



Bulletin

A publication of the VIRGINIA NATIVE PLANT SOCIETY
Conserving wild flowers and wild places

<http://www.vnps.org>



Richard Cheatham, left, as colonial botanist John Clayton, holds the second edition (1762) of *Flora Virginica*, which was based on his work. Tom Smith, director of the Virginia Department of Conservation and Recreation's Division of Natural Heritage, holds the brand-new *Flora of Virginia*. (Photograph by Julie Buchanan/DCR)

At last, Floras!

By now, I hope you have all had a chance to spend some time with the *Flora of Virginia*! If not, I hope it won't be long. The excitement started with the *Flora's* publication in December and has barely slowed in the meantime.

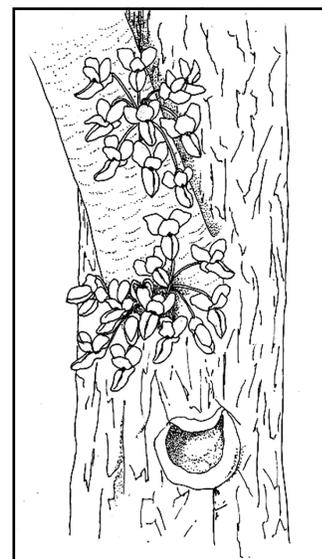
We held three *Flora* Premieres to recognize our supporters, to
(See *Flora of Virginia*, page 6)

Redbud cauliflory:

The inside story

One of the most distinctive features of redbuds, *Cercis canadensis*, the 2013 VNPS Wildflower of the Year, is its production of flowers on mature trunks and major branches, a habit termed cauliflory. Redbud flowers also form on young, one-year old twigs; as explained below, twig- and trunk-borne flowers are parts of a single developmental continuum; twigs bearing flowers eventually becoming trunks and large branches that continue to bear flowers.

But before exploring the biological details of cauliflory, some attention to etymology is warranted. In the context of redbuds, the term cauliflory is derived in straightforward fashion from the Latin, "caulis" (stem) and "flor-" (flower). And while all flowers are borne on stems of one sort or another, botanical use of the term restricts cauliflory to those uncommon instances in which



Cauliflorous flower clusters of eastern redbud. (Drawing by Nicky Staunton)

(See *Cauliflory*, page 3)



2013 VNPS Wildflower of the Year brochure inside!





From the president *Use winter to enjoy botanical books*

The Flora of Virginia is here! This is an exciting time for our society as we can take advantage of the botanically slow winter season and seize the opportunity to peruse our new books. I hope that many of you purchased your own copies, but they also may be available in your local or university libraries courtesy of our generous chapters. What an incredible effort was put forth by co-authors Chris Ludwig, John Townsend, and Alan Weakley, as well as the untiring editor Bland Crowder. How timely to publish it on the 250th anniversary of John Clayton's Flora Virginica and the 30th anniversary of VNPS! I was so pleased to participate in the Premiere hosted at Meadowlark Gardens, but felt for our weary authors who patiently signed books when they should have been making merry.

Nancy Ross Hugo and Donna Ware presented an interesting historical perspective for the book. The publisher made the terrific suggestion to include some color photos, and they appear in Gary Fleming's section of the Nature of Virginia Flora followed by 50 special botanical

sites in our great Commonwealth. Field trips, anyone? The line drawings of principal artist Lara Gastinger and illustrators Michael Terry and Roy Fuller are small, but exquisite. They are critical to successful identifications by this non-scientific enthusiast. I'm so pleased that additional illustrations are planned for the Flora website. And a smartphone digital app, for which VNPS held its 2012 fundraiser, is also in the future.

This project was truly the work of a cast of thousands, including every one of us through our chapters' financial support. We also owe our gratitude to Marion Lobstein whose tireless championing of this project years ago helped make it a reality. At least she can carry a single very large volume into the field now, instead of several large books. She challenges us to get our copies dirty from use!

I hope to see many of you at the annual workshop on March 16 in Richmond when we explore an unheralded treasure, our iconic Virginia Piedmont.

Your president, Nancy Vehrs

Sign up now for Great Smoky Mountains field trip

VNPS will sponsor a field trip to Great Smoky Mountains National Park from April 7 through April 13. Lodging will be at Music Road Inn in Pigeon Forge. The motel is a no pets and non-smoking establishment. The trip will include trips to Tapocca and Joyce Kilmer Wilderness Areas in North Carolina led by Dan Pitillo of Western Carolina University. Included in the trip will be walks along Middle Prong River, Porters Creek, Chimneys Picnic area, Sugarland Trail, and Noah Bud Ogle Trail. Besides beautiful spring ephemerals, participants will witness extraordinary waterfalls and rag-

ing rivers as well as beautiful vistas. Botanical treats include at least five species of trillium, acres of phacelia and an all pink showy orchis. Some areas are so dense in floral beauty that one cannot leave the trail without stepping on a spring ephemeral.

The trip cost of \$590 includes paid guides, lodging, daily breakfast, and lunch. The price also includes a dinner and slide show on Sunday April 7 at 6 p.m. Carpooling will be mandatory once we leave the hotel for field trips. The days will be long, but the walking easy to moderate. Walking will be slow. Birding is always good so bring binoculars.

Wildlife abounds so a camera is a must. Showers spring up unannounced, so rain gear is a must as well.

The trip will be led by Butch Kelly, Betty Kelly, and Rich Crites of the Blue Ridge Chapter. If you are interested, send in a \$200 deposit to Virginia Native Plant Society, Blandy Experimental Farm, 400 Blandy Farm Lane, Unit 2, Boyce, VA 22620. Make checks out to VNPS. If you have further questions contact Butch or Betty Kelly at butch2410@msn.com or 540-384-7429. Deposits should be sent in no later than March 9. There is a limit of 22 participants.

•Cauliflory

(Continued from page 1)

flowers develop on the sides of mature woody stems. Cauliflower, the vegetable, by this definition, is not cauliflorous! It seems that “*caulis*” also means “cabbage” and cauliflower the vegetable is, literally a massiveglomeration of very early stage flower buds of plants closely related to cabbage; cauliflower buds form on the ends of succulent non-woody stems and thus do not qualify as cauliflorous as the term is usually applied in botany.

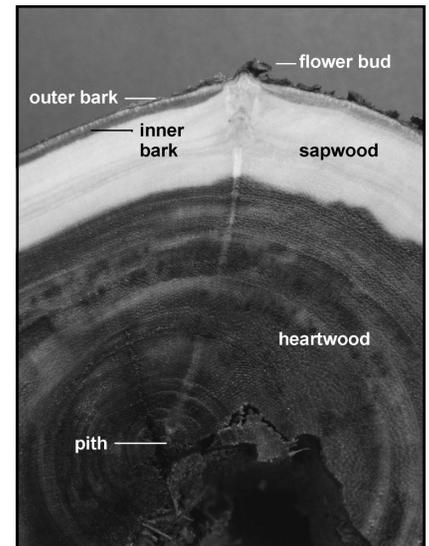
The vast majority of flowering plants produce flowers at or near the tips of relatively young actively growing stems. Commonly, flowers or inflorescences (flower clusters) form at the very ends of stems or from lateral buds located not far below the stem tip. Cauliflory, on the other hand, is decidedly uncommon, but it does occur in a small number of plant genera, mostly from the tropics. Perhaps the most familiar tropical cauliflorous plant is the chocolate tree (*Theobroma cacao*); the flowers are quite small, but the subsequent fruits, about six inches long, deeply ribbed and bright yellow, are decidedly eye-catching (and can be seen in a recent television ad). Redbuds constitute one of the few examples of cauliflory among temperate zone plants.

The developmental connection between redbud flowers produced on one-year old twigs and those found on mature trunks should be obvious to any careful observer. The first pertinent fact is that the alternate leaves of redbuds are borne in strict distichous phyllotaxy, which is to say that successive leaves are oriented 180 degrees apart from each other, alternately on opposite sides of the stem, leafy branchlets, thus, being more or less planar. Because redbud leaves occur along two lines (think right- and left-hand sides of the stem), flower clusters arising from lateral buds of one-year old twigs also occur in two lines—nothing unusual here, a great many plants produce flowers in the axils of one-year old twigs. If one carefully studies a flowering redbud tree, however, it will soon become evident that flowers on slightly older twigs continue the distichous pattern

seen on the youngest twigs, as do the truly cauliflorous flowers of large branches and main trunks. The straightforward conclusion is that the pattern of flower production for any redbud stem must be initiated in its earliest growth stages, following the architecture established by distichous leaves and the flower buds that form in their axils.

To explain how principal trunks and main branches of redbud retain the capacity for flower formation requires microscopic examination, and such studies have been reported in a series of papers by Shirley Owens and Frank Ewers from Michigan State University (see literature cited). One key point is that redbuds make not one, but a series, of lateral buds in their leaf axils. As many as 10 first order lateral buds per node have been documented, and these occur in a linear series of descending size. The largest lateral buds have the potential to produce a flower cluster in the year subsequent to their initial formation; successively smaller buds occur below the largest one, with the smallest located closest to the leaf axil proper and likely to remain dormant for as long as five years before forming flowers (on what would then be a fairly substantial branch). In part, then, cauliflory in redbuds is a straightforward matter of the plants possessing multiple lateral buds capable of forming flowers over a number of years as that stem becomes incrementally thicker. But redbud stems much older than five years continue to produce flowers, which is the distinctive hallmark of cauliflory. It seems that the first order lateral buds, those that formed when the stem segment was very young, also have the ability over time to proliferate new second order buds. Thus, cauliflory can continue indefinitely from proliferating bud clusters that were initiated in primary growth.

Another way to conceptualize the developmental pattern of redbud cauliflory is to remember that lateral buds, in general, also have the capacity to make branch stems. In the usual case, the branch stem elongates rapidly and, over time, its basal region becomes engulfed as its parent stem increases in diameter, eventually forming a knot in the woody tissue of the parent stem.



Chop-saw dissection of an eastern redbud trunk showing the small knot-like trace left as one cauliflorous bud cluster has become engulfed by yearly increments of woody tissue. (Photo by John Hayden)

The cauliflorous bud clusters of redbud can be viewed as the tips of greatly foreshortened branches that grow so slowly that their tips barely protrude beyond the bark of their parent stems. And just like ordinary branches that form knots as their parent stems overgrow their bases, careful dissection of redbud trunks will reveal small knot-like tracks that extend from the central pith to surface bud clusters.

So that's the “how” of cauliflory. What about the “why?” “Why” questions are often difficult. In the case of redbuds, one is tempted to assert that because its closest relatives are tropical plants, and because most cauliflorous trees are tropical, cauliflory in *Cercis* an ancestral trait that belies the tropical origin of now temperate zone redbuds. But that explanation only shifts the context of the question in time and space: so why did the tropical ancestors of redbuds develop the cauliflorous habit? Frankly, attempts to answer such questions tend to be speculative and most speculation revolves around the complexity of tropical forests and the intricacy of pollination interactions observed in tropical plants. Understory trees and shrubs in the tropics can't be expected to attract the same pollinators that service flowers in the canopy. Rather, understory trees and shrubs are more likely to be

(See *Redbud*, page 8)

Buck Hollow

Camaraderie comes while attacking invasives



It was a cold winter morning, but clear and still, so I didn't mind being outside for a couple of hours. I arrived early, not knowing how long it would take to drive to the trailhead at Buck Hollow. I looked around—no bird activity, lots of oriental bittersweet making the trees look full at their crowns, Japanese honeysuckle ankle deep on the forest floor. I used the spare minutes to pick up litter...the usual drink cups, cigarette butts, spent rifle casings, and shockingly a bag of soiled diapers. Soon Robin Williams came, then six other Master Naturalists. A typical turn-out. Since 2009, an average of five Old Rag Master Naturalists have worked two hours a day, every other Friday to remove invasive plants in this tiny portion of Shenandoah National Park. In 2012, about a dozen different volunteers worked at the site. Not a huge number of people each day; not a huge amount of time each day; but over four years, an astounding volunteer effort.

Buck Hollow is a narrow, rocky, stream-side habitat at the foot of Shenandoah National Park just west of the tiny town of Sperryville. It is classified as a Northern Blue Ridge Montane Alluvial Forest.* Most of the sites of this habitat type were lost to farming and others to catastrophic flooding such as we see during hurricanes.

As a result, these sites are increasingly unusual and many, like Buck Hollow, have been degraded by invasive plants introduced along trails and power line rights-of-way.

With the work crew assembled, we headed away from the parking lot to where the actual work was being done. Even in winter, it was exhilarating to see what a difference this project makes. The canopy, free of bittersweet, is more open; saplings and shrubs bear barber-pole scars of honeysuckle vines that once strangled them, but now stand straight and clean. Last spring and summer, volunteers reported a rebirth of numerous native plants, including some uncommon vines such as climbing milkweed, yellow passion flower and Canada moonseed. Black snakeroot, golden ragwort and other natives now cover much of the forest floor replacing garlic mustard and Japanese stiltgrass.* Opening the canopy produced some problems, of course. People anticipated an eruption of stiltgrass and garlic mustard and it came; one surprise was oriental potato vine.

Four years ago, Piedmont Chapter member and Sperryville resident Robin Williams was looking for a master naturalist project close to home and struck up a conversation with Jake Hughes, lead biological science technician at Shenandoah National Park, about starting something in the park. Jake identified Buck Hollow as a target for restoration. Perhaps because it is so rocky, the deer pressure in the hollow is lower than in other areas of the park, and there still was quite a diversity of native plants. Together they developed a multi-year strategy, focusing on different invasive plants in each season.*

What is unique about the Buck Hollow project is not that the native plants return—knowing that they would is what motivated Robin and Jake to initiate the project. What is unique is that they have managed to keep volunteers coming year in and year out—some who have been regular from the beginning, some who joined later. Why? What is it about this project that gives it staying power when so many invasive plant projects peter out? These are some of the reasons, all of which probably aligned to make this a success story.

1) While volunteers understand that they will never be able to quit working in Buck Hollow, seeing success is reward enough. The native seed bank was there and responded heartily to their work. Robin is realistic without being discouraged. Her excitement to see progress encourages everyone else.

(See Buck Hollow, page 7)



Top photo: Jack Hughes with Virginia Master Naturalist volunteers. Bottom photo: Oriental bittersweet strangling a tree.

Visit VNPS on the web

For the most up-to-date statewide and chapter events, head to the VNPS website at www.vnps.org. A color version of this *Bulletin*, often with expanded content, will also appear on the web page even before the print copy reaches your mailbox.

You can also visit VNPS on Facebook. Be sure to "like" us while you are there.

John Clayton Chapter launches successful outreach

Several years ago (2005, to be exact), working with a marketing person about the Williamsburg Botanical Garden (WBG), I reacted to a suggestion that the garden should be visible on a monthly basis with articles about "What's Blooming Now." So I started that project, posting photos monthly of blooming plants on the WBG website.

Transferring the same thought to the John Clayton Chapter of the Virginia Native Plant Society, I contacted local newspapers about writing monthly articles titled "Wildflower of the Month." The response was favorable, so since April 2005 I have sent two articles monthly to local papers, one in the Williamsburg area, and the other in Gloucester. I send photos taken by me as well as other chapter

members with our credits. The recipients publish what I send, or incorporate my comments in a blog or a gardening feature. The articles mention my association with the VNPS John Clayton Chapter and include the chapter's web address as a source for further information on native plants.

So far, I have not eliminated all the native plants that could be featured monthly, but, I admit, January and February are becoming difficult. Below is the January article on shortleaf pine.

Our Williamsburg newspaper, *The Virginia Gazette*, had been reluctant to receive my offerings, but for several years has published a feature, "Our Natural Life," paid for by a local business. Often plants and animals not native to this area are featured, and the

presidents of the Williamsburg Bird Club, the local chapter of the Master Naturalists, and I have complained to the newspaper editor. Finally, after several months of our comments, he contacted me and asked for articles about native plants. This is a wonderful way to educate local newspaper readers about Virginia's native plants and serves as advertisement for our chapter and the VNPS, as well.

Now every Wednesday, "Our Natural Life" carries a note and a photograph of a local bird, another local animal, or a native plant. The moral here is to keep trying and you will, sooner or later, get what you want!

*Helen Hamilton, past-president
John Clayton Chapter/VNPS*

Virginia's shortleaf pine often overlooked

With some people suggesting loblolly pine, and others scrub pine as a favorite, shortleaf pine (*Pinus echinata*) is often overlooked. While less common around Williamsburg, it is the most widely distributed southern yellow pine, native in 12 southeastern states. This is a large, tall tree with a full, open crown. The trunk is straight, naturally pruned, the bark becoming reddish brown and breaking into broad, flat plates. Needles are two and a half to five inches long with two and occasion-

ally three per bundle. The egg-shaped cones are one to three inches long, their scales tipped with a short, often temporary prickle.

Loblolly pine is rather similar in stature and bark. However, its needles are six to nine inches long, three to a bundle. Cones are four to six inches long, with stout, very sharp prickles.

Scrub pine is usually shorter in stature, and scrubby in appearance due to numerous lower branches persisting. It has the shortest needles, usually under two and a half inches long, strongly twisted, in bundles of two only. The bark of mature trees is only slightly fissured and scaly. The cones are small, like those of shortleaf pine, and tend to accumulate on the tree for many years.

Shortleaf pine grows in uplands and dry forests on a wide range of soil and site conditions, in every county in Virginia. The range is from New York to Illinois, south to Florida and Texas.

An important timber species, the tree produces lumber for construction and millwork as well as plywood, barrels, boxes and crates. Seedlings and



Shortleaf pine cone (Photo by Helen Hamilton)

small trees will sprout after fire damage or injury.

Echinata is from Latin *echinus* that means hedgehog, alluding to the spiny hedgehog-like appearance of the cone. A larval host for the elfin butterfly, the tree provides habitat and food for bobwhite quail, mourning doves, meadowlarks and a variety of songbirds.

This article, by John Clayton Chapter past president Helen Hamilton, is one of a monthly outreach series provided by the John Clayton Chapter to an area newspaper.



The longer needles of a loblolly pine, left, can be seen in comparison to a shortleaf pine. (Photo by Helen Hamilton)



Like hotcakes: The *Flora* was selling hand over fist at all the December Premieres. Here, people buy copies at the Richmond party. (Photograph by Julie Buchanan/DCR)

• *Flora of Virginia*

(Continued from page 1)

distribute complimentary copies, and, of course, to sell the *Flora*. People were buying them eight at a time, no lie. The authors didn't get a chance to party for signing autographs. And the good feelings were palpable, so many happy people together at one time. The Premieres were held at Wintergreen Nature Foundation at midday on Sunday, December 9, with master of ceremonies Doug Coleman, foundation director, and at Lewis Ginter Botanical Garden in Richmond that evening, with emcee Gerald P. McCarthy, executive director of the Virginia Environmental Endowment. The third Premiere took place at Meadowlark Botanical Gardens in Vienna the following evening, led by VNPS president Nancy Vehrs. The events could not have been better.

A highlight was a semi-surprise visit from John Clayton, colonial botanist (a historical character commissioned by the *Flora of Virginia* Project with the support of the Virginia Foundation for the Humanities), who gave us an idea of what it was like to botanize and publish the results in the 18th century. Again, thank you, VNPS for all your support of this work, at state, chapter, and individual levels. It couldn't have happened without you!

P.S. Like us on Facebook!

Bland Crowder, associate director and editor, *Flora of Virginia* Project

Flora festivities coming to Valley

The story of Virginia's *Floras*, both past and present, will be told in the Shenandoah Valley on Thursday, March 28, at 2 and 7 p.m. at Blue Ridge Community College (BRCC) in Weyers Cave. *Exploring Virginia's Botanical History through Three Centuries*, featuring Dick Cheatham as John Clayton and Donna Ware as herself, will be the topic of the 75-minute program.

The program is one of many events being held as part of the month-long One Book, One Community reading event held throughout the area of Staunton, Waynesboro, and Augusta County. One Book, One Community, which is sponsored by the public libraries of Staunton, Waynesboro, and Augusta County, and the Community Foundation of the Central Blue Ridge, focuses on a single book each year that the community reads and discusses through a variety of activities. This year's book, *A Walk in the Wild* by Bill Bryson, focuses on Virginia's natural world. Among the activities will be the event at BRCC's Plecker Auditorium.

The magnificent diversity of Virginia's plants was first documented by Gloucester County clerk and botanist John Clayton. His book, *Flora Virginica* published in 1762, was Virginia's first, and until 2012, only plant guide. The audience will meet time traveler "John Clayton" (portrayed by living history re-enactor Cheatham) as he describes his observations of Virginia's natural world in the 1700s.

"Virginians have played a major role in American history and even world history. Many of their names are recognized around the world," noted Cheatham, who researched the man he portrays. "John Clayton was known and respected throughout scientific circles in Europe in the 18th century and thereafter, but is sadly all but unknown in his home state today. Clayton's path-breaking contributions in botany are today being revived in conjunction with the publication of a brand new *Flora of Virginia*."

Following John Clayton, botanist Donna Ware will present "Discovery and Documentation of the Virginia Flora in the 20th century." Ware's talk includes information about the newly published *Flora*, in which she co-authored a section. The 1,200-page volume was more than a decade in the making. The program is sponsored by Blue Ridge Community College, BRCC Cultural Affairs Committee, the Shenandoah and Upper James River Chapters of the Virginia Native Plant Society, and the Augusta County Historical Society. The afternoon program begins at 2 p.m. and repeats at 7 p.m. For more information, visit www.communityfoundationcbr.org.

Flora workshop

In the spring, Marion Lobstein will offer a workshop at Blandly Experimental Farm on how to use the newly published *Flora of Virginia*. This will be sponsored by VNPS (Piedmont and Prince William Chapters) and the Friends of the State Arboretum. Workshop sessions will focus on using the dichotomous keys in the new *Flora*, recognizing plant families, and changes in plant taxonomy. The workshop runs on four Thursdays from March 21-April 11 from 9 a.m. to 12:30 p.m. Cost is \$40 for VNPS/FOSA members, \$50 non-members. For more information contact Marion Lobstein at mblobstein@earthlink.net or 703-622-0676.

• Buck Hollow

(Continued from page 4)

2) Jake is a natural teacher. As people work in a patch of weeds, when they spot something new (to them), Jake identifies the plant and tells a bit about it. Even when Jake is not able to work alongside the volunteers, people can send him a description and photo of a find and he'll respond right away with information about it. So each work day is a native plant walk, an opportunity to learn new plants and plant relationships and, incidentally, how to get rid of the bad guys.

3) There is camaraderie in working in a group. Some people chatter as they work; others are silent, but obviously comforted by the presence of others around them. Making this a master naturalist project pulled together a group of people who, acting alone, likely would not have stayed committed.

4) There's something to do all year. Many invasive plant removal projects are one day efforts, or at best, a period of weeks. In Buck Hollow, there is work to do and people to work with all year long.

In many ways the most pleasant working conditions are in the winter—the poison ivy is dormant; the mosquitoes are gone; and you don't have to worry about surprising a copperhead.

5) Jake and Robin don't lose their cool when someone hacks a native trumpet vine by mistake, or tramples a puttyroot orchid. While every native plant is precious, none is endangered. Their mission is to keep the community alive, and to do that, they accept that people sometimes mess up.

I can hardly wait until spring to see the native plants of Buck Hollow come out to sincerely thank Robin and all the many other volunteers who have made Friday morning weed whacking a part of their lives.

Catherine D. Mayes

**In the website version of this article (see link below), the reader will find a complete description of the habitat type, a list of indicator and unusual native species found at this site, and a seasonal schedule of the invasive plants targeted for removal.*

http://vnps.org/wp/wp-content/uploads/2013/02/Footnote_Cathypdf.pdf

The Meadow Project still growing

It has been a fabulous year for the Meadow Project, beginning with the Kickstarter fundraiser last January. The *Urban & Suburban Meadows, Bringing Meadows to Big and Small Spaces* film is a complete success! Many organizations are doing educational screenings for their members and homeowners and schools are using it as a guide to plant native habitats.

When I launched the campaign, my goal was to raise enough money to finish the film, which had taken a two-year hiatus. I had no idea what an amazing journey it would be. With the help of wonderful volunteers, using the Kickstarter platform and the power of social media, we raised nearly \$22,000! It was a fantastic feeling knowing that so many individuals and associations believed in the project.

The Meadow Project group has been busy on a new project to educate and raise awareness about sustainable, native, healthy, and affordable land care practices that nurture wildlife and human life. The series of blogs and videos is called *Wildlife Gardens by Example*.

Catherine Zimmerman

www.themeadowproject.com

See the address label for your membership expiration date
VNPS Membership/Renewal Form

Name(s) _____

Address _____

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Individual \$30

Student \$15

Family \$40

Associate (groups) \$40*

Patron \$50

Sustaining \$100

Life \$500

*Please designate one person as delegate for Associate membership

To give a gift membership or join additional chapters: Enclose dues, name, address, and chapter (non-voting memberships in any other than your primary chapter are \$5)

I wish to make an additional contribution to ___ VNPS or _____ Chapter in the amount of ___\$10 ___\$25 ___\$50 ___\$100 ___\$(Other)_____

Check if you do not wish your name to be exchanged with similar organizations

Check if you do not wish your name to be listed in a chapter directory

Which chapter do you wish to join? (See www.vnps.org) _____

Paying by credit card? ___MC ___Visa ___Discover Exp. date _____

Card # _____ Security code _____ Signature _____

Make check payable to VNPS and mail to:

VNPS Membership Chair, Blandy Experimental Farm, 400 Blandy Farm Lane, Unit 2, Boyce, VA 22620

Membership dues are tax deductible in the amount they exceed \$5. Contributions are tax deductible in accordance with IRS regulations.

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VNPS dues sharing structure changes

The VNPS board has instituted a change to the dues sharing agreement between the state office and individual chapters. The split before this change was that 60 percent of dues were retained to support state activities and 40 percent were sent to the local chapter. The new structure increases the state retention to 65 percent and reduces the chapter share to 35 percent. New chapters would retain 40 percent for five years to allow them to build a small reserve for their own expenses. We do not currently have any chapters less than five years old.

The state share of dues is used primarily to fund the office. VNPS has a part-time administrator who maintains the membership database; helps organize state field trips, annual workshops, and annual meetings; and answers general inquiries from members and the public. The state share also covers the cost of editing, printing, and mailing the *Bulletin*, and printing the Wildflower of the Year brochure. There are also expenses like insurance and fees that are required or prudent.

Unfortunately, membership dues have been relatively flat for the last four years, while some of the state office costs, particularly postage and printing, have been increasing. VNPS has a bare-bones budget so the board did not see opportunities to reduce expenses to match income without a crippling reduction in services. For three of the last four years, VNPS covered expenses by taking money out of reserves. (In that other year there was an extra sell-out state field trip. Field trips were undersubscribed in 2012.) While reserves are held specifically for the purpose of maintaining service levels in the face of unanticipated revenue shortfalls, board members did not think it wise to continue to draw on reserves for routine operating expenses.

The board believes local chapters currently have adequate funds to cover their expenses, so should not be harmed by the change. Chapter presidents have been contacted to confirm that the proposal will not disrupt any planned chapter initiatives.

Catherine D. Mayes, VNPS Treasurer

•Redbud

(Continued from page 3)

pollinated by insects or other animals that live near the forest floor; cauliflory may thus be a means to provide easy access to flowers for these inhabitants of the lower strata of tropical forest. Returning to modern redbuds, one notes that bumblebees and carpenter bees are frequent pollinators, and these are insects that spend a great deal of their time relatively close to the ground. So, perhaps the "Why cauliflory?" explanation boils down to "it worked" for the tropical ancestors and it continues to work in its present temperate zone habitats. If it ain't broke, don't fix it!

W. John Hayden, VNPS Botany Chair

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Bonus Photo Gallery: Skunk cabbage blooming at the Augusta Springs wetlands (in western Augusta County)



(Photos by Nancy Sorrells)

