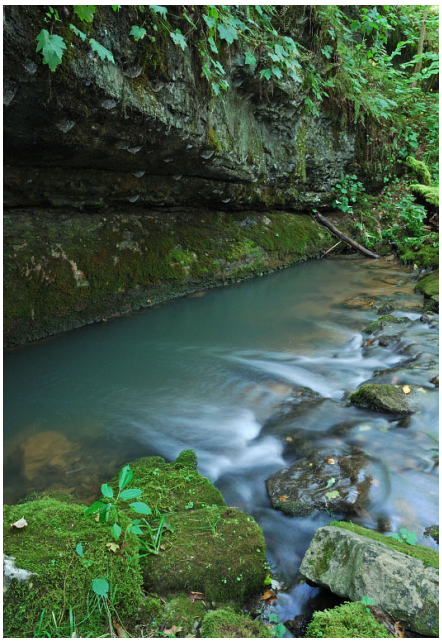
Sempervirens
Winter 2015 The Quarterly of the Virginia Native Plant Society

VNPS Helps Preserve Unique Karst Landscape

A very special place in Southwest Virginia will soon expand its borders, thanks in part to the annual fundraising appeal by the Virginia Native Plant Society. The Cedars Natural Area Preserve supports exceptional natural communities including rocky, dry limestone glades and woodlands located across nearly 20 square miles in Lee County near the Powell River. The karst landscape, where thin soils develop over easily dissolved limestone bedrock, creates terrain that tends to be rolling, rocky, rugged, and full of sinkholes, caves, and sinking streams. The preserve is a haven for rare plants that have adapted to the mostly thin, nutrient-poor soils of the area.

The Commonwealth and The Nature Conservancy have teamed up to protect a series of parcels containing approximately 2,040 acres of land, says Chris Ludwig, chief biologist with the Virginia Department of Conservation and Recreation's Division of Natural Heritage. Earlier this year, when 300 additional acres in need of protection were identified, the VNPS Board of Directors set a goal of raising $20,000 toward the purchase of that additional acreage. Thanks to the generosity of our members, that goal has been surpassed.



The Cedars is known for its beautiful karst landscape. (Photo by Gary Fleming)

A rare Northern Metalmark (*Calephelis borealis*) perches next to a leaf of Running Glade Clover (*Trifolium calcaricum*), the rarest plant at The Cedars. Other than the relatively large population restricted to The Cedars, it is only known from a much smaller site in Tennessee. (Photo by Johnny Townsend)

"The parcel you all are helping to protect is a dandy!" said Ludwig. "It has thriving populations of rare plants in addition to large forest and woodland areas that are still untouched by invasive plants. Also, and this is important, your efforts here not only protect rare plants and significant plant communities, they help protect a unique and significant karst landscape, numerous globally rare subterranean organisms, rare moths, a rare butterfly, a rare snake, and water quality for the Powell River, which has some of the most significant mussel and fish diversity left on the planet."

The Cedars is home to 18 rare native plants, and several others will probably be identified because of the habitat type or because they were seen there historically. The 18 stars: Wild Hyacinth, *Camassia scilloides*; Crawe's Sedge, *Carex crawei*; Mullein Foxglove, *Dasistoma macrophyllum*; Ringed Panic Grass, *Dichanthelium annulum*; Flattened Spikerush, *Eleocharis compressa* var. *compressa*; Northern Rattlesnake-master, *Eryngium yuccifolium* var. *yuccifolium*; Pink Thoroughwort, *Fleischmannia incarnata*; Canada Bluets, *Houstonia canadensis*; Highland Dog-hobble, *Leucothoe fontanesiana*; Hispid False Mallow, *Malvastrum angustum*; Rattlesnake-master, *Manfreda virginica*; Pitcher's Stitchwort, *Minuartia patula*; Yarrow-leaved Ragwort, *Packera millefolium*; White Blue-eyed-grass, *Sisyrinchium albidum*; Small Dropseed, *Sporobolus neglectus*; Tall Dropseed, *S. compositus* var. *compositus*; Gyandotte Beauty, *Synandra hispidula*; and Running Glade Clover, *Trifolium calcaricum*.

—Nancy Sorrells

From the President

Marathon Native Planting Creates Pollinator Paradise for VDOT

Can you imagine trying to plant 8,000 native plants in one day? Diane Beyer, state vegetation management planner with the Virginia Department of Transportation, recently had the ambitious goal of planting native pollinator perennials in a sunny 15,000-square-foot area at the I-95 northbound rest area near Dale City in Prince William County. With a push from Nicole Hamilton, executive director of the Loudoun Wildlife Conservancy, this project is part of the Virginia Department of Transportation's Pollinator Habitat Program, which aims to create waystations, or refuges, for monarch butterflies and other threatened pollinators. A couple of years ago, Nicole was taken with the plight of monarchs and sought assistance from the national Monarch Watch organization to find public areas in which to plant milkweeds (*Asclepias* spp.), the only host plants of monarchs. The Prince William Wildflower Society learned of this project a little late in the game, but made an effort to participate and to recruit volunteers through the Virginia Native Plant Society, Master Gardeners, and Master Naturalists.

It was the classic o'dark thirty when I awoke Sept. 29 to a forecast of rain later in the day. I stopped off at my neighborhood doughnut shop for coffee and doughnuts for our volunteers and headed to a meeting spot to carpool with Tamie Boone, Prince William Chapter vice president.

Members of the Prince William and Potowmack chapters were among the 50 participants in a native-plant blitz at an I-95 rest area near Dale City, in Northern Virginia. (Photo by Nancy Vehrs.)

We were fortunate that traffic on the two miles of I-95 was lighter than expected and arrived well before 7 a.m. Most of the plants had been delivered the day before and unloaded by Diane and a few volunteers including Brenda Hallam of the Prince William Chapter. The star attractions—flats and flats of small milkweed plants fresh from Monarch Watch—still had to be unloaded, and Sue Dingwell, Tamie, and I, along with a VDOT volunteer, unpacked and sorted them. Once Diane arrived, we arranged the flats over the mulched planting area. Species included Common Milkweed (*Asclepias syriaca*) and Swamp Milkweed (*A. incarnata*), as well as Spotted Joe-pye-weed (*Eutrochium maculatum*), New York Ironweed (*Vernonia noveboracensis*), Mistflower (*Conoclinium coelestinum*), Square-stemmed Monkeyflower (*Mimulus ringens*), White Turtlehead (*Chelone glabra*), Scarlet Beebalm (*Monarda didyma*), Wild Bergamot (*M. fistulosa*), and several species of asters. Some plant choices were influenced by availability.

Some 50 volunteers had arrived by 9 a.m., and, with a PBS crew filming, Diane and Nicole briefed us, and the planting began under overcast skies. Our volunteer force, along with VDOT and Dominion volunteers, worked diligently to place those plants in the ground by 3 p.m. Dominion provided a pizza lunch, and many volunteers could commit only to the morning. Thus, the frenzied pace accelerated after lunch as we raced to plant all the remaining plants with fewer able bodies. Overall, the small plants were closely spaced and should fill in quickly next year. Much welcome rain fell that evening and continued for days as part of the nor'easter that dumped a lot of water on the Southeast. I was able to rest my weary and sore bones on those rainy days.

Next time you head north on I-95, be sure to stop at mile marker 156 to assess the planting. Small educational plots with signs will be seen near the main building, and the large meadow planting has a wide grassy path through the middle for walks. VNPS applauds this undertaking and looks forward to other statewide efforts. For information about a project in your area, contact Diane Beyer at Diane.Beyer@vdot.virginia.gov. She would welcome your support and assistance. ***—Your President, Nancy Vehrs***

Sept. 9–11, in Blacksburg

New River to Host 2016 Annual Meeting

Even before the final activities for the 2015 Annual Meeting drew to a close in Staunton, members of the Virginia Native Plant Society's New River Chapter were well into the planning stages for the 2016 Annual Meeting, to be held Sept. 9–11 in Blacksburg. Field trips are being organized, speakers are being lined up, and details are being ironed out.

The meeting will be one to remember in Virginia Tech's hometown, says New River President Mary Rhoades. Blacksburg is on the Eastern Continental Divide, and the Jefferson National Forest is just 10 minutes away. Field trips will include an outing to the Blue Ridge Parkway with Butch Kelly and visits to species-rich Wildwood Park in Radford and beautiful Claytor Lake State Park in Dublin, where you will be able to spend an hour on the water using your own equipment or a rented canoe, kayak, or paddleboard. Because there are so many avid gardeners among our members, permission has already been obtained to visit enough gardens to fill an entire day.

Boat slips at Claytor Lake State Park.

The Day's Inn on South Main Street in Blacksburg has been reserved, and the special room rate of $68 per night has been locked in.

Watch this newsletter and the VNPS website in the coming months for more details about this native plant adventure in Southwest Virginia. ❖

News on the Flora App

It probably seems slow to you, but we're forging ahead with our work on the Flora of Virginia App for smart phones and tablets. Most of our work is still data preparation for the Graphic Key, sure to be the App's hottest feature (maybe after its weight!). The next step is the programming, and we are raising funds now to pay the developers.

Volunteers—most of them Virginia Native Plant Society members!—are turning the *Flora's* species descriptions into a data matrix, a format that the App's computer program will be able to use to drive the new Graphic Key. Users will basically answer questions about their mystery plant by tapping the icons that apply to it. And with each tap, more and more candidate species are eliminated, eventually leaving one species or, considering that the App has 3,164 species, a handful of possibilities, and the ID is clinched using the photographs and full descriptions from the print *Flora*, also in the App.

The first several questions will knock out lots of species before the user even thinks about the plant's traits: What major group? (Examples: asters, grasses, broad-leaved woody plants, ferns, orchids.) What's the water situation at the plant site? (Dry, somewhat moist, wet, water.) Light regime? (Sun, part shade, shade). (And just in case you were wondering, the traditional dichotomous keys will be available in the App too.)

A plus about the App: it will be in the hands of much younger people than the print *Flora*. Kids use apps constantly, and if they like nature or are taking science or biology, the Flora App will be in their pocket or backpack. Without the electronic format, few students below college age would use the print *Flora*. But the App will be used by students as young as sixth grade—tomorrow's conservationists, ecologists, consultants, botanists, plant lovers, and VNPS members. ***—Bland Crowder, executive director, Flora of Virginia Project***

PROGRAMMING THE FLORA APP

The Flora Project's fall funding appeal echoes the look of the Graphic Key and its buttons. To see such a key in use, watch this video (on YouTube): *http://tinyurl.com/pwb6h9l* We hope you'll help us! If you aren't on our mailing list, you can give via our site, floraofvirginia.org

Little Things Reveal the Big Picture

By W. John Hayden
Botany Chair

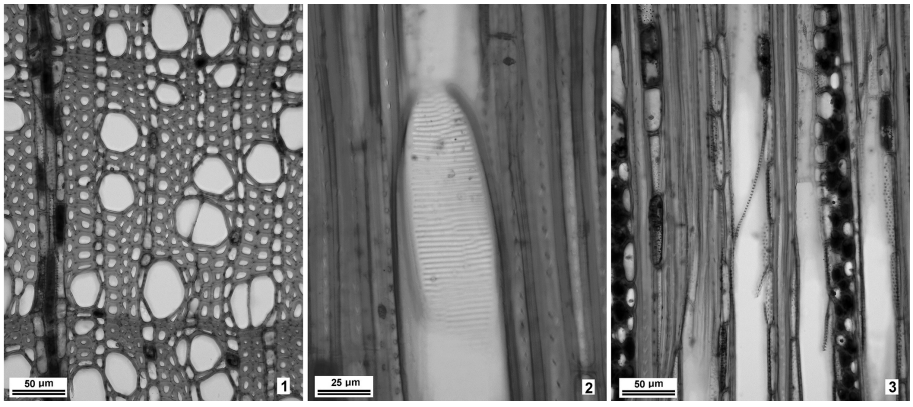
As enthusiasts who enjoy native plants in natural habitats, we tend to focus on gross morphology—aspects of plant form that can be readily observed with the naked eye or with a hand lens. And there is plenty to see at the gross level. The *Flora of Virginia* contains 1,269 pages of keys and descriptions devoted to gross morphology of the commonwealth's botanical treasures. Morphological diversity, however, does not stop at the magnification limit of a hand lens. Light and electron microscopes open up whole new worlds of intricate structure for appreciation and study. And tiny structural details can illuminate and provide insight at much larger scales, such as whole-plant biology or ecology.

This article contemplates a single aspect of the internal microscopic structure of our VNPS Wildflower of the Year, *Clethra alnifolia*, also known as Sweet Pepperbush. Our focus will be vessel elements, cells that function like water pipes in xylem tissue. These cells move water from roots to above-ground organs. It may be a surprise for some to learn that vessel-element cells are dead at functional maturity—they consist of nothing more than their tough cell walls that stack together, end to end, forming minuscule pipes (technically, vessels). The large, empty-looking cells in Figures 1–3 are vessel elements viewed in wood, each sectioned in a unique orientation. A critical step in the conversion of a living cell to a vessel element (cell resembling a short length of pipe) is the dissolution of its end walls. Imagine a process analogous to using a can opener to remove the ends of soup cans and then stacking the cans together to make a long conduit for water. Vessel elements stack end to end, forming the water-conducting vessels found in xylem.

Many plants have vessel elements for which the soup-can analogy, minus tops and bottoms and stacked together, requires little additional explanation. Vessel elements of oak and ash trees are good examples. The situation in *Clethra,* though, is a little more complex. First, the end walls are not perpendicular; instead, they are inclined so that in profile view the end of the cell takes the form of a wedge (Figure 3). Nevertheless, each wedgelike, low-angle end wall in the vessel elements of *Clethra* overlaps with that of the next vessel element above and below, so these cells also form pipelike vessels. But there is one more difference; instead of a single hole in the end wall (as would be made by a can opener), the vessel elements of *Clethra* have multiple slitlike openings, each separated from the next by a slender bar of cell wall material (Figure 2). The openings do, of course, align with each other, and water passes from one cell to the next by passing between the bars. For *Clethra*, the topless, bottomless soup-can analogy is just too simple.

Plant anatomists refer to the openings in the end walls of vessel elements as perforations. Perforations in oak and ash are simple, while those of *Clethra* are scalariform (ladder-like). Among flowering plants at large, simple perforations are more common than scalariform perforations. Can we find any meaning in this information about the details of the water-conducting system of *Clethra*? As mindful readers of this year's Wildflower of the Year articles will remember, *Clethra* and *Cyrilla* are widely acknowledged to be early offshoots of the lineage leading to Ericaceae. As it turns out, scalariform perforations are frequent throughout all three of these families, supporting evidence for their close relationship. Notably, however, some Ericaceae (*Arbutus, Arctostaphylos)* have simple perforations.

It is widely thought that water moves more efficiently through vessels with simple perforations than those with scalariform perforations; all those little bars of wall material must impede water flow to some extent. Ecological data support this idea. As noted by Sherwin Carlquist (1976),



WOOD OF *CLETHRA ALNIFOLIA*. 1. Cross section; large open cells are vessels seen in cross section. 2. Radial section; scalariform perforation from the shared end wall of two overlapping vessel elements. 3. Transverse section; the steeply inclined end walls of two overlapping vessel elements.

the flora of Southern California is dominated by plants with simple perforations. Southern California, of course, is an arid land that imposes harsh demands for efficient conduction during those brief occasions when water is available. Of all the plants in this habitat, only five species possess scalariform perforations, and all of those occur in canyons, near watercourses, or where the water table is relatively shallow. Many related ecological observations support the general conclusion that, because scalariform perforation plates are inherently inefficient, plants with scalariform perforations conduct adequately only in environments with plentiful soil moisture. And where does *Clethra* grow? Though sometimes found in dry conditions, it is much more frequently a denizen of moist forests, swamps, seeps, and ditches.

Whereas conductive inefficiency may well be an impediment that limits the ability of *Clethra* and plants with similar plumbing to colonize dry habitats, students of xylem structure and function have identified a potential adaptive value for scalariform perforation plates. Xylem conducts water and, in temperate regions, water freezes in winter. As water freezes, it loses its capacity to hold atmospheric gases in solution. In winter, when water freezes inside vessel elements, inevitably, little bubbles form. Problems arise when the ice melts because these bubbles rise as far as they can go inside the xylem vessel. In plants with simple perforations, this means that bubbles can accumulate from the ice of many individual vessel elements, ultimately coalescing as a large air bubble (embolism) somewhere in the upper reaches of the vessel. This is a problem because a large air bubble completely shuts down the flow of water; the mechanism of water flow in plants requires continuity of the water column. In plants with scalariform perforations, however, air bubbles from melting ice will be caught by the bars of perforation plates at the upper end of each vessel element. There is no chance for multiple bubbles from long stretches of the water column to coalesce; consequently, continuity of the water column and therefore the capacity to conduct water from root to shoot is maintained. Birch trees, for example, are also thought to benefit in this way from their scalariform perforations. Of course, most species of *Clethra* are found in the tropics, where freezing is not an issue. Nevertheless, scalariform perforations in the xylem of *Clethra alnifolia* (or its ancestor) may well have functioned as an adaptation, allowing it to maintain water columns in the conduction system as this once tropical plant expanded its range into temperate regions to the downright frigid conditions that it must endure at its northern limits, in Nova Scotia.

Bottom line: everything in biology is connected; even tiny microscopic details can illuminate ecology and systematic relationships!

Literature Cited

Carlquist, S. 1976 Ecological Strategies of Xylem Evolution. University of California Press, Berkeley.

Native Orchids in Winter?

No, there are no Virginia native orchids that flower in the dead of winter. Spent seed capsules, remnants of last summer's glory, can be spotted by hawk-eyed naturalists, but orchid flowers just don't tolerate the winter cold. A surprising number of native orchids, however, do retain living, photosynthetically active leaves above ground through our coldest months of December, January, and February. Perhaps the most common of these cold-tolerant orchids is the Cranefly Orchid (*Tipularia discolor*), readily recognized by its two-toned leaves, dark green above and purple below. Of similar habit, but less frequently encountered, are the green-and-white-striped leaves of Puttyroot (*Aplectrum hyemale*). Much smaller and easily overlooked are the winter rosettes of certain species of Ladies'-tresses (*Spiranthes*); rosettes of *S. lacera*, for example, are little larger than a quarter and could easily be mistaken for Deer-Tongue Grass (*Dichanthelium clandestinum*). The winter-adapted leaves of these genera are strictly seasonal, and these orchids flower in summer on leafless stems.

The only other orchids in Virginia with winter leaves are the Rattlesnake-plantains (*Goodyera* spp.); unlike those discussed above, these orchids are evergreen. We have two species, the rare Dwarf Rattlesnake-plantain (*G. repens*), restricted to the mountains, and Downy Rattlesnake-plantain (*G. pubescens)* found throughout the commonwealth. To be an evergreen orchid

Downy Rattlesnake-plantain, *Goodyera pubescens (Photo by John Hayden)*

Continued on page 8

Shenandoah, Upper James chapters outdid themselves!

2015 Annual Meeting A Smashing Success

By Charles Smith
Registry Chair

The Shenandoah Valley is a special place for me, and I was fortunate to be able to attend the Virginia Native Plant Society Annual Meeting there Sept. 11–13. The members of the Shenandoah and Upper James River chapters did a wonderful job of hosting, arranging the venue, speakers, field trips and leaders, and meals. The attendees provided the fellowship, and natural areas provided enrichment and the reinforcement of why we care for them.

At the Friday board meeting we learned that the fundraising efforts to assist in the purchase of additional acreage for The Cedars Natural Area Preserve had exceeded $15,000. A presentation by Rod Walker about Blue Ridge PRISM partnership for invasive species management described a unique management tool, the first cooperative weed management area in Virginia, which relies on collective knowledge to educate landowners and residents about managing invasive species over a 10-county area, why it is needed, and methods used. The last noteworthy thing is that the meeting ended after only two hours!

The Friday evening gathering included a good meal, good company, and two good speakers. The weather was mild and comfortable for an outside event at the Cochran Pavilion of Staunton's American Frontier Culture Museum, also the rallying point for Saturday's field trips and the setting for our dinner and meeting that night. The centerpieces both evenings were beautiful arrangements of cut native flowers from members' gardens.

Our first speaker Friday evening, Lynn Cameron, is a leader in the effort to create the Shenandoah Mountain National Scenic Area in a 90,000-acre tract that is deemed a biodiversity hot spot by The Nature Conservancy and an outstanding ecological core by the Virginia Natural Heritage Program. Designation by the U.S. Congress will protect natural resources by establishing wilderness areas that are trailless and scenic areas that direct recreation to areas that can sustain it.

Following Lynn, Nancy Sorrells, author and editor of *Sempervirens*, spoke about the threat to Shenandoah Mountain and other special natural resources posed by the Atlantic Coast Pipeline and other proposed natural-gas pipeline routes. These pipeline routes are unprecedented in their proposals to cross high-elevation ridge lines, requiring massive clearing and disturbance. Virginians and residents of other states are challenging these pipelines when companies have not demonstrated the need and have not tried to use existing utility easements and transportation corridors that are already disturbed.

Saturday was cloudy with a promise of showers as we gathered for field trips and picked up our lunches. I was excited to be on the Maple Flats field trip with Natural Heritage ecologist Gary Fleming and USDA Forest Service botanist Fred Huber. Our trip leader, Chris Wenk of the Upper James River Chapter, herded the cats that composed our group. One of the best things about the field trips is making new acquaintances and getting reacquainted with people. My carpool included Chris, Mary Rhoades, President of the New River Chapter, and Brenda Skarphol, a member of the Potowmack Chapter. We had a lively conversation en route to the site, and once there we had a great group of people who shared freely and enjoyed one another's company as well as the special resources at Maple Flats.

After the field trip we cleaned up, changed clothes, and headed back to the Cochran Pavilion for the evening's

Clockwise from top left: 1) Mark Gatewood leads the trip to Grand Caverns. 2) *Native plant lovers this way,* a weathered tree trunk seems to beckon, atop Sister Knob in Bath County. 3) Virginia Sneezeweed, *Helenium virginicum*. (Photos by, respectively, Nancy Vehrs, Nancy Sorrells, and Suzanne Dingwell.)

activities. The friendly folks working the cash bar introduced me to Full Nelson Virginia Pale Ale from Blue Mountain Brewery located east of the Blue Ridge in Nelson County. Mike Smith, Shenandoah Chapter, let me know that Route 151 in Nelson County has five vineyards, three breweries, a cidery, and a distillery that have garnered a reputation for quality and the moniker for Route 151 of Alcohol Alley.

Dinner was good Saturday, and I was able to share the meal with our speaker for the evening, Bobby Whitescarver. Bobby is an accomplished storyteller with disarming country charm and a rich background as farmer, land conservation professional, educator, and soil and water conservation district board member. He talked about working together to heal the land through education, improved practices such as eliminating fescue (which is invasive, as well as toxic to livestock, wildlife, and other plants largely because of its fungal associates) and improving stream buffers, and restorative actions such as planting native warm-season grass meadows to provide livestock forage and support wildlife like the Northern Bobwhite.

After enjoying breakfast with the many Society members staying at the Best Western hotel, I checked out and drove to Grottoes for the Sunday morning field trip at Grand Caverns (once called Weyers Cave). Our tour was a rich experience thanks to a good guide, the natural display, and playful humor throughout the trip. The tour was followed by an ascent of the ridge above the cavern to view the local flora and the surrounding countryside from several hundred feet up.

It was a full, rewarding weekend. ❖

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Nancy Vehrs, President
Nancy Sorrells, Editor
Karen York, Office Manager

VIRGINIA NATIVE PLANT SOCIETY

Next submission deadline: Dec. 15, 2015

Remembering Rich

The Blue Ridge Wildflower Society is mourning the loss of one of its most cherished members, Rich Crites. Rich died at home on Sept. 4. He was a friend, mentor, teacher, and counselor to many folks. Though large in stature, he had a gentle manner and a caring heart. Rich was always there for anyone who had a problem or just a simple plant question.

Raised on a farm in Illinois, he never lost his interest in the outdoors or the farming life. His career led him in 1968 to Virginia Western Community College, where he taught until he retired in 2001. Like many, he followed his full-time career with a couple of years teaching biology part-time. He touched many students in biology, ecology, and environmental classes. His true love was teaching spring and summer classes on local flora, which led to his affectionate nickname, Mr. Wildflower. Many folks in these classes became members of the VNPS's Blue Ridge Wildflower Society. Rich and several of his students started the chapter, and it blossomed through his enthusiasm.

Rich was an active member of many local, state, and national groups. In addition to his career at VWCC he taught 15 years in Mary Baldwin College's Adult Degree Program. Rich was in his element with his cane and cigar leading students and chapter members on field trips to see the plant world. His friends and students will never forget him poking his cane at an especially beautiful or unique plant. He knew the plants from the tops of the trees to those hugging tightly to a rock or flat on the ground. To Rich, every species had its own way of being special. He looked at people the same way. He will be missed. ***—Butch Kelly, Blue Ridge Wildflower Society***

Spring Destination: Southwest Virginia

Special botanical areas in Southwest Virginia will be the focus of the Virginia Native Plant Society's spring trip April 24–May 1, 2016, reports First Vice President Sally Anderson, trip organizer. Field trips will take us to sites from Roanoke to the far western counties. Trip leader will be Gary Fleming, vegetation ecologist with the Virginia Natural Heritage Program. Gary is a familiar face to many Society members, and his expertise is beyond compare.

Trip highlights will include Raven Cliff, the New River Trail, Pinnacle Natural Area Preserve, Whitetop, and Natural Tunnel State Park. All these sites are featured in Gary's *Flora of Virginia* chapter "Learning the Virginia Flora: 50 Sites for Productive Field Botany." He also wrote the *Flora* chapter "The Nature of the Virginia Flora," as well as the habitat and distribution information used in the book's taxon descriptions.

Gary has conducted field studies of the natural communities and flora of Virginia for more than 35 years. He is president of the Virginia Botanical Associates, a nonprofit organization that has been devoted to mapping the distribution of all vascular plants in Virginia for the past 30 years and that administers the Digital Atlas of the Virginia Flora (vaplantatlas.org).

The price per person will be $885 (double occupancy; for single occupancy, add $400), which includes seven nights' accommodation, six lunches, and a $275 donation to the VNPS and the Flora of Virginia Project.

Reserve your space after Jan. 1 by sending a $200 check to VNPS, 400 Blandy Farm Lane, #2, Boyce, VA 22620 or, with a credit card, by calling VNPS at 540-837-1600 mornings. ❖

2016 Wildflower of the Year Downy Rattlesnake-plantain

(*Continued from page 5*)

growing on the forest floor must be especially challenging. These plants experience warm days of summer in the dim shade of the forest canopy and the bright light of winter when temperatures are at their coldest. Yet, somehow, they manage. Keep an eye out for Downy Rattlesnake-plantain this winter; its leaves are easily recognized by their broad white midvein and finer white reticulations. When you find one, contemplate the resilience of this unassuming species and make note of its location so you can return in summer to observe its delicate white flowers. Downy Rattlesnake-plantain is the 2016 VNPS Wildflower of the Year. Make an effort to get outside and appreciate it—truly an orchid for all seasons!

—John Hayden, Botany Chair

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