shoots barely above ground. Jocelyn was then a bit better than Cathy at plant ID, but only Cathy kept them from getting hopelessly lost thanks to her compass skills while managing to keep the data organized...somewhat. Cheerfully, she pulled Jocelyn out of deep mud when she got us off track in an August foray, marching straight into an overgrown wetland.

This past July, Cathy organized a small expedition to search for a spectacular, rare plant in a privately owned wetland, a VNPS registry site, near Marshall, Virginia. The plant, the Purple Fringeless Orchid (*Platanthera peramoena*) had not been seen there for years. Despite earlier failed attempts and a general conviction that the small population had been overtaken by invasives, Cathy persisted until the field’s owner, by now personally intrigued, opened new road into the trackless wetland where the plant had last been seen. Triumph. Not one but six splendid orchids were found that July afternoon. They remain a celebration of this wonderful friend of ours, her zeal for the natural world, effectiveness in getting things done, and friendship shared by so many of us.

Aside from native plants and conservation, Cathy’s enthusiasms included our region’s bird life and her garden, famed for its harvests of strawberries so generously shared in the springtime.

Piedmont Chapter president, Emily Southgate comments: “Cathy’s positive attitude and sense of humor in the face of tremendous odds should inspire us all in addition to her contributions to VNPS, American Chestnut Foundation, Clifton Institute and many other organizations devoted to protecting and improving our natural heritage.”





## Bull Run Mountain Natural Area Preserve—Sally Anderson

On November 14 we were treated to a walk at a new location, Jackson Hollow, on Virginia Outdoors Foundation's Bull Run Mountain Natural Area Preserve. VOF's Summers Cleary was our host and Emily Southgate was our plant expert. We began on some mid-slope woods. The road bank where we parked was lined with Mountain Laurel (*Kalmia latifolia*), Christmas Fern (*Polystichum acrostichoides*), Common Rock Polypody fern (*Polypodium virginianum*), Trailing Arbutus (*Epigaea repens*) and rocks covered in a Fern Moss (*Thuidium sp.*), all evergreen plants that shone in the fall sunlight.

Bull Run Mountain NAP is about 2500 acres in size. It was dedicated as a state Natural Area Preserve in 2002 but was a conservation priority for decades before. The VOF website [[vof.org/protect/reserves/bull-run-mountains/](http://vof.org/protect/reserves/bull-run-mountains/)] has information about the history of its protection, the biological diversity found there, and which trails and areas are open to the public. Jackson Hollow is normally closed to public visits.

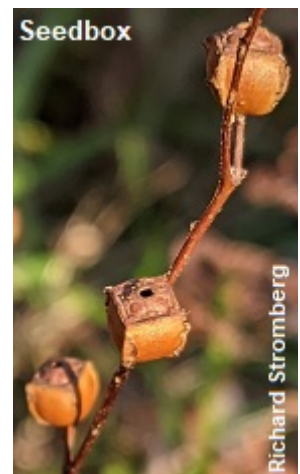
Jackson Hollow receives cool air drainage from the surrounding uplands, and the hillsides are full of springs, which combine to give the area a bit of a northern feel. This was accentuated by a grove of hemlocks we passed through. Our primary destinations on the walk included two different areas of the floodplain of Catharpin Creek. Both are in a former lake bed, but the dam was destroyed by Hurricane Agnes in 1972 and the stream is no longer impounded. Emily explained that the creek may have originally had some marshy floodplain areas, rather than being an incised and rocky mountain stream, resulting in the plant diversity found in those habitats now that the dam is gone.

The two areas of floodplain we visited were very different. The part closer to the broken dam was a little rockier and fast flowing, and lined with Smooth Alder (*Alnus serrulata*), on which next year's male catkins and last year's female cones could be seen. In this area we found Common Running-cedar



(*Diphasiastrum digitatum*) growing in large mats, and had fun wandering through it and making the spores puff from the strobili. A Tall Meadow-rue (*Thalictrum pubescens*) must have been more than six feet high. A Hairy Hawkweed (*Hieracium gronovii*) had all of its leaves munched off except one at the base, yet still had an open flower and several buds.

The next floodplain area was dominated by Willow trees (*Salix sp.*), and other plants noted were Seedbox (*Ludwigia alternifolia*), White Turtlehead (*Chelone glabra*) and Common Greenbrier (*Smilax rotundifolia*), all in fruit. Invasive Japanese Stiltgrass (*Microstegium vimineum*) and Joint-head Grass (*Arthraxon hispidus*) covered much of the floodplain, but scraping it away, we found that other plants were managing to survive underneath. This might be because these grasses get off to a late start, not emerging until late spring.



The best walks end with some questions unanswered. A leafless shrub with reddish buds growing at the second floodplain location is as yet unidentified. A different kind of question concerns Redcedar (*Juniperus virginiana*) trees. When immature the foliage of these trees is very prickly, but it seems that as they grow above browse height they produce smoother leaves. What triggers the tree to make this change is unknown as far as we have been able to find out.





The events below are subject to cancellation or may be restricted to ten people because of Covid-19.

<b>Saturday</b>	<b>Dec 12</b>	<b>1pm</b>	<b>Winter Plants at Blandy</b>
<b>Clarke County.</b> Walk at the State Arboretum led by Jack Monsted, Native Plant Trail curator at Blandy. To register, contact <a href="mailto:piedmontvnps@gmail.com">piedmontvnps@gmail.com</a> .			
<b>Saturday</b>	<b>Jan 9</b>	<b>1pm</b>	<b>Trees at Shenandoah River State Park</b>
<b>Warren County.</b> For more information, register at <a href="mailto:piedmontvnps@gmail.com">piedmontvnps@gmail.com</a> .			
<b>Saturday</b>	<b>Jan 30</b>	<b>2pm</b>	<b>The Fascinating Flowers</b>
Virtual talk via Zoom by Emily Southgate describing flower structure. For more information register at <a href="mailto:piedmontvnps@gmail.com">piedmontvnps@gmail.com</a> .			
<b>Saturday</b>	<b>Feb 13</b>	<b>1pm</b>	<b>Cool Springs Walk</b>
<b>Clarke County.</b> Walk at Shenandoah University Shenandoah River Campus at Cool Springs. For more information and to register, contact <a href="mailto:piedmontvnps@gmail.com">piedmontvnps@gmail.com</a>			
<b>Saturday</b>	<b>Feb 27</b>	<b>2pm</b>	<b>Not Your Textbook Leaves, Stems and Roots</b>
Virtual talk via Zoom by Emily Southgate describing leaf, stem and root structure. For more information register at <a href="mailto:piedmontvnps@gmail.com">piedmontvnps@gmail.com</a> .			
<b>Saturday</b>	<b>Mar 13</b>	<b>1pm</b>	<b>Walk TBD</b>
Walk to be led by VDGIF employee Ron Hughes. For more information and to register, contact <a href="mailto:piedmontvnps@gmail.com">piedmontvnps@gmail.com</a>			

## 2020 Shenandoah Chapter of the Virginia Master Naturalists Volunteer of the Year

VNPS Piedmont Chapter Board member Mary Keith Ruffner has been named Volunteer of the Year by the Shenandoah Chapter of the Virginia Master Naturalists. VMN Chapter Membership Chair Janet Rigoni listed excerpts from nomination submissions:

“She always goes the extra mile. A steadfast bluebird trail monitor at Blandy and Sky Meadows, she mentors new monitors and covers extra trails when people can’t work. A staunch participant in two different Christmas Bird Counts and several butterfly counts, she also takes on extra areas that lack coverage there.”



“She has been involved in multiple projects and I consider her to be a top notch, all around naturalist/conservationist. First and foremost, she has been an exemplary leader of the pollinator plot projects bringing together a team to create and tend the plots plus going on her own when watering and weeding were needed.”

“She interacts with visitors to draw attention to the VMN Shenandoah Chapter and to explain the purpose of the work, drawing attention to the variety of pollinators and their needs.”

“She has devoted many hours of her personal time this year, during the Covid pandemic restrictions, establishing, maintaining and enhancing native plant pollinator plots at Sky Meadows State park in the chapter outdoor lab. She has organized volunteer work days, observing the Covid safety restrictions and has provided both leadership and mentoring of VMN volunteers during her activities at the outdoor lab.”

“Have you seen someone chest-deep in invasives along the Sensory Explorers’ Trail? Have you encountered someone, back bent and shovel in hand, planting seedlings in pollinator plots at Sky Meadows? Have you wondered who did the back-breaking work of carrying water to those pollinator plots week in and week out? Have you had a conversation with someone who can quote you chapter and verse about the importance of native plants and the impact of invasive plants on those natives and the insects and birds that depend on them? If you answered yes to all of these, then you know Mary Keith Ruffner. “



## Plant Identification Aids—Richard Stromberg

Before cell phones we had books. Roger Tory Peterson invented the field guide using drawings to emphasized distinguishing features, first for eastern birds, later for other topics like flowers. Peterson flower guides have emerged for various sections of the country. Peterson flower guides are organized by flower color, though later ones have dichotomous keys to help. A dichotomous key leads you through a series of questions. It can be a long process and often leave you hanging if you have taken a wrong branch or come to a question about a part of a plant that isn't available when you are looking.

“Newcomb’s Wildflower Guide” provided an advantage to people in the northeastern quadrant of our continent with a three-part keying system (number of petals, arrangement of leaves and type of leaves.)

But field guides cannot include all species for an area because of size restrictions to allow portability.

A book that contains all plant species in an area is called a Flora. John Clayton produced “Flora Virginica” in 1758, but Virginia has not had a Flora since until the 1554 page “Flora of Virginia” was published in 2012. Before that, the 1950s “Flora of West Virginia” served me well in the Piedmont Chapter area. Maryland produced one ten years later. The Floras are intended for scientists, so terminology may be difficult for casual users, though they have glossaries. They have dichotomous keys that are very long. The “Flora of Virginia” starts with 42 pages of keys just to get to family.

The Flora of Virginia project has integrated the book into an app. The Flora of Virginia app not only contains the whole printed book, it also contains the Atlas of Virginia Flora, which is an online system showing a dot in each county where the species has been documented. It also has pictures of most species and a graphic key. I just discovered an app called “Virginia Wildflower”. It has a keying system very similar to the Flora of Virginia app and has over 3,000 species as does the Flora of Virginia.

“iNaturalist” launched in 2008. It provides an online place for people to enter a picture of what they saw and where they saw it. The latest cameras/phones can take a picture and capture the coordinates. Early on you could put an observation on iNaturalist and hope that others could identify it. For example, I saw an unusual snake on the road to my house. I circulated a picture to friends. Then I put it on iNaturalist and got three responses within an hour...from Africa. It was a Ball Python, probably an escaped pet.

iNaturalist has created an app to allow phones to directly upload observations. iNaturalist has added image recognition software to compare an observation to its vast collection of pictures and suggest identifications. So it works not only with plants, but also mammals, insects, fungi, etc. It also created an app called “Seek” that does the identification function without entering observations into its data base.

“Lens” uses Google’s vast collection of photos to identify things, and goes far beyond the natural world. It told me that our dining room sideboard is a Bernard Pedersen credenza.

I have tried other apps like “PlantNet”, but it did not find answers as well as Lens or iNaturalist. When I googled PlantNet, I came up with pages of alternative apps. So I first try Lens, because I have a Google phone and it is right there. Then I go to iNaturalist, which often does a better job, and it records my entry for possible scientific use and as a catalog of my observations.

I have also used iNaturalist as an aid on trips. For example, before I went to Big Bend National Park, I looked at iNaturalist’s observations for that park. And I set up a “subscription” to have iNaturalist send me new observations each day before I went.

Lens and iNaturalist and other image recognition apps require internet access, so they are not available if you are in the field in a place with no access. But you can take a picture and use these apps when you have internet access. The Flora of Virginia and Virginia Wildflower apps do not require internet access as all their information is loaded on your phone.

**PIEDMONT CHAPTER  
VIRGINIA NATIVE PLANT SOCIETY  
P.O. BOX 336  
THE PLAINS, VA 20198**



*Curlyheads (Clematis ochroleuca)*

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Richard Stromberg