



# Bulletin

A publication of the VIRGINIA NATIVE PLANT SOCIETY

<http://www.vnps.org>

*Conserving wild flowers and wild places*

Mark your  
VNPS Calendar

### ***Geology Field Trip***

Saturday February 15

Cumberland State  
Forest and Bear Creek  
Lake State Park

### ***Winter Workshop***

Saturday March 1

University of Richmond  
Plants and Climate  
Change

### ***Annual Meeting***

Friday through Sunday

October 17-19

Virginia Beach

Hosted by South  
Hampton Roads Chapter

Watch [www.vnps.org](http://www.vnps.org) for  
more details or contact VNPS  
at [vnpsoc@shentel.net](mailto:vnpsoc@shentel.net) or 540-  
837-1600.

## Redbud seedpods hold surprises

As fall advances across the Old Dominion, canopies of redbud, the 2013 VNPS Wildflower of the Year, transform themselves from green to gold, revealing seed pods also changing color from pale green to dark chocolate brown. These seedpods, which may be retained on the tree into winter, are typical legume fruits, the product of the flower's simple pistil, each containing several seeds. Unlike most legumes, however, redbud seed pods seem disinclined to open and release individual seeds for dispersal. Redbud fruits tend to disperse intact. Once on the ground, the inevitable action of weather and microbes gradually degrades the pod, whereupon the process of seed germination can proceed.

Fresh seeds of redbud, however, are dormant and will not germinate until two different factors, each responsible for different aspects of seed dormancy, are overcome. This double dormancy derives from the presence of an extremely hard, impermeable, seed coat and physiological dormancy of the embryo contained within. For temperate-zone trees, seed dormancy makes good ecological sense. Rapid germina-

tion would leave redbud seedlings vulnerable to the harsh rigors of winter; better to remain dormant through the coldest months and germinate during the more favorable weather of spring.

Most legumes have very hard seeds, and redbud is no exception. Anatomically, the stereotypical legume seed coat consists of two (or more) layers of tough sclereid cells: elongate macrosclereids at the surface underlain by one (or more) layers of boxlike brachysclereids directly below. Both of these sclereids are very nearly solid masses of cell-wall material. Together, they tile the surface of the seed, except for a small patch known as the hilum, which marks the

*(See Redbud, page 6)*



*Redbud seedpods. (Courtesy John Hayden)*

***Special book offer to early bird shoppers on page 8!***



## From the president Fall season filled with plant activities

As your president, I like to seize the opportunity to attend events around our great Commonwealth. Fall rivals spring in the plethora of activities presented by our chapters and the environmental community at large. In September and October I visited a great many places. Our VNPS Annual Meeting in the Charlottesville area September 13-15 was a great success with delightful weather serving as the perfect backdrop to colorful fall plants on our field trips. With only a half-hour business meeting, the term "annual meeting" is somewhat of a misnomer if one's idea of a meeting is listening to a series of boring motions and reports. Nicky Staunton paid tribute to Ted Scott, a local conservationist who died in June and to whom the meeting was dedicated. Both Lara Gastinger and Nancy Adamson were dynamic evening speakers with absolutely riveting photos and videos. My field trips to Louisa County on Saturday and Preddy Creek Park on Sunday offered such contrasts. A working historic farm with a large pond, Brackett's was a delight for conservationists of both cultural and natural history. Margaret and Will Shaw's large Liquidamber property introduced me to tea-berry (*Gaultheria procumbens*), which I happily sampled. It was the minty source of Clark's Tea-berry Gum. Preddy Creek Park is a new public treasure for Albemarle County with its large, diverse meadow and trails through lovely woods. Kudos to Mary Lee Epps and her chapter for coordinating an excellent weekend meeting!

The week after the Charlottesville trip was busy with two chapter meetings. My local Prince William Wildflower Society held its annual meeting on September 16 and featured our own Charles Smith discussing "Plant Communities," a program he presented to the Potowmack Chapter

this past winter. Natural communities don't have "one of this, and one of that," so our native plant gardens should strive to replicate nature better instead of "treating plants like furniture," he noted.

The John Clayton Chapter held its meeting on September 19 with VNPS Botany Chair and University of Richmond Biology Professor John Hayden presenting on the biology of fall color with a beautiful digital slide show. A number of members of the chapter, including longstanding board member Pat Baldwin, were also presented with chapter awards. The meeting was capped off with a redbud-photo-topped cake in honor of our 2013 Wildflower of the Year.

New Conservation Chair Marcia Mabee Bell and I attended the Virginia Conservation Network's annual Environmental Assembly at the Virginia Beach Convention Center September 20-21. We struggled with erecting the huge VNPS display board, but its eye-catching photos attracted many participants to our table of brochures and invasive plants. Another environmental gathering that I attended was the "Blue Ridge Summit, Leveraging the Impact of Our Conservation Efforts," presented by the Friends of the Blue Ridge Mountains on October 16. Representatives from more than 40 conservation and environmental groups met to discuss collaborative ways to preserve the treasured northern Blue Ridge Mountains. Education and hands-on mountain experiences seem key to success.

A visit to Blacksburg and a meeting with the friendly members of the New River Chapter ended with a personal tour of the cherished yet controversial Stadium Woods at Virginia Tech. This small fragment of forest contains magnificent white oaks and other big trees, yet had been proposed as the site for an indoor football practice field. That proposal has been nixed for now, but the woods are not protected with any kind of enduring conservation easement, and the tree drip lines on the edge serve as parking for football players on game weekends. Fortunately, the forest's friends remain vigilant in their quest to permanently protect this special area.

Other activities included a beginner's workshop on using the Flora of Virginia, presented by Marion Lobstein at the Occoquan Bay National Wildlife Refuge, just days before it would be shut down by the federal government. Marion succeeded in demystifying the big book for members of the Prince William Wildflower Society and led participants through the keys. Another event was David Haskell's presentation on his recently acclaimed book *The Forest Unseen*. This well-attended program was collaboratively coordinated by the Arlington Master Naturalists, Friends of the Arlington Library, and the Potowmack Chapter of VNPS.

It seems that I'm always on the go, but it's a pleasure to go to such worthwhile events around Virginia. Maybe you'll find me in your neighborhood in the near future.

**Your President, Nancy Vehrs**

### Society loses good friend



Dorothy Bliss in her college garden. (Courtesy Randolph College)

VNPS owes much to charter member Dr. Dorothy Bliss, who passed away recently in Lynchburg. Dorothy, a retired professor of botany at Randolph College, left her mark on campus, where a native plant garden is named in her honor, as well as in the larger botanical world.

She served as VNPS Botany Chair from at least 1988 until 1994. Under her direction the society's Wildflower of the Year program was

(See Bliss, page 5)

# 'Verdict' reached in plant trespassing case

In October of 2012, Dr. John Hayden found *Commelina benghalensis* on the University of Richmond campus. *Commelina benghalensis* is an invasive, exotic species, and Dr. Hayden was the first to document its presence in Virginia. As a student learning the basics of botany, I took interest in Hayden's discovery. What follows is my creative take on the circumstances of this discovery. —Camille Fagan, University of Richmond

It's official: the villain lurking on the University of Richmond campus, has been identified, investigated, and executed. Dr. John Hayden, a professor at the university and the outlaw's jail keeper, has graciously allowed me an interview to calm the students' uproar regarding the scandal. What's the crime, you ask? Trespassing. And the criminal? He is a noxious weed with the potential of overruling local foliage. The intruder is *Commelina benghalensis*, better known as Ben.

I enter Dr. Hayden's office on a Tuesday afternoon. I am welcomed with a smile that has traveled the world studying plants, the same knowing smile responsible for Ben's capture. Hayden invites me to sit, and, between us, atop stacks of scholarly journals, rests Ben. Bingo. The specimen eerily floats in a green solution to the top of his jar, challenging my presence. I grin, acknowledging the felon in all his treacherous glory. I begin.

**Interviewer:** Let's start from the beginning. Every local news station has run Ben's mugshot for weeks, yet you were the only one to recognize and detain the intruder. Tell me about the imprisonment.

*Hayden leans back in his chair and opens his mouth to speak. His voice is steady, undeterred by the outlaw glaring at him from inches away.*

**Hayden:** Well, it happened inadvertently. I walked across campus to get help fixing my cell phone when something odd caught my eye. There, growing among the commonly cultivated irises and nandinas, was a *Commelina* plant that appeared out of place. Cautiously, I approached. From a safe distance I examined the plant's spathes

and noted their fused backside. I collected a sample, brought it back here to the lab's holding cell, and started my investigation. I knew my finding was significant, but at the time I had no idea with whom I was dealing.

**Interviewer:** Unbelievable. How did you recognize that the specimen was in fact Ben, the infamous campus trespasser?

**Hayden:** I consulted the University of North Carolina herbarium website for the current draft of *Flora of the Southern and Mid-Atlantic States* by Alan S. Weakley [co-author of the *Flora of Virginia*] and jotted down *C. benghalensis* as a likely identification because of the sample's cleistogamous flowers and closed spathes. However, Weakley did not report *C. benghalensis* for Virginia. Ben had never before been documented in this area, yet there he was in my lab. The plant's invasive nature offered the final clue needed to solidify Ben's identity as a trespasser, so I promptly returned to the scene of the crime and collected the species to local extinction. Samples were incarcerated in jars for future examination.

**Interviewer:** What a hero! It sounds like the detainment went fairly smoothly. Would you agree?

**Hayden:** Yes and no. I was lucky to classify Ben as quickly as I did, but the process certainly could have proved problematic. You see, Ben is a master of disguise. He has polymorphic features. That could have complicated identification and hindered the swift carriage of justice.

**Interviewer:** What is the range of his forms?

**Hayden:** Ben's typical morphology has ascending to decumbent stems (they come up but fall over), spathes with basally fused margins, subterranean cleistogamous flowers, and blue petals, two of which are large and one that is small. Ben's organs, however, manifest multiple forms. For example, the basic flower structure varies from unisexual to bisexual.

*Hayden pauses to reflect, noting my confusion with the terminology. He continues.*

**Hayden:** Let's break it down.



The villain Ben

Cleistogamous flowers are closed, so their pollen never has the chance to disperse and transfer to another flower. As a result, the pollination has to occur on a stigma in the same flower. Cleistogamous flowers self-pollinate.

On the other hand, chasmogamous flowers are wide open, which means they can either self-pollinate or out-cross. Ben has both chasmogamous and cleistogamous flowers.

Another polymorphic disguise that could have muddied identification involved Ben's stamens and seeds. The stamens of *C. benghalensis* can be posterior, anterolateral, or anteromedial, and seeds can be large or small in size. Essentially, there is potential for numerous forms of *C. benghalensis*. This polymorphic property was, perhaps, Ben's secret weapon that allowed him to avoid capture for as long as he did.

**Interviewer:** Scary stuff. What is Ben's future here in Virginia?

**Interviewer:** Ben's verdict has been determined. He has received the death sentence: local extinction. His remains will be cross-sectioned for research.

Though he has been put to death, I cannot in good conscience let you leave without warning. Ben has vicious relatives called *Commelina communis* and *Commelina diffusa* who are equally as destructive to our plant community. They are also non-native and invasive, but, unlike *C. benghalensis*, their spathes are not fused. We as a community must be vigilant for their presence on campus.

Lastly, I worry that other *C.* (See *Trespass*, page 6)

# Annual Meeting perfect fall gathering



Photo by Carol Hammer



Photo by Nancy Vehrs

What a lucky weekend we had for our fall gathering! The mid-September weather could not have been more cooperative. About 120 of the society's members came to the Charlottesville area and were treated to two very interesting evening speakers as well as to field trips to visit all sorts and sizes of land. Our Jefferson Chapter hosts, led by chapter president Mary Lee Epps, can be congratulated for a well-planned event.

My own field trip choices seem unusual in retrospect, since they were all privately managed properties rather than natural areas and parks. But each property had areas ranging from nooks to large areas that were natural or at least naturally recovering. What was really heartening was to see all of the landowners interested in managing these lands at least in part for the benefit of other living things and for the native plant habitat that supports us all. The meeting theme "How Habitats Change" described my experience.

On Saturday I visited two properties on the east side of the city. The first was a property known as Brackets Farm, complete with a rambling historic house with many extensions added over the centuries, and some interesting old out-buildings. The array of trees planted or left to grow around the house was mainly natives and included under-appreciated eastern red cedars (*Juniperus virginiana*) and common hackberry (*Celtis occidentalis*) as well as large black walnuts (*Juglans nigra*) and the more decorative southern magnolia (*M. grandiflora*, an American native introduced from the deeper south) and American holly (*Ilex opaca*). The grounds held some vegetable gardens, and (totally unrelated to native plant interests, but fascinating to my vegetable gardening interest) I saw corn smut for the first time. I always thought this edible fungus sounded icky, but seeing it in person I realized that it's not the slimy mess it looks like in photos. Now someday I'd like to try it. The most "natural" part of the property that we saw was the edge of the constructed pond. In minutes we put together a rather long list of plants that occur near water that had found their way to this spot, being those nonshowy types of natives that no one really plants. In this wet year, many were bound together by dodder (*Cuscuta* sp.). Of course a few invasive plants were intermingled, but it seems to me that there were few enough to control with a small effort.

In the afternoon we travelled just a short distance to the Shaws' property called Liquidambar. Will and Margaret gave us the grand tour and were hospitable and informative. This more acid pine-and-hardwood-forested land was partly managed by creating some openings where different types of natives flourished. While some species had been planted, the larger part of our walk was interesting for the many natives that planted themselves. Maryland golden aster (*Chrysopsis mariana*), a seed box (*Ludwigia alternifolia*), a seed box (*Ludwigia alternifolia*) and some goldenrods and asters were still in bloom. We found pinesap (*Hypopitys monotropa*)

(See Annual Meeting, page 5)



Photo by Carol Hammer



Photo by Nancy Vehrs

Scenes at Annual Meeting

# • Annual Meeting

(Continued from page 4)

in the woods, and I learned two new plants: *Hypericum gentianoides* or pineweed that looks like a funny whisk broom with tiny yellow flowers; *Chasmanthium laxum* is a narrow upright grass with sickle-shaped florets, related to but not closely resembling river oats (*C. latifolium*). There are nice photos of both of these plants on the Digital Atlas of the Virginia Flora at [vaplantatlas.org](http://vaplantatlas.org).

Sunday's field trip was Phil Stokes' "tree farm," which label described only a small portion of the property. First we walked most of the way around a constructed pond where Phil has removed invasive plants and filled the area with natives. From his description, his invasive removal work is Herculean! It has turned out to be a lovely treat with the blue sky reflecting on the water that was surrounded by blooms of pickerelweed (*Pontederia cordata*), jewelweed (*Impatiens capensis*) and woolgrass (*Scirpus cyperinus*). We walked up the corridor of the small stream that filled the pond into a nice riparian woodland where we were happy to find a ladies'-tresses (*Spiranthes* sp.). In the tree farm area, a volunteer boxelder (*Acer negundo*) in one of the tree tubes was covered in saddleback caterpillars (*Acharia stimulea*, which becomes a rather plain dark brown moth). I've searched my boxelder grove at home for more, but have not found them. The literature says they eat anything. As a final treat we visited a row of planted American hazelnut (*Corylus americana*) and Phil provided nut-crackers for our parting snack!

Our evening speakers were Lara Gastinger, *Flora of Virginia* chief illustrator and Nancy Adamson, of the Xerces Society. Lara's talk focused on her illustrated field notebooks. Her artistic sensibility leans toward fine details and to plants that have some sort of irregularity, especially damage from insects. Not only does she capture the most beautiful details, but she constantly reminds us of the place of plants in the natural world, whose

function is to both capture the sun's energy and pass it along, via herbivory mainly. Some participants were lucky enough to have a sketch class with Lara the following day. She teaches fairly regularly, so if you are artistically inclined you might want to take one of her classes.

Nancy Adamson also focused on the connection of plants to the insect world, but in a more scientific presentation on pollination, with a strong component of what individuals can do. Eighty-five percent of plants and 35 percent of crops are pollinated by insects, and besides supporting measures for habitat preservation, we can provide nectar and pollen throughout the growing season, protect nest sites, and reduce or eliminate pesticides. Nancy feels that bee and butterfly gardens are excellent places to experience the plant-to-insect connection, and described some citizen-science opportunities such as bumblebee monitoring. Especially exciting were Nancy's videos of pollinators visiting mid-Atlantic native flowers. These closeup films showed clearly how concentrations of small flowers, such as clusters of redbud (*Cercis canadensis*) and the heads of aster-family



Chip Morgan leads the fern walk field trip at the Annual Meeting. (Photo by Carol Hammer)

(Asteraceae) species provide a lot of food in one spot, like an insect food court. To learn more you can visit [www.xerces.org](http://www.xerces.org) and look at the remarkable films on youtube at <http://www.youtube.com/watch?v=nisyGsfoYVk>.

Our Annual Meetings are tops on my event list, and our mid-September weekend was lots of fun. Watch for announcements for our next VNPS Annual Meeting in Virginia Beach next October!

Sally Anderson, VNPS Past President

## Piedmont geology trip scheduled

As a follow-up to the VNPS 2013 Workshop on the Piedmont, David Spears, state geologist, will lead a field trip in Cumberland State Forest and Bear Creek Lake State Park on February 15 from 11:30 a.m. to 4 p.m. Geologically, Cumberland State Forest is interesting because it straddles the Spotsylvania Fault Zone, a major tectonic boundary. The group will study many interesting rock types representative of Piedmont geology, including volcanic rocks, fault-sheared rocks, quartz- and mica-rich schists, and Triassic conglomerate and diabase. Some of these rock types form distinctive soils that support varied plant communities.

Tom Dierauf, retired chief of research for the Virginia Division of Forestry, knows the area well, and will collaborate with Spears in order to help the group understand the relationship be-

tween the soils and the plants that grow there.

Participants should bring a lunch to eat at 11:30 while Spears gives a short lecture and shows some maps. The trip will include several half-mile walks.

There is a \$20 fee for the field trip. To register, call the VNPS office or download a registration form from the VNPS website. Registration will open January 6.

### • Bliss

(Continued from page 2)

started in 1988. In 1990 she helped establish the VNPS Registry program and served as Registry Chair for many years. Over the years she contributed many articles to this *Bulletin*.

## • *Redbud*

(Continued from page 1)

spot where the seed attaches to the seed pod. These tightly packed sclereids constitute an impermeable barrier to water, and, as long as water is excluded, the seed will remain dormant.

Besides dormancy, the tough seed coats of legumes also provide a measure of protection from seed predators. For plants, rich stores of food, usually starch, or protein, or oil, assist in establishment of the new seedling. But the world is full of hungry animals, and many (including us humans) have learned how to exploit the nutrients contained in seeds. Very few people, however, eat wild-collected legume seeds; toxins and tough seed coats render wild legume seeds essentially inedible. But we can eat seeds of various crop legumes (e.g., beans, peas, chickpeas, and soybeans) because during the process of domestication, our ancestors selected less toxic and softer seeds from the natural variability of the wild legume ancestors of these crops.

But one group of animals is especially adapted to eating wild legume seeds, a group of beetles known as bean weevils (family Chrysomelidae, subfamily Bruchinae). Adults of these insects live in flowers, consuming pollen and nectar. After mating, females lay their eggs inside the ovary of the flower. As larvae emerge from their eggs, they enter the plant's ovules, which at this early stage are soft and unprotected. An infected seed develops more or less normally; but as it reaches maturity, the hungry weevil larva (already inside) consumes all the internal tissues. Just before pupation, the weevil larva cuts an exit hole through the seed coat, again, working from the inside. There are well over 1,000 different species of bean weevils, including specialists that attack just a single host plant, and generalists with more catholic tastes. Most hosts are legumes, but some weevils also attack plants in the mallow (Malvaceae) and morning glory (Convolvulaceae) families. The weevil *Gibbobruchus mimus* is commonly encountered in eastern redbud seeds.

Redbud seeds that escape being eaten by weevils eventually find themselves in the soil. Time passes, rain and snow come and go, temperatures climb and fall, and ubiquitous microbes secrete their digestive enzymes, all of which gradually break down the seed coat and water gains access to the interior of the previously very dry seed. In this way, nature breaches the physical dormancy of redbud seeds.

Impatient gardeners can speed up seed hydration in a number of ways. Sandpaper, files, or sharp knives can be used to nick into the seed coat, providing pathways for the quick entry of water. For the chemically inclined, brief treatment in a strong acid can also soften the seed coat and promote permeability. These techniques, either mechanical or chemical, are known as scarification. And to hasten water entry, redbud seeds can be soaked in warm water prior to planting.

Mere hydration of redbud seeds, however, is not sufficient to prompt germination of the embryo because there is also a physiological dormancy factor that must be overcome. Hydrated redbud embryos must endure several weeks of cool temperature followed by a return to warmth before they germinate. In a horticultural practice called cold stratification, scarified redbud seeds can be induced to germinate relatively quickly by sowing in moist soil and keeping the pot refrigerated

for one or two months before returning to warm conditions. In nature, the physical (seed coat) and physiological (embryo) dormancy may be overcome in the course of a single winter. But based on personal experience, passage through a second winter season yielded many more redbud seedlings than the first—perhaps it took that long for both dormancy factors to be overcome.

It has been said that wishes are like seeds—few ever develop into something. Indeed, we should expect, on average, each redbud tree to succeed in making just one redbud seedling that will survive to maturity—any less and the species would eventually go extinct, any more and we would be overrun with redbuds. It is a sobering proposition to think that despite the elaborate biology of redbud seeds, despite their double dormancy adaptations for proper germination, their structural and chemical defenses notwithstanding, and despite the undeniable fact that each has the genetic potential to become a handsome redbud, only a tiny percentage of the seeds produced can be expected to become trees themselves.

Redbud seeds may seem like such simple little things, but close examination reveals unexpected intricacies. One is reminded of a saying by the Chinese philosopher, Lao Tzu (Laozi), "To see things in the seed, that is genius."

W. John Hayden, VNPS Botany Chair

## • *Trespass*

(Continued from page 3)

*benghalensis* may be reintroduced here in Virginia because it is known to move quickly. It was first collected in Florida in 1928, then found in Georgia in 1967, California in the 1980s, and North Carolina in 2002. Ben is gone from Virginia, for now, but perhaps not for long.

*Thanking Dr. Hayden for this exclusive interview, I stepped out of his office and breathed a sigh of relief. The villain was vanquished. Justice prevails at the University of Richmond.*

***Goodbye, Redbud,  
Hello, Trumpet  
Honeysuckle!***

The 2014 VNPS Wildflower of the Year is trumpet honeysuckle, *Lonicera sempervirens*, also known as coral honeysuckle.

# Powhatan teacher creates botany lesson plans

Barbara Adcock, lead science teacher at Pocahontas Elementary School in Powhatan County, spent the summer developing learning materials related to the *Flora of Virginia* and to the exhibition of the same name to be presented next year at the Library of Virginia. She had this unique opportunity after being selected as one of the library's two 2013 Anne and Ryland Brown Teacher Research Fellows.

Brown fellowships emphasize an interdisciplinary approach to teaching, and Adcock was a perfect fit—as a STEM academy teacher in grades two through four. STEM stands for science, technology, engineering, and mathematics. The materials she has created include 12 lesson plans for grades K–5, aligned with Virginia's Standards of Learning. The fellowship afforded Adcock “the opportunity to explore authentic resources and develop inquiry-based lessons that will stimulate great learning for my students and others,” she said.

Linking plant study to the use of maps, geography, and terminology, all of which are required by the science SOLs, Adcock is developing an appealing interactive map that presents, at the click of a mouse, information from

the *Flora of Virginia* and the Digital Atlas of the Virginia Flora to introduce Virginia's five physiographic provinces, present a species from each, display a range map, and give scientific and common names. Lesson plans describe the process of identifying plants; investigate how plants are used and were used in the past; describe the difference between natives and nonnatives; and introduce key terms for describing and classifying plants.

“The lessons are great!” said Jennifer Blessman, an educational program assistant at the library, who worked closely with Adcock on her fellowship. “They have the kids interacting with plants rather than just sitting in a classroom.” This is, of course, an important side to these materials, because it has become all too rare for students to get their hands on plants. That is not the case in the Pocahontas STEM program; the school has had an outdoor classroom for 17 years now.

An environmental focus prepares students for the sustainable world that they must create, Adcock said. “We talk a lot about keeping the natural balance in our area,” she said. “The students learn about the plants—their uses, how animals use them as habitat. Their ad-

aptations.” Adcock and her teammate, Debbie Putney, work with their 44 third- and fourth-graders to take care of and learn about their outdoor classroom. The

(See *Teacher*, page 8)



Barbara Adcock leads her students in identifying a sweet gum leaf.

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

Name(s) \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

\_\_\_ 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 listed in a chapter directory

Which chapter do you wish to join? (See [www.vnps.org](http://www.vnps.org)) \_\_\_\_\_

Paying by credit card? \_\_\_ MC \_\_\_ Visa \_\_\_ Discover Exp. date \_\_\_\_\_

Card # \_\_\_\_\_ Signature \_\_\_\_\_

Make check payable to VNPS and mail to:

**VNPS Membership Chair, Blandly Experimental Farm, 400 Blandly 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.

**The Bulletin**

ISSN 1085-9632

is published five times a year  
 (Feb., April, June, August, Nov.)  
 by the

**Virginia Native Plant Society**  
 Blandly Experimental Farm  
 400 Blandly Farm Lane, Unit 2  
 Boyce, VA 22620

(540) 837-1600  
[vnpsoc@shentel.net](mailto:vnpsoc@shentel.net)  
[www.vnps.org](http://www.vnps.org)

Nancy Vehrs, President  
 Nancy Sorrells, Editor

Original material contained in the *Bulletin* may be reprinted, provided credit is given to VNPS and the author, if named. Readers are invited to send letters, news items, or original articles for the editor's consideration. Items should be typed, on disk in Microsoft Word or e-mailed to: Editor, 3419 Cold Springs Rd., Greenville, VA 24440, or [lotswife@comcast.net](mailto:lotswife@comcast.net). The deadline for the next issue is **January 6, 2014**.

## Order new botanical illustrations book now for free shipping

An art book for botanists will hit the shelves shortly after the new year. *American Botanical Paintings: Native Plants of the Mid Atlantic* reproduces 60 original works by 40 botanical artists. Each illustration is accompanied by a description of the plant and its

value to gardeners and the environment. Thirty-eight original paintings of butterflies, moths, and caterpillars that use or pollinate the plants are included. VNPS members will recognize Judy Rodgers and *Flora* chief illustrator Lara Gasteringer among the featured artists.

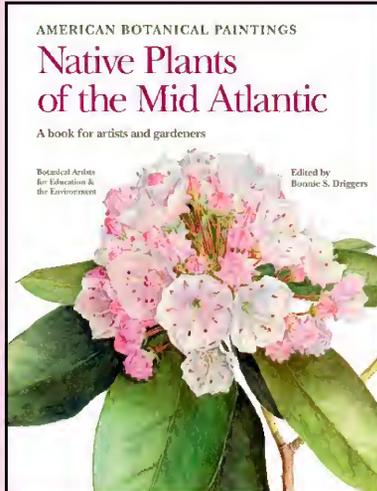
The press run for *American Botanical Paintings* is limited but will be available to accompany an exhibition at the U.S. Botanic Garden after February 15 for \$39.95 plus shipping. **Those who place their order before December 31, 2013, (at [www.starbooks.biz](http://www.starbooks.biz)) will receive free shipping.**

The book is geared toward a broad audience, and has been well received and endorsed by respected authorities in the fields of both art and science who have seen advance copies. Dr. Shirley Sherwood, a botanical art collector, noted "This is a delightfully illustrated book, beautifully designed and with lots of

variety in the choice of plant subjects. I admired the standard of painting and the fresh, appealing studies that will be attractive to both naturalists and gardeners."

Holly H. Shimizu, U.S. Botanic Garden executive director, wrote that "The U.S. Botanic Garden was thrilled to be a part of this book as it embodies what we know to be vital—our world is better and richer with fine botanical art, and the plants in our backyards, in our woods, and along the roadsides are amazing!"

The book has been produced by the Botanical Artists for Education & the Environment, an incorporated 501(c)(3) nonprofit. The book is funded solely through donations. Any profits generated by the sale of the book will benefit nonprofit organizations that support native plant education and conservation.



### • Teacher

(Continued from page 7)

focus is often on trees, and there are at least 17 species in the study area.

Their students have learned about—and actually like using—dichotomous keys, Adcock said. "They feel very proud of themselves when they agree on their identification!" The youngest children gather fallen leaves to use in the garden and use fallen branches to create brush piles for habitat.

"The students like to pick their favorite tree, make observations about it, and sit under it and write. We get the best writing from the students when they have been sitting under their trees," Adcock said. "They are developing a real love of the outdoors, something I hope continues throughout their lives. They are the future stewards of our world. This caring they develop now will make them want to care for the outdoors later." Indeed it will. Terrific work, Barbara!

The fellowships honor Anne and Ryland Brown, of Forest, and are a legacy to their belief in the power of education to improve our well-being. —Bland Crowder, associate director, *Flora of Virginia Project*, and curator of the exhibition at the Library of Virginia from mid-March to mid-September 2014

## New native plant guide in high demand

Last year, the Northern Neck Chapter kicked off its "Plant Northern Neck Natives: Go Native—Grow Native" campaign to encourage people to use native plants in their gardens and protect native vegetation in the landscape. As a first step, the chapter researched and produced a full-color, 48-page book, *Native Plants of the Northern Neck*. The recently released *Flora of Virginia*, the online Digital Atlas of the Virginia Flora, and the Plant Eastern Shore Natives campaign served as important resources to the team developing the guide. The book, released in late June, has received rave reviews and is rapidly being snatched up by local homeowners. Nearly three-fourths of the 5,000 copies in the first printing already have been distributed.

Janet Pawlukiewicz, the project director, explained that their strategy is to work "both the supply and demand sides" by building interest in native plants while improving availability. To that end, the chapter formed partnerships with many

local organizations, including garden clubs and the Master Gardeners and Master Naturalists, and garden centers. In addition to the guide, the project provided promotional banners and plant tags to partner garden centers in exchange for their commitment to stock and special order native plants featured in the guide.

On September 7, during the chapter's native plant sale, the campaign released a new brochure highlighting four garden plans that Master Naturalist Paula Boundy designed to incorporate Northern Neck native plants. The sale made more money and brought in more new members than usual—perhaps because of the success of the campaign.

The "Plant Northern Neck Natives: Go Native—Grow Native" is supported by grants from the Virginia Coastal Zone Management Program, the Northern Neck Audubon Society and the VNPS Northern Neck Chapter. For more information, including an online copy of the guide, see [nnnps.org](http://nnnps.org).

# ***VNPS Annual Meeting photo album***



**In Memory of Ted Scott**



