



# Bulletin

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

www.vnps.org

## Welcome to Virginia, Harperella! /

Harperella (*Ptilimnium nodosum*), a diminutive herb in the carrot family, was found for the first time in Virginia last June by Virginia Department of Conservation and Recreation, Division of Natural Heritage, field botanist Allen Belden. This species is listed as endangered under the federal Endangered Species Act. The population was located along Aquia Creek on Marine Corps Base Quantico property in Stafford County.

Harperella is unusual in that its leaves, hollow quill-like structures, consist of a leaf stalk (petiole) only; thus, the expanded portion of the leaf (the blade) is missing. The flowers are white and in flat-topped clusters (umbels), resembling those of Queen Anne's lace but much smaller and more delicate. For a long time

harperella was believed to be an annual; it is now known that the type that occurs along fast-flowing creeks and rivers (as opposed to pond edges)

behaves as a perennial. Some botanists believe that this type, which includes the new Virginia population, is a  
(See Harperella, page 4)



Harperella  
*Ptilimnium nodosum*  
Illustrations by  
Nicky Staunton

## Exploring the complexities of biodiversity in Richmond

Biodiversity, explored from several perspectives, was the focus of this year's VNPS workshop, held March 8 in Richmond. The wealth of ideas, facts, and unknowns that came out in presentations and discussion defies quick summary. Instead, here's a sampling of what's in my notes and still on my mind, which may at least suggest the workshop's scope.

Martin Ogle, chief naturalist of the Northern Virginia Regional Park Authority, outlined elements he considers part of a compelling case for

biodiversity. Some of them are not those we usually hear. He emphasized that such a case must include both the values of preservation and the costs of neglect. Two points he made are particularly challenging. One is that cultural diversity, rooted in indigenous cultures that reflect the land, is part of biodiversity. The other – to him “the big problem” – is that what's driving our economy and putting it in competition with the rest of life is the idea of growth for its own sake. Therefore we need to seek alternatives in which the primary

indicators of human well-being are not based on growth. Discussion brought out connections between the two: population growth also drives economic growth, and that economic growth and the way it's seen vary among cultures. And while cultural diversity and biodiversity may seem incompatible, in the long run they are not, because cultures can change.

In introducing the workshop, moderator Stan Shetler pictured biodiversity as “a vast, complex net-  
(See Biodiversity, page 4)

# From the president . . . . .

## Virginia's plants show us their special places

Snow was falling for the third straight day. Temperatures were low. The lighting for the day was gray. No traffic passed by, so stillness was a pleasure. The beautiful quiet was ended by the bubbling trill of two house wrens that really was equally beautiful. The wrens were nearby searching for some seed that might have lasted over winter and investigating a little nesting site. Their song was a harbinger of spring's return. The arrival of flocks of robins confirmed warm days would be with us soon. The berries that over-wintered filled them. The robins' beautiful colors broke the gray day and lifted my spirits.

Wherever you are in Virginia, nature is waking. Hungry for blooms and color and life, I've even stooped to look for speedwells, chickweed and draba. Hepatica, bloodroot, bluebells and our 2003 Virginia Wildflower of the Year, trout-lily, are pushing to bloom. Their pollinators have waked also and are hungry. What a glorious season in Virginia!

You will read about our VNPS Virginia Wildflower Celebration events during the months of April and May. These are the busiest months for our chapters. Do join a field trip to visit our native plants where **they** live in the wild. There will be some native plant garden tours to enjoy. VNPS chapter spring native plant sales are anticipated, enjoyed and are the source of support for programs by our 12 chapters. Join us for each and every event you can attend. Many will be listed on our website: [www.vnps.org](http://www.vnps.org).

I wish each of you the awesome joy of surprise when you see for the first time one of our natives "at home" in the wild. I wish you the reassuring joy of relocating and visiting a flower friend of old — just where it was last year. I hope there are more. Finally, I wish you a renewed zeal to know, love and want to protect our native plants where they choose to live in the wild, natural areas of Virginia. There is absolutely no other place on earth exactly like Virginia. Where you live in Virginia is uniquely your "place." The same is true for our native plants. The spots where they live are their unique "places."

**Your President, Nicky Staunton**

## General Assembly session brought mixed results for natural resources

Winter months coincide with the Virginia General Assembly. We are pleased that some essential funds related to natural resources were restored to the Virginia agencies before the arrival of spring.

Regretfully, there was not enough to restore the jobs lost at the Virginia Department of Conservation and Recreation, Division of Natural Heritage.

However, the effort to sublimate the entire Department of Game and Inland Fisheries into Coastal Marine Resources was defeated.

The Occoneechee State Park issue was returned to the public to decide

its resolution. In an effort to avoid the legally required public resolution of the controversy, the budget contained an amendment to transfer 50 acres of the state park to the town of Clarksburg. The effect on the park would be to divide the park land, destroy historic Occoneechee Indian tribal land and reduce a state natural area to a golf course. The land was to be developed by a private developer after Clarksburg acquired it. Enough legislators voted against the amendment that the issue is back in the community for resolution.

Each of you who made time to con-

tact your legislators made a difference. Thank you. Thank them! Stay in touch with them through the summer and autumn. The next General Assembly meets in just nine months and you can accomplish much by then if you continue to share your thoughts and concerns with them. If you were to invite your planners, elected officials, and developers to join you on the spring field trips, they will be able to see the beauty we describe to them and understand why we are so passionate in protecting natural habitats from development, tri-county parkways, the threat of trading away state natural areas, invasive alien plants and mismanagement.

## Flora Project update

Chris Ludwig, President of the Flora of Virginia Foundation, announced that three new directors have joined the Flora Board, Deborah Roach, Ann Regn, and Suzanne Wright.

Chris Ludwig has developed a 45-minute PowerPoint presentation on the Flora Project that includes illustrations by Roy Fuller and Lara Call Gastinger. Board members will have a copy to use in presenting the Flora of Virginia Project to groups.

There is a mock-up of text and illustrations being prepared for release to the public so an example of a genus/species treatment (*Chamaecrista*) in the new *Flora of Virginia* can be seen. Lara Call Gastinger is over a quarter of the way through her current contract for 200 illustrations in the book.

A Flora of Virginia Symposium was held April 11 at the State Arboretum of Virginia with all proceeds donated to the Flora of Virginia Project, Inc. Ludwig,

Ruth Douglas, John Townsend and Donna Ware spoke.

The *Flora of Virginia* date of publication is to be 2010. Donations to support the project can be made payable to the Flora of Virginia Project, Inc., P. O. Box 512, Richmond, VA 23218-0512. To donate securities, contact Ludwig at 804-371-6206.

For updates about the Flora of Virginia got to: [www.dcr.state.va.us/dnh/vaflora.htm](http://www.dcr.state.va.us/dnh/vaflora.htm).

# Hepatica: Harbinger of spring in the Commonwealth

For the past two years, the last week of February has been brightened for me by the sight of hepatica flowers. This year, the ground was covered by a foot of packed snow in February, and bloom time came in March.

There are two species of hepatica in Virginia. The most widespread is the round-lobed hepatica or liverleaf, *Hepatica americana*, which is found in all but a few eastern counties. The other is the sharp lobed hepatica, *Hepatica acutiloba*, which grows in many of the mountain counties from the Blue Ridge west.

Both plants have three-lobed basal leaves that grow from rhizomes or underground stems, and their shape gives rise to the name liverleaf. As the names suggest, one species has rounded lobes and the other has pointed lobes. The leaves are often purple mottled on the top and somewhat purple underneath, and form a clump about 5 inches or 10 centimeters high. Although they are some of the earliest bloomers, hepaticas cannot be considered spring ephemerals. They produce new leaves in late spring after flowering, and these leaves are held on the plant over the winter.

They turn a little darker and hug the ground, but are ready to begin photosynthesizing as weather permits.

The flowers of both species lack true petals. The petal-like sepals are arranged radially and have colors that vary from white to blue to pink in the round-lobed hepatica and white to blue to deep purple in the sharp-lobed hepatica. The flowers are less than an inch (about 2 centimeters) across and may have 5 to 12 sepals, although 6 sepals is most common. They are held above the leaves on narrow scapes or leafless flower stems. The genus is a member of the Ranunculaceae (Ranunculus family), and so the flower parts are separate rather than fused. The flowers have numerous stamens, and are pollinated by wind or by insects, including bees, flies, thrips and gnats. No nectar is produced, so pollen is the reward for these pollinators.

The achenes (hard dry, one-

seeded fruits) are enclosed within a rounded head. The achene and stem of the sharp-lobed hepatica are hairy; those on the round-lobed hepatica are less hairy. The seed head opens in our area in late April or May. The seeds have an eliasome or lipid filled structure on their surface, and they are carried away by ants mainly, or rodents, aiding dispersal.

The hepaticas are shade tolerant, and can be found in deciduous forest land. Round-lobed hepatica can be found in more acidic sites than sharp-lobed, which is sometimes associated with calcareous sites, while both tolerate summer dryness

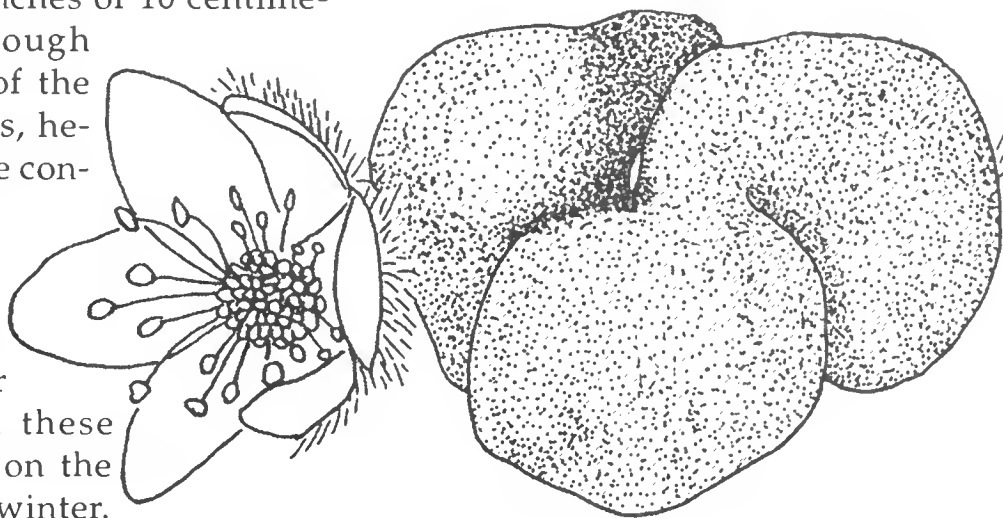
and may even be found on rock outcroppings.

These rhizomatous plants will form colonies, can survive droughts and are probably resistant to fire, too.

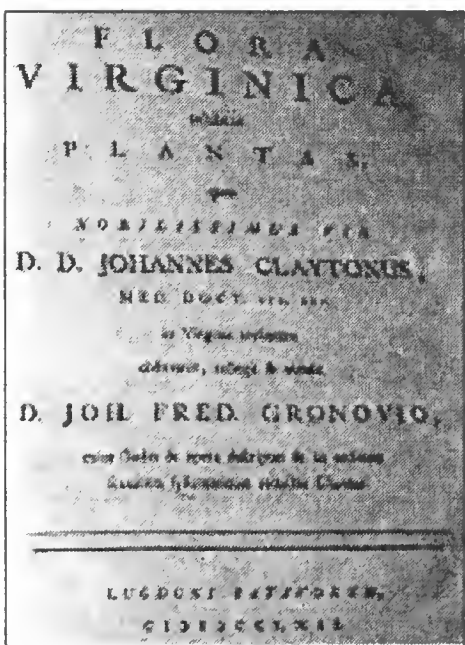
With rhizomes and evergreen leaves, they ought to be good for holding soil.

Limited medicinal uses for stomach and abdominal problems and for cooling the liver are recorded, but perhaps their cheerful early flowers are their best medicine.

Sally Anderson, VNPS 2nd Vice-President



Hepatica illustration by Nicky Staunton



Title page from the 1762 Flora Virginica by Gronovius.

## 1762 Flora Virginica comes to Virginia

When Michael Sawyer moved to The Netherlands last fall, he had set a goal. He visited some rare book dealers to request that a copy of the original *Flora Virginica* be located to purchase.

The adventure began. Six months later, Julius Steiner of Asher & Company in The Netherlands had located a copy. When the search began, there was no plan for purchasing a copy that might be found. A short search for a donor was successful and a member of the Virginia Native Plant Society offered to purchase the rare book that is to be donated to the

Flora of Virginia Project, Inc. and used to support the *Flora*. The book has arrived in Virginia and was at the Flora of Virginia Symposium held at Blandy in early April.

The contemporary mottled calf cover with reback (restored spine with original title on leather embedded) is beautiful. Text is in Latin and the paper is in excellent condition. This is the third edition after the first London edition of 1739-1743 and contains a map of Virginia annotated with information.

John Frederick Gronovius' work is (See Gronovius, page 8)

## •Harperella

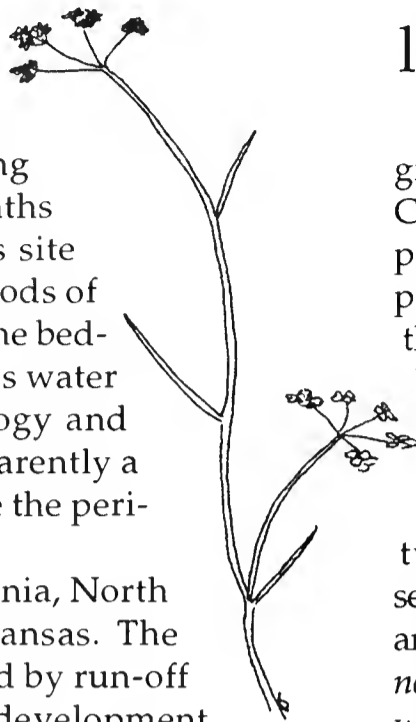
(Continued from page 1)

separate species, *Ptilimnium fluviatile*.

The new population grows from fissures in the mafic bedrock that underlies portions of Aquia Creek. During periods of high water (generally during the cooler months and after major storm events), harperella plants at this site and their habitat are inundated. Conversely, during periods of low water (generally during the summer and early fall), the bedrock fissures where harperella grows are above the creek's water level. Harperella is adapted to such a variable hydrology and requires it for its continued existence. The species is apparently a poor competitor, and few other plant species can tolerate the periodic flood scouring to which the habitat is subject.

Harperella is also known from Maryland, West Virginia, North Carolina, South Carolina, Georgia, Alabama and Arkansas. The major threat to the Virginia population is siltation caused by run-off due to high levels of new residential and commercial development within the Aquia Creek watershed.

Allen Belden, field botanist, VDCR, Division of Natural Heritage



## VDACS considers listing species

On March 13, the Board of the Virginia Department of Agriculture and Consumer Services (VDACS) held a public hearing concerning listing plants and insects as endangered or threatened. (See January 2003 *Bulletin*)

Dr. Donald Butts read the plants recommended for listing from those that were submitted by DCR-Division of Natural Heritage. At the last minute, two plants were added to the list: seabeach amaranth (*Amaranthus pumilus*) and harperella (*Ptilimnium fluviatile*; *P. nodosum*), known also as mock bishopweed. Both were recently identified in Virginia and are already federally listed as endangered. Allen Belden, of DCR-Division of Natural Heritage, located harperella and tells about the find in a separate article in this *Bulletin*.

Dr. Butts read comments and questions that VDACS received in response to the request for public comment. Tom Smith, of DCR-Division of Natural Heritage, thanked the board for considering the submitted list. Ruth Douglas and Nicky Staunton attended to express VNPS support for listing the plants and insects as Endangered or Threatened.

Considering Endangered or Threatened species is different from most other business considered by the VDACS Board. Virginia Secretary of Agriculture J. Carlton Courter's report to his board included subjects ranging from soybean sales, apple exports, goat cheese, dairy farm concerns – and listing plants in the wild as endangered or threatened in Virginia.

We hope to be able to report in the next *Bulletin* that the species will be listed and will receive protection.

## Biodiversity issues studied at workshop

(Continued from page 1)

work of threads blurred by variation." Looking more closely at what we know of that complexity, Bruce Stein, Vice President of Programs at NatureServe, underscored how much we *don't* know. One of the greatest threats to biodiversity, he said, is ignorance. For example, while the U.S. has more than 200,000 named organisms, probably three times as many are unnamed or unknown. Even among the known species, about a third are to some degree at risk. Moreover, the processes that are increasing extinction are also reducing the ability to adapt and diversify.

How Virginia fits in a national context depends on the measure of biodiversity that's used. Among the 50 states, it ranks about 12th in overall species diversity, 13th in flora, but 2nd in dragonflies and 3rd in amphibians. In endemic species it ranks about 21st, and 16th in species at risk. On a map of the distribution of imperiled species, some of the state's western edge is part of a Southern Appalachian "hotspot" centered on the Clinch River Valley, in part a reflection of that area's array of rare cave species and freshwater mussels.

States are not the best units for conservation planning, however, as Judy Dunscomb, Director of Conservation Science for The Nature Conservancy in Virginia, pointed out. She described a

planning process based instead on ecoregions, defined by ecological characteristics rather than political boundaries, that TNC is developing in Virginia and nationwide. Across an ecoregion, it envisions assembling a "portfolio of functional conservation areas" – a minimum number of sites that, managed appropriately, will ensure the long-term viability of all native biodiversity within that ecoregion. Workable definitions of those terms are not yet established, but it appears that on average a portfolio may equal nearly a quarter of the ecoregion's area. Through examples of components of the portfolio for Virginia's ecoregion, Ms. Dunscomb illustrated the importance of tailoring site-specific conservation strategies.

Mary Pockman, VNPS Director-at-large

## For more information

*Precious Heritage: The Status of Biodiversity in the United States*, edited by Bruce A. Stein, Lynn S. Kutner, and Jonathan S. Adams (Oxford, 2000).

*Biodiversity*, edited by E.O. Wilson (National Academy Press, 1986). Papers from the National Forum on BioDiversity sponsored by the National Academy of Science and the Smithsonian Institution in 1986.

Web sites: NatureServe ([www.natureserve.org](http://www.natureserve.org)); Virginia's Division of Natural Heritage ([www.dcr.state.va.us/dnh/](http://www.dcr.state.va.us/dnh/)); American Museum of Natural History (<http://research.amnh.org/biodiversity/>); National Geographic and World Wildlife Fund ([www.nationalgeographic.com/wildworld](http://www.nationalgeographic.com/wildworld)).

# Wildflower Calendar of Events

**Beaver Dam Park Trail Hike** – Saturday, April 19, 10 a.m. Near Gloucester on the Middle Peninsula. Sponsored by Northern Neck Chapter, led by John Clayton Chapter members. (To register, call Sylvia and Sid Sterling at 804-693-2953)

**Arcadia Field Trip** – Saturday, April 19, 9 a.m. at Peaks of Otter visitor center. Join Rich Crites and his class on a trip to Peaks of Otter and Arcadia. (Call Crites at 540-774-4518)

**Birds and Blooms** – Saturday, April 19, 8 a.m. Field trip co-sponsored by Blue Ridge Wildflower Society and Roanoke Valley Bird Club. Meet near Bo'jangles, Botetourt Commons Shopping Center, Daleville. Bring bag lunch. (Call Butch Kelly at 540-384-7429)

**Wildflower Walk at Great Falls Park, Balls Bluff** – Sunday, April 20, 2:30 p.m., Led by Marion Lobstein. (For information or to register, contact Lobstein at 703-536-7150 or mblobstein@earthlink.net)

**Northern Neck Botanizing Hike** – Monday, April 21, 10 a.m. Sponsored by Northern Neck Chapter on Anne and John Olsen property. (Call Ann Messick at 804-435-6673)

**Great Smoky Mountains 53rd Annual Wildflower Pilgrimage** – April 22-29, week's worth of activities, lectures and field trips in Gatlinburg, Tenn. (Contact 865-436-1290 or [www.goldsword.com/wildflower/pilgrimage.html](http://www.goldsword.com/wildflower/pilgrimage.html))

**Spring Wildflowers of the Potomac Gorge (Scott's Run)** – Friday, April 25, 10 a.m.-12:30 p.m., Audubon Naturalist Society walk led by Cris Fleming. (For information, call 301-652-9188, x16), \$18 fee for non-Audubon members.

**Prince William Forest Park** – Friday, April 25, 8 a.m.-3 p.m., Audubon Naturalist Society walk through a Virginia Piedmont forest. (Call 301-652-9188, x16), \$34 non-Audubon members.

**Exploring Dameron Marsh Hike** – Saturday, April 26, 11 a.m. Sponsored by Northern Neck Chapter and led by Natural Heritage naturalist Rebecca Wilson. Bring bag lunch. (Call Ann Messick at 804-435-6673)

**Shenandoah Chapter Plant Sale and Waynesboro Riverfest** - Saturday, April 26, all day. This one-day festival held in Waynesboro celebrates the South River watershed. Shenandoah Chapter will have native plants for sale and an exhibit. (For information, [www.riverspirit.org](http://www.riverspirit.org))

**Bioblitz at Glencarlyn Park, Arlington** – Saturday, April 26, 10 a.m.-3 p.m.. Co-sponsored by VNPS and Maryland Na-

tive Plant Society, field studies of terrace gravel forest community. Bring bag lunch. (Call Rod Simmons at 703-256-7671 or [cecropia13@msn.com](mailto:cecropia13@msn.com))

**Green Hill Park Field Trip** – Saturday, April 26, 9 a.m., Salem, sponsored by the Blue Ridge Wildflower Society. (For directions, call Rich Crites, 540-774-4518)

**Prince William Spring Fling Gardening Extravaganza** – Saturday, April 26, 9 a.m.-3 p.m., sponsored by Prince William Extension Office at Prince William County Fairgrounds, Manassas. (Call 703-792-7747)

**Prince William Wildflower Society Garden Tours** – Sunday, April 27, Noon - 5 p.m. PWWS members will open three gardens to the public for this free event. A brochure with directions will be available in April. (Contact Nancy Vehrs, [nvehrs@attglobal.net](mailto:nvehrs@attglobal.net))

**Potowmack Chapter Garden Tours** – Sunday, April 27. (Call Billie Trump at 703-960-1476)

**Bull Run Ramble** – Sunday, April 27, 1-3 p.m., Audubon Naturalist Society program at Hemlock overlook park. (To register, call 703-803-8400)

**Manor House Tea and Native Plant Trail Walk** – Sunday, April 27, 1-3 p.m., Green Spring Gardens Park, (Call 703-642-5173), \$22 fee.

**Northern Neck Botanizing Hike** – Thursday, May 1, 10 a.m. Sponsored by Northern Neck Chapter on Anne and John Olsen property. (Ann Messick, 804-435-6673)

**Hickory Hollow and Cabin Swamp Hikes** – Saturday, May 3, 9 a.m. Picnic brunch followed by natural walks led by Ann Messick and Ellis Squires along upland roads of Hickory Hollow and into Cabin Swamp. Audubon Society sponsored (To register, 804-435-7338), \$8 fee.

**Bioblitz at Fort DuPont** – Saturday, May 3, 10 a.m.-3 p.m.. Co-sponsored by VNPS and Maryland Native Plant Society, field studies of terrace gravel forest community, bring bag lunch. (For information, call Rod Simmons at 703-256-7671 or [cecropia13@msn.com](mailto:cecropia13@msn.com))

**Bluebells and Birding** – Saturday, May 3, 8-11 a.m. Enjoy spring migrants and blooming bluebells at Bull Run Park in Centreville. (For information, 703-354-5093 or [jmcperson@nvct.org](mailto:jmcperson@nvct.org))

**Curry Mountain Field Trip** – Saturday, May 3, meet at Daleville park & ride at 10:30 a.m., Blue Ridge Wildflower Society. (Call Cindy Burks, 540-977-0868)

**Birds & Blossoms** – May 8-11, A weekend for birders and naturalists at Norfolk Botanical Garden. (For information and to register, [www.norfolkbotanicalarden.org](http://www.norfolkbotanicalarden.org))

**20th Annual Spring Wildflower Symposium** – May 9-11, presented by the Wintergreen Nature Foundation and Wintergreen Resort. (Contact 434-325-7451 or [www.twnf.org](http://www.twnf.org))

**Spring Wildflowers of the Potomac Gorge (Bear Island)** – Friday, May 9, 10 a.m.-12:30 p.m., Audubon Naturalist Society walk led by Cris Fleming. (Call 301-652-9188, x16), \$18 for non-Audubon members.

**Shenandoah National Park Wildflower Weekend** – May 10-11, free programs, but park entrance fee required. (For information, contact 540-999-3397 or [www.nps.gov/shen/2gl.htm](http://www.nps.gov/shen/2gl.htm))

**Prince William Wildflower Society Plant Sale** – Saturday, May 10, 9 a.m.-noon. Bethel Lutheran Church in Manassas, corner of Sudley Road (Rt. 234) and Plantation Lane. (Nancy Arrington 703-368-8431)

**Great Falls Walk** – Saturday, May 10, sponsored by the Potowmack Chapter. (For information, call Marianne Mooney, 703-534-8179)

**19th Annual Spring Plant Sale** – Saturday, May 10, 9 a.m.-noon, sponsored by Blue Ridge Wildflower Society and held at Community Arboretum at Virginia Western Community College. (Call Cindy Burks, 540-977-0868)

**Northern Neck Nature Walks** – Monday, May 12, 9 a.m. Picnic brunch followed by nature and bird walks led by Jerry Eddy (birds), Ann Messick (plants), and Ellis Squires (plants). Audubon Society sponsored (To register, 804-435-7338), \$8 fee.

**Hickory Hollow Hike** – Thursday, May 15, 10 a.m. Donna Ware, Curator of the Herbarium at William & Mary will lead walk. Bring bag lunch. (Call Ann Messick at 804-435-6673.)

**Ferns and Friends at Bull Run Mountain** – Saturday, May 17, sponsored by the Friends of Bull Run Mountain (To register, 703-753-2631 or [www.fobr.org](http://www.fobr.org))

**Hopalong Cassidy Trail and Roaring Run Field Trip** – Saturday, May 17, meet at Daleville park & ride at 9:30 a.m. to botanize this shale barren, and visit Roaring Run. Led by Blue Ridge Wildflower Society's Esther Atkinson, Dora Lee Ellington and Frieda Toler for Cassidy and Cindy Burks for Roaring Run. (Call Burks, 540-977-0868)

**Hickory Hollow Orchid Walk** – Saturday, May 24, 9 a.m. Ann Messick and Ellis Squires lead walk through Hickory Hollow. Audubon Society sponsored (To register, 804-435-7338).

## Practical sense and practical plants combat drought conditions

Even given our moisture-laden winter, I still look to the coming growing seasons with an abiding sense of "drought wariness." In this new year, my own stock beds will feature ever-increasing numbers of dry-tolerant species. Plants, principally natives, have proven their staying power through repeated seasons of prolonged dry spells and reduced water tables.

Whatever your age, you may wish to write that novel (or even read one); to travel to other lands; to enjoy a sunset between your nine-to-fives; to know your children, or grandchildren. As a middle-aged nursery grower, I am increasingly conscious of the time and labor involved in the maintenance of my living inventory. In 2002, I provided supplemental watering only twice to my raised beds, and none whatsoever to naturalized sites.

Quite simply, the perennial layering of composted media is what enables us to sustain plantings through stressful periods, and to greatly reduce time otherwise spent in weeding. To the more experienced grower/gardener, this point may seem all too obvious. Yet, whatever our level of knowledge, successful gardening with natives is most critically based in the content of our planting ground.

A relatively attractive and inexpensive model of a compost enclosure is provided below. The type featured herein has effectively served my nursery grounds for 10 years running, and still shows no signs of dilapidation. Our perennial compost pile contents include: whole and shredded leaves fallen onto lawn

areas from oaks, maples, dogwoods, (yielding the most nutritious chemistry), poplars and pine needles.

Also, shredded woody and herbaceous material, available by pruning, deadheading, or fallen limbs/branches. We also layer on moderate amounts of burn pile contents. And when our local jurisdictions permit, we conduct regular control burns of our burn pile contents: clippings, extracted weeds, etc. The burn process helps to more immediately break down materials, and rule out the infusion of weeds or unwanted seeds within the compost pile. The composition of my compost pile is moderately acidic. And so, where certain plants/sites would warrant it, I dust and work in some dolomitic lime (purchased in bulk from a Fredericksburg quarry).

My raised stock beds might be considered unique micro-habitats, which may be considerably amended/manipulated in order to accommodate the particular cultural requirements of certain native stock. I build soil and soilless media above my composite- and clay-based soils. Here the intention is to increase the texture and "drainability" of these "controlled" beds. In naturalized planting areas, we are chiefly layering on composted materials with some gritty sand in order to increase the moisture-retentive properties of on-site soils.

Some of our esteemed VNPS colleagues would hope that fellow members spend more time and energy on the preservation of our native plant communities, rather than "landscaping" them into our properties. I believe that the protection of

our natural populations should be our primary focus. I do also embrace the notion of landscaping with site-appropriate natives in order to support a healthy diversity of life within our homescapes – from neighbor to neighbor. My own personal and professional focus continues to be on those natives that are particularly useful to wildlife. They are more than pretty faces.

When planting natives, both the homeowner and professional should be mindful of several considerations. Gain a practical knowledge of the particular cultural requirements of each species on your wish list. Secondly, select the right plant for the right place. Your choices should be based on natural community models. Respect those native species which, through their own unique mechanisms, have historically occurred in your particular local area. Plant provenance should be responsibly reflected in our "sense of place," as well as the sources of our nursery-propagated purchases.

For the time being, the *Atlas of the Virginia Flora* remains the most useful reference for field records of native species. (Send \$22.75 to Virginia Botanical Associates, c/o Robert Wright, Virginia Botanical Associates, Inc., 10210 Commonwealth Boulevard, Fairfax, VA 22302.) Also, our VNPS website features numerous texts recommended for guidelines in the cultivation and proper siting of our native species. Lastly, our cultivation efforts should not run contrary to the conservation of our natural resources – such as water. Hence the practical value of composting and mulching.

Here's a recipe for a reasonably attractive and inexpensive composting enclosure:

- One roll (or less) of wood-slat and wire snow fencing } *available through*
- 5 or 6 foot metal stakes } *most co-ops*
- nylon cord, baling twine or wire }

Once you decide on the diameter/circumference, allow for a two- to two-and-a-half foot spacing between stakes to determine how many you'll need. Allow a little more room between the two stakes which will define your entryway – enough room to accommodate the width of your wheelbarrow.

After driving in your stakes, unfurl your snow-fence roll around your circle of stakes. Use cord to tie the fencing slats to your stakes as you gradually unfurl. Start your tying-on at one of the two entry stakes, securing ties at an upper and lower point on each stake.

*Mary Painter, VNPS Membership Chair*

## Native plants with drought tolerance

*Arcostaphylos uva-ursi* (bearberry)  
*Aster cordifolius* (blue wood aster)  
*Aster divaricatus* (white wood aster)  
*Aster dumosus*  
*Aster ericoides* (heath aster)  
*Aster linariifolius* (bristly aster)  
*Aster oblongifolius*  
*Aster pilosus* (frost aster)  
*Aster vimineus* (small white aster)  
*Bouteloua curtipendula* (side oats gramma)  
*Carex pensylvanica* (sedge)  
*Carex plantaginea* (sedge)  
*Chasmanthium latifolium* (river oats)  
*Celtis occidentalis* (hackberry)  
*Clethra acuminata* (cinnamon clethra)  
*Cornus racemosa* (grey dogwood)  
*Diospyros virginiana* (persimmon)  
*Dryopteris marginalis* (marginal shield fern)  
*Geranium maculatum* (wood geranium)  
*Heuchera americana* (American alumroot)  
*Heuchera macrorrhiza* ('Autumn Bride')  
*Hydrangea quercifolia* (oakleaf hydrangea)

*Iris cristata* (dwarf crested iris)  
*Liatris pycnostachya* (prairie blazing star)  
*Liatris squarrosa* (scaly blazing star)  
*Opuntia compressa* (prickly pear)  
*Paxistyma canbyi* (mountain jade)  
*Phlox divaricata* ('May breeze')  
*Polemonium reptans* (Jacob's ladder)  
*Polystichum acrostichoides* (Christmas fern)  
*Rhus aromatica* (fragrant sumac)  
*Rhus coppalina* (winged sumac)  
*Rosa carolina*  
*Rudbeckia fulgida* (orange coneflower)  
*Rudbeckia triloba* (three-leaved coneflower)  
*Salvia lyrata* (lyre-leaved sage)  
*Sanguinaria canadensis* (bloodroot)  
*Schizacharium scoparium* (little bluestem)  
*Solidago rugosa* (rough-leaved goldenrod)  
*Sorghastrum nutans* (Indian grass)  
*Stokesia laevis* (Stoke's aster)  
*Stylophorum diphyllum* (wood poppy)  
*Tradescantia virginiana* (spiderwort)  
*Virburnum prunifolium* (blackhaw viburnum)

## Bugs and gardening topic of Northern Neck meeting

The Northern Neck Chapter, one of VNPS's newest groups, is planning a buggy gathering for its summer meeting on July 17 at 7:30 p.m. at Wicomico Episcopal Church.

The evening's speaker, Art Evans, is planning to put up a screen and use a black light to attract insects. The program topic to be complemented by the creatures is "Gardening with bugs."

The church is located along Rt. 200 in Northumberland County on the Northern Neck. Call Ann Messick at 804-435-6673 for more information.

## Cullowhee Conference offering scholarships

The 20th Anniversary Cullowhee Conference, "Native Plants in the Landscape" will be held July 24-26 at Western Carolina University, Cullowhee, N.C.

Up to 23 scholarships will be awarded to college students, botanical garden interns, and nature center or park interns involved with programs on native plants and interested in

propagation, production, education and perpetuation of native plants in the landscape. Students and interns in landscape architecture, horticulture, botany and ecology are especially encouraged to apply.

Any full-time college student (undergraduate or graduate) during the 2002-2003 academic years may apply if he/she can demonstrate a particu-

lar interest in native plants and their use in the landscape. Application deadline is 5 p.m., Friday, May 9. Results will be mailed by June 7. For more information, contact Elaine Nash, Chairman, Cullowhee Scholarship Committee, 3390 Hwy. 20 SE, Conyers, Ga. 30013-2866 or call 770-922-7292 leave message, number and time to call. Also visit <http://cess.wcu.edu/np>.

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

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

Address \_\_\_\_\_

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

\_\_\_ Individual \$30

\_\_\_ Student \$15

\_\_\_ Family \$30

\_\_\_ 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 to be exchanged with similar organizations in a chapter directory

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.

### The *Bulletin*

ISSN 1085-9632

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

#### Virginia Native Plant Society

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 400 Blandy Farm Lane, Unit 2  
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Nicky Staunton, 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@rica.net](mailto:lotswife@rica.net)

The deadline for the next issue is May 15

# Gronovius book to aid Flora Project

(Continued from page 3)

based on John Clayton's specimens and comprised the first systematic flora of Virginia. It established many new genera. According to information taken from a website, "John Clayton came to Virginia in 1705, where his father was attorney general." Clayton had an estate on the Piankatank River in Mathews County and spent much time collecting Virginia plants and discussing them with J.F. and Laurens T. Gronovius, Carl Linnaeus, Peter Kalm, Peter Collinson and John Bartram. "After many delays, the results of his work were embodied in the *Flora Virginica* by Gronovius. Because Clayton's herbarium specimens formed the basis of this work, it is asserted that it should be called 'Clayton's *Flora Virginica*,' but the final identification of the specimens, the science and system of the book, were largely the work of Gronovius." In the first edition he used a binomial nomenclature which preceded Linnaeus' system by a decade; in the present edition, he employed a more Linnaean system of identification.

# New book looks at interaction between man, forest

Chris Bolgiano is surrounded by the subject of her newest book. That's because she and her husband, Ralph, have long made their home on 100 wooded acres in the western mountains of Virginia. But *Living in the Appalachian Forest: True Tales of Sustainable Forestry* goes far beyond the feel-good prose of nature writing. Instead she chooses to examine the hard issues that inevitably occur when humans inhabit a forest.

She looks at the "good guys" and the "bad guys" within the forest landscape and notes the blurring of lines between those who seek sustainability and those who seek profitability. In

some cases, however, as with the coal barons ravaging the landscape through mountaintop removal, the bad guys are all too obvious. Native plant society members will particularly enjoy sections about low-impact timbering using horses and about ginseng.

Readers familiar with Chris' earlier two books on the Appalachian forest and mountain lions will again delight in the descriptive essays that detail persons and places of the forest. The paperback, published by Stackpole, recently won first in the Virginia Outdoor Writers Association members' contest. (200 pp., \$18.95, ISBN 0-8117-2845-5)

## Wintergreen Spring Wildflower Symposium

The Wintergreen Nature Foundation hosts its 20th Annual Spring Wildflower Symposium May 9-11. Over 20 well-known authors, botanists and naturalists will lead more than 60 activities including wildflower walks, photography and astronomy workshops, garden tours, landscape design classes and birding activities. This weekend of relaxation, learning and fun takes place at the Trillium House at the Wintergreen Resort, home to The Wintergreen Nature Foundation, nestled in the Blue Ridge mountains.

Enjoy a tour of the gardens with well-known landscape architects; learn the medicinal properties of the common plants with author of *The Green Pharmacy*, Dr. James Duke; enjoy the waterfalls as you walk the area.

Whether you are a wildflower enthusiast, outdoor educator or simply an admirer of the Blue Ridge landscape, this program has something for you. If you are interested in attending, contact Liz Salas at 434-325-7451 or [specialevents@twnf.org](mailto:specialevents@twnf.org). A schedule can be found at [www.twnf.org](http://www.twnf.org).

www.vnps.org

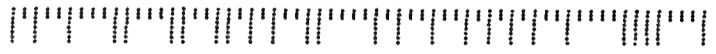
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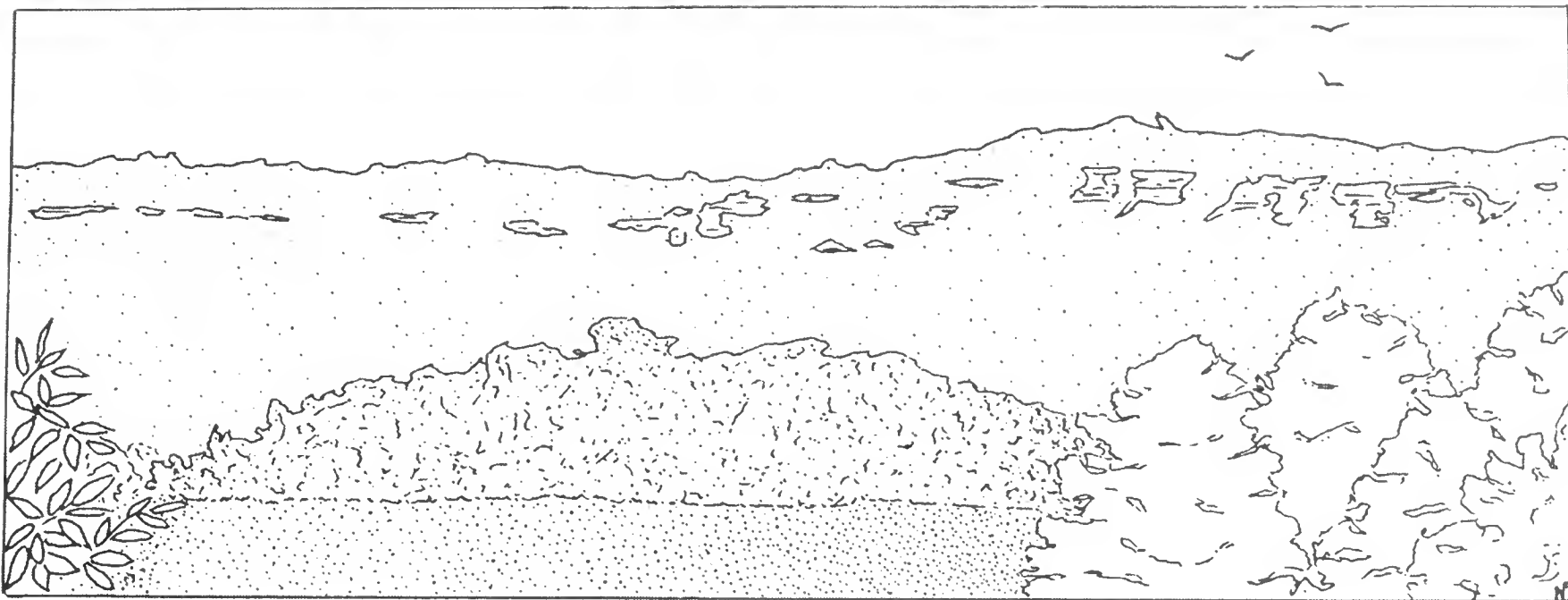


# Bulletin

A publication of the VIRGINIA NATIVE PLANT SOCIETY

*Conserving wild flowers and wild places*

www.vnps.org



## The face of Bull Run Mountain

### *Bull Run Mountain a focal point for Annual Meeting*

Mark your calendars for the VNPS Annual Meeting to be held September 12-14 in Prince William County and Manassas. The Prince William Wildflower Society is preparing a wide range of field trips and speakers to highlight the great diversity to be found in the only county in the state that spans geographically from mountains to tidewater.

The VNPS Board business meeting will take place Friday, September 12 from 3 to 5 p.m. at Bethel Lutheran Church in Manassas. Participants will reconvene at 7 p.m. for a social mixer.

The capping event for Friday night will be a presentation by Michael Kieffer, Executive Director of the Bull Run Mountains Conservancy. Michael will guide us through the 800-acre Bull Run Mountain Natural Area Preserve (through a slide show on Friday and a field trip on Saturday). This preserve was the recent subject of an intense field study by the Virginia Department of Conservation and Recreation - Natural Heritage and the conservancy that resulted in the identification of 11 major plant communities. Nodding trillium has been located on the mountain that looks westward from High Point. In the

*(See Bull Run, page 6)*

### Newport News decision favors state's natural resources

On May 22, the Virginia Marine Resources Commission (VMRC) voted to deny a permit to Newport News that would have allowed the creation of the King William Reservoir. This hearing, the second of two due to large public attendance, was the latest in the controversial project's 18-year history.

The permit, if approved, would

have allowed construction of an intake pipe that would draw up to 75 million gallons of water a day from the Mattaponi River to fill the proposed 1,500-acre reservoir, flooding over 400 acres of wetlands.

The reservoir was to be constructed to supply water to Newport News, which would in turn supply

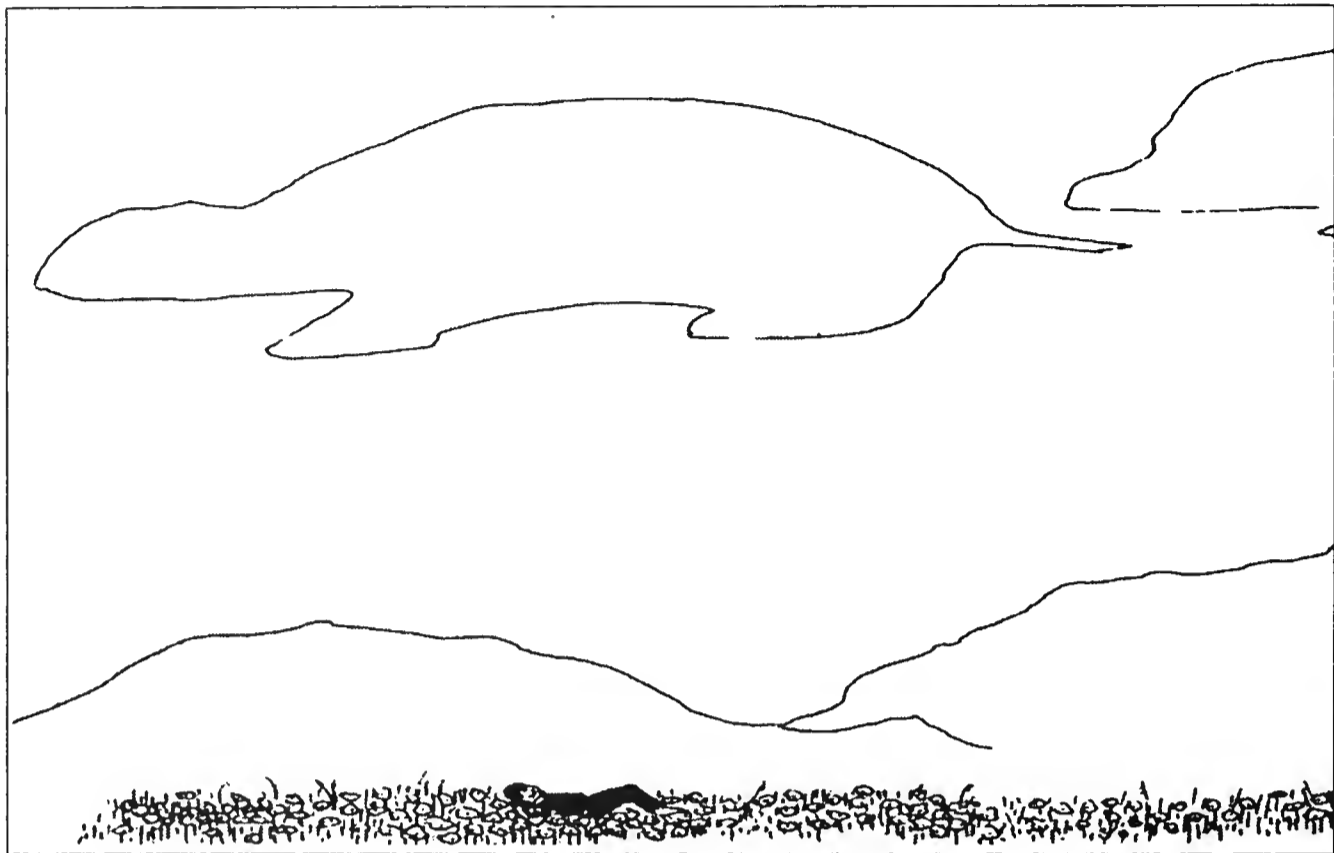
water to other localities and businesses on the lower Peninsula for future growth of the area. Opponents argued that Newport News' water projections were inflated compared to the regional growth rates. Water projection numbers used for the permit were those originally proposed before Virginia Beach

*(See Decision, page 7)*

From the president . . . . .

*Summer is great for getting to know plant friends*

Summer and being 5 years old meant that I...was short enough to smell the flowers without bending over...small enough to lie on the top of the clipped hedge of my Grandmother's garden and watch the clouds form images...had time for just sitting under a humongous white oak tree, shaded and cooled by its shadow, watching wood ants toting their finds to the nest. Once in a while I'd get to travel to the North Carolina mountains for a family visit. It was in the mountains that the magic of wildflowers entered my life forever because it was mostly natural woods, lanes and meadows. At least, at 5, that is what I saw.



Much of our learning takes place when we are 3, 4, 5 years old. The intensity of learning is seldom met later in our lives. Today, some children still have free summer time to lie on the ground and watch clouds form images of animals. Some, but not all, children get to natural areas with parents who understand the refreshing of spirit and the learning that takes place there. For many, adults and children, there is a vacuum of knowledge about nature. They really aren't aware that their lives depend on plants and the life supported by plants—in the wild. Not gardens. Not zoos. But in wild places.

Perhaps the efforts made by Virginia Native Plant Society and other habitat conservation groups will make a difference. Let's hope the decline of habitats and species and a growing appreciation of our regional beauty turns to a change of public and private policy that will respect the land and its resources.

Meanwhile, whether you travel or stay home this summer, enjoy the regional flora where you are. Maybe this summer is the time to start a "Native Plant Life List." This summer, learn to identify plants that you see using a field guide for the region, note where the plant lives (soil, sun, water, community) along with the date and location. Also, check to see its origin, whether it is common to the area or whether it is a rare plant. Sketch or paint or photograph the plant and/or its habitat. Notice any wildlife in relationship with the plant.

The goal? Once you know a plant friend's name and learn all that you can about it, you appreciate it. Once you appreciate it, you care about its survival. When you reach that point, you look for other like-minded people and together, you will find a way to give your plant friend and its community protection. That is what we are about in the Virginia Native Plant Society.

My summer? Well, the Bruce Peninsula pilgrimage will soon be under way. Before going to Newfoundland with our group, there will be visits to my local natural areas to observe and monitor some special plant species. There will be removal of the dense and diverse alien plant invasion of my home landscape. Hopefully, trips around Virginia to enjoy both new and familiar natural areas will be part of your summer. Growing season for plants is also a growing season for our botanical knowledge.

Happy native plant trails, friends.

**Your President, Nicky Staunton**

**BOTANY**

*There should be no monotony  
In studying your Botany.  
It helps to train  
And spur the brain –  
Unless you haven't gotany.*

*It teaches you, does Botany,  
To know the plants and spotany,  
And learn just why  
They live or die –  
In case you plant or potany.*

*You learn, from reading Botany,  
Of wooly plants and cottony  
That grow on earth,  
And what they're worth,  
And why some spots have notany.*

*You sketch the plants in Botany,  
You learn to and plotany  
Like corn or oats –  
You jot down notes,  
If you know how to jotany.*

*Your time, if you'll allotany,  
Will teach you how and what any  
Old plant or tree  
Can do or be –  
And that's the use of Botany!*

**Berton Braley Science News Letter  
March 9, 1929**

## VNPS FISCAL YEAR 2002

### INCOME STATEMENT

#### Income:

Dues, Membership	\$ 25,179
Donations	\$ 6,807*
Income Fundraising Letter	\$ 4,600
Sponsored Events (Net)	\$ 4,242
Sales, Gifts & Books	\$ 299
Interest Income	\$ 490
Dividend Income	\$ 7
Capital Gains on Donated Stock	\$ 306
Other Income	\$ 1,033
<b>TOTAL INCOME</b>	<b>\$ 42,963</b>

#### Expenses:

Cost of Gifts, Books Sold	\$ 168
Newsletter	\$ 13,019
Botany	\$ 2,665
Membership Development	\$ 1,123
Publicity	\$ 200
Registry Program	\$ 32
Conservation	\$ 952
Long Range Planning	\$ 81
Accounting/Tax Preparation	\$ 850
Fundraising Letter	\$ 880
Insurance	\$ 1,785
Taxes/License	\$ 25
Dues/Memberships	\$ 450
Administration	\$ 20,065
<b>TOTAL EXPENSES</b>	<b>\$ 42,295</b>

**NET INCOME** \$ 668

### SUMMARY BALANCE

<b>TOTAL ASSETS</b>	<b>\$ 15,638</b>
<b>Current Liabilities</b>	<b>\$ 40</b>
<b>Net Worth</b>	<b>\$ 15,598</b>

**TOTAL LIABILITIES AND NET WORTH \$ 15,638**

The above financial statements, as well as bank reconciliations, and general ledger detail for the year ending 10/31/02, have been reviewed by Updegrave, Combs, McDaniel & Wilson, P.L.C., Leesburg, Virginia

**Submitted by Rebecca Clay, VNPS Treasurer**

\*Includes \$2,000 donation from the Potowmack Chapter and \$500 donation from the Prince William Wildflower Society

## Useful plant websites

### Websites about invasive alien plants

1. Virginia Invasive Plant Fact Sheets, including information on invasive control and on native alternatives; also a list of invasive plants in Virginia. Natural Heritage Division, Department of Conservation and Recreation, [www.dcr.state.va.us/dnh/invinfo.htm](http://www.dcr.state.va.us/dnh/invinfo.htm). Also available, *Managing Invasive Alien Plants in Natural Areas, Parks, and Small Woodlots* by K.E. Heffernan, 1998, [www.dcr.state.va.us/dnh/mnginv.pdf](http://www.dcr.state.va.us/dnh/mnginv.pdf).
2. Information on invasive plants in Virginia, and many other links. Virginia Native Plant Society website [www.vnps.org](http://www.vnps.org).
3. Downloadable images of invasive exotic species in North America, The Bugwood Network, [www.invasive.org](http://www.invasive.org).
4. Invasive plants: information and control. The Nature Conservancy website, <http://tncweeds.ucdavis.edu>. This is nationwide in its coverage.
5. *Control of Invasive Non-native Plants: A Guide for Gardeners and Homeowners in the Mid-Atlantic Region*, Maryland Native Plant Society publication, [www.mdflora.org/publications/invasives.htm](http://www.mdflora.org/publications/invasives.htm).
6. Voluntary codes of conduct for gardeners and commercial, professional and government groups whose actions affect the spread of invasive plant species. Missouri Botanical Garden website, "Linking Ecology and Horticulture to Prevent Plant Invasions," [www.mobot.org/iss/](http://www.mobot.org/iss/).
7. Information about invasive plants in the U.S., including fact sheets. Plant Conservation Alliance, [www.nps.gov/plants/alien](http://www.nps.gov/plants/alien). A publication covering 82 invasives in the Mid-Atlantic Region can be found in electronic form by adding: /pubs/midatlantic to above address.

8. National plant protection issues, including threats from invasive alien plants. Native Plant Conservation Campaign. Sponsored by the California Native Plant Society and The Center for Biological Diversity, [www.cnps.org](http://www.cnps.org) and [www.biologicaldiversity.org](http://www.biologicaldiversity.org).

9. Invasive plants of the southeast. Southeast Exotic Pest Plant Council, [www.se-eppc.org](http://www.se-eppc.org), and links to other sites, including various state EPPC chapters.

### Websites about Virginia native plants

1. Virginia Native Plant Society, info on membership, native plants, plus links to other wildflower sites, [www.vnps.org](http://www.vnps.org) and [www.vnps.org/references.htm](http://www.vnps.org/references.htm)
2. *Native Plants for Conservation, Restoration, and Landscaping*, Division of Natural Heritage, Virginia Department of Conservation and Recreation, a useful publication, available on [www.dcr.state.va.us/dnh/native.htm](http://www.dcr.state.va.us/dnh/native.htm).  
*Compiled by Ruth Douglas, VNPS Director-at-large*

## John Clayton Chapter to host program about namesake

On July 17, the John Clayton Chapter will welcome archaeologist Robert Harper and his team members who will present a program on their ongoing investigation at Windsor Farm. Long rumored to be the home of botanist John Clayton, this site has yielded over 10,000 artifacts in the past year.

The presentation will be delivered in three parts. Linda Breaks of Gloucester Point will give a synopsis of John Clayton's life, including his British ancestry, formative years and adult life in Gloucester County. Archaeological volunteer Lisa Harper will deliver an overview of initial testing in the area where it is believed Clayton may have cultivated his garden, considered the best in Virginia in the 1730s. Principal investigator Robert Harper will present research leading to the selection of Windsor Farm for excavation, the ongoing excavations of the house foundations and the artifacts recovered in relation to the site history.

Robert Harper has been overseeing the Windsor Archaeological Project despite undergoing an extended period of rehabilitation for a broken elbow. He currently serves as national president of the Colonial American Artifact Association headquartered in DeLand, Florida, and volunteers his other free time in archaeological projects at Rosewell Plantation and the Fairfield Foundation and in the recent past, at Greenspring Plantation, and Virginia Institute of Marine Science and the National Park Service's "East of New Town Survey" at Jamestown. He is the author of numerous articles on artifacts recovered from the Commonwealth of Virginia, a contributing writer to six books on Civil War collecting and Virginia history and the author of two books, *Richmond County 1692-1992: A Tricentennial Portrait* and *What Mean These Stones*.

This meeting will be held on Thursday, July 17, 7 p.m. in Watermen's Hall at the Virginia Institute of Marine Science in Gloucester Point. For information and directions, contact Janis Miller (804-966-9119; janmike@visi.net).

## Archaeology gives clues about famous botanist

For almost a year, archaeological investigations have been under way at Windsor Farm in Mathews County, Virginia, a site rumored for decades to have been the home of 18th-century botanist John Clayton. To date, 19 five-foot by five-foot test units have been excavated. They are spread out over an acre hilltop thought to have been the center of the 450 acres described by Clayton in his 1773 will as, "all the plantation or tract of land whereon I now live in the aforesaid parish of Ware in county of Gloucester..." From almost the moment the ink had dried on that document, this man who served for 53 years as clerk of Gloucester County, author, cartographer, plantation owner, land speculator, father to eight children and was called in his lifetime "Mr. Clayton the Great Botanist of America," became one of the most frustrating enigmas in Virginia history.

With the unfortunate passing of Windsor's most recent owner in early 2002, it became the concern of two Gloucester historians, Lorna Wass and Boyd Gwyn, that the site would be sold out of the current family ownership and developed, thus whisking possibly the last physical vestige of John Clayton from the local soil. A plan was formulated by four friends with archaeological backgrounds to secure permission, assemble needed materials and funding and arrange schedules to allow digging during favorable conditions. Logistics from weatherproofing and grass cutting on the site to the long-term conservation and storage of artifacts had to be considered, but within 90 days the site had been laid out and the first secrets of the plantation were being brought to light.

Since June of 2002, nearly 54,000 pounds of soil and building debris have been examined and over 10,000 artifacts recovered, ranging in date from the late 17th through the early 20th century. While not a single artifact personally attributable to John Clayton or his family has been recovered, each day in the field brings to light more clues to this long-forgotten plantation. The vast majority of the 18th-century artifacts recovered fall precisely into the date range of Clayton's supposed ownership (circa 1730-1774), conforming to a letter written by Clayton in 1764 in which he hints of having lived in Ware Parish for at least 30 years.

Excavations in the possible garden area revealed a row of post holes forming a fence line at an angle askew to the 19th-century buildings, but amazingly similar in appearance to those lines drawn on the only surviving land document concerning Clayton. This 1754 recording of a lawsuit brought by Clayton against his neighbors was for the sole purpose of straightening his angular land boundaries in order to make two of them into a more perfect square. From one of the postholes came a remarkably preserved section of cedar post and two shards of ceramic, dating the fence line to the mid- to late-18th century. A burned post and shell walkway were also encountered in the garden units, but are more likely of 19th-century origin.

Initial probing disclosed a brick foundation 50 feet west of the current 1880s farmhouse where family tradition stated the original house was located. Excavations have revealed a foundation 24 by 16 feet, gone along both end walls down to the last course of brick, but basically intact along both 24-foot sidewalls. The remaining walls are five courses high, two bricks (18 inches) in thickness, laid in English bond and at some time plastered on the interior.

Two wing additions of 16-foot width, but as of yet unconfirmed length, have been exposed. The south wing appears to have burned along with the main block of the house, but the north wing may have survived the fire and provided the family shelter while the new house was under construction. It is thought that timbers salvaged from this wing might have been used in building the 19th-century smokehouse whose footing actually overlies the north wing site by a few feet. The most massive timbers in the smokehouse are hand hewn, show signs of reuse and are held in place with wooden pegs, all the while being adjoined to smaller beams that are machine sawn and held together with more modern nails.

Insurance policies of 1802 and 1806, taken out by Clayton's grandson Jasper on his plantation called "Windsor" describes his house as, "24 by 16, two story high first story of Brick at 8 feet pitch 2nd of wood about 10' Do.[ditto] The lower floor (See Windsor Project, page 8)

## *Invasive plant conference to be in Philadelphia*

The Invasive Plant Conference, to be held in Philadelphia August 6–7, will focus on the implications of invasive plants and possible solutions to this ecological problem. The Morris Arboretum of the University of Pennsylvania, The Mid-Atlantic Exotic Plant Pest Council, The Nature Conservancy and Penn State Cooperative Extension, The Pennsylvania Department of Conservation and Natural Resources, and other institutions are organizing the conference.

The sponsoring organizations actively engage in public education regarding the management of invasive plants and, through the two-day seminar, will bring together experts from the fields of research, the green industry, invasive policy, public education, and on-the-ground management.

Researchers estimate that there have been over 50,000 plant species introduced into North America. Scientists are now finding proof that certain invasive plants lead to a loss of biodiversity in native ecosystems. Many of these invasive species, which have been planted in our front yards and parks, have become "botanical pollutants" to our native areas. The effects of these introductions have resulted in rapidly shrinking populations of native plants, and those losses are threatening native animals and insects, which depend on the plants for their survival. What does this mean for our area and what is being done to control this phenomenon? The Invasive Plants Con-

ference will address the issues of invasive plants and share knowledge from all levels of management so that techniques for control can be found.

The invasive issue is not purely a topic for natural land managers. Members of the green industry are in the middle of a growing debate regarding the ethics of planting invasive species in the region's public and private landscapes.

The conference, valuable for land managers, municipal workers, county and state parks personnel, home gardeners, restoration volunteers, and conservation district personnel, will also be highly beneficial for landscape professionals and nurserymen. It intends to raise questions from all sides of the debate, and will present alternatives to invasive plants and the latest research regarding possible solutions.

Speakers include: Emile DiVito "Impacts of Invasives;" Cole Burell "More than a Pretty Face: Native Alternatives to Invasive Species;" and Rick Darke "Roadside Restoration with Native Plants." Topics include the St. Louis Declaration; alternatives to planting invasive plants; the role of the federal government in addressing the problem of invasives; biological control; herbicides as control measures; deer impacts; ethics; and case studies.

The cost is \$150 per person and includes all lunches. To register or for more information, call 215-247-5777 x159, email mabxeduc@pobox.upenn.edu or go to [www.upenn.edu/paflora](http://www.upenn.edu/paflora).

## *Lewis Ginter celebrates horticultural education in 2003*

Throughout 2003, the Lewis Ginter Botanical Garden in Richmond will be presenting "Branching Out," a series of nine programs to celebrate the opening of the new 36,000-square-foot Education and Library Complex and to demonstrate the breadth of the garden's vision for year-round horticultural education. The programs, which began in February and continue through November 13, partner with nationally recognized institutions and experts for in-depth exploration of a diverse range of topics.

The October 2 program, "The Botanical Journey of Lewis and Clark" will be presented by Peter Hatch, Director of Monticello's Gardens and Grounds and Dr. James Reveal, botanical scholar, working on the unique collection of original plant specimens from that famed expedition.

The November 13 "Plant Life Conservation Day" is a day-long symposium focusing on the role of plants in ecosystem management and preservation, watershed issues and environmental education. Included will be a special presentation on the inventory of native Virginia plants by the Flora of Virginia project.

A variety of gardening subjects will also be offered monthly. For information, contact Lucy Coggins at 804-262-9887 or go to [www.lewisginter.org](http://www.lewisginter.org).

## *Make plans to attend tri-state conference*

Mark your calendars for October 4-5. That's the weekend conference, sponsored by VNPS and the Maryland and West Virginia native plant societies. The conference focus is on the native plants and geology of the Blue Ridge Mountains and Potomac Valley.

The three societies, together with the U.S. National Park Service, will explore how the Potomac River both divides and connects the three states. Speakers, discussions, and a field trip will look at the native plants and natural communities that bridge the arbitrary boundary of the river, and also at each state's perspective on conservation issues. The conference will be at the U.S. Fish and Wildlife Service National Conservation Training Center in Shepherdstown, West Virginia, on the Potomac just east of I-81.

Plant society and trail conference members, and Department of Interior employees registering by July 1 will receive a special early bird registration discount of \$35 per person (plus \$16.50 for the Saturday social) as opposed to \$45 after July 1. Non-member registration is \$55. To register, please send check (payable to Maryland Native Plant Society) to: Meghan Tice, P.O. Box 25, Bowie, MD 20719. For more information, please contact: Meghan Tice, 2003 Regional Conference Chair, [cecropia13@msn.com](mailto:cecropia13@msn.com) or 301-809-0139. Look for more conference details in the August *Bulletin*.

## *Nature newsletter launched*

Nature writer Marlene Condon, whose columns appear regularly in *Virginia Wildlife*, is launching a monthly nature newsletter entitled *The Happy Habitat*. If you would like to receive a complimentary copy of the first issue (due out this summer), send your printed or typed name, phone number, and complete address to: "The Happy Habitat"- Dept. VW, P.O. Box 235, White Hall, VA 22987-0235.

You will receive the introductory issue at no cost. At that time, if you wish to continue the subscription, you may then send payment for the next 11 issues (one issue per month).

## • Bull Run

(Continued from page 1)

1940s an intense multi-year inventory of the area was conducted, the results of which were published in *Castanea*.

Saturday of the Annual Meeting weekend will be a day of field trips. Participants can choose half-day or all-day trips. Locations include (from west to east): Bull Run Mountain, Conway Robinson Memorial State Forest, Manassas National Battlefield Park, Prince William Forest Park, Leesylvania State Park and Occoquan National Wildlife Refuge. After a day of adventure, members will have time to freshen up before the evening events.

### VNPS Annual Meeting

**When:** September 12-14

**Where:** Prince William County & Manassas

**Sponsoring Chapter:** Prince William Wildflower Society

The annual meeting and election of officers, dinner and a speaker will follow a silent auction.

On Sunday morning, some short field trips are planned for those who wish to participate before departing for home. These include a tour of the native plant trail at the Northern Virginia Community College Manassas Campus, a tour of a member's garden and canoeing at Bull Run Marina on the Occoquan Reservoir. Please come join us and help us enjoy and celebrate Virginia's botanical diversity that can be found in Prince William County.

### Fall plant sale

Fairfax County's Green Spring Gardens will host a fall plant sale Saturday, September 6 from 10 a.m. to 3 p.m. Rare and unusual plants, native plants, perennials and shrubs suitable for northern Virginia gardens will be sold. Visitors can also shop at the Manor House and Horticulture Center. The center is open 9 a.m. to 4:30 p.m. every day except Sunday, when it opens at noon. For information call 703-642-5173 or go to [www.greenspring.org](http://www.greenspring.org).

## Annual Meeting

### Prince William rich in habitat diversity

**Prince William Forest Park** - This forest, managed by the U.S. Department of the Interior's National Park Service, preserves approximately 17,000 acres of mixed hardwood forest covering a major portion of the Quantico Creek watershed. The park represents one of the largest parcels of undeveloped land in the area and is the third largest unit of the national park system in Virginia. That, combined with the fact that this park is the largest example of a piedmont forest ecosystem in the national park system, makes it a significant natural resource. In addition, the park contains two physiographic provinces, the Piedmont and Coastal Plain. It straddles the southern and northern climates; a transition zone that supports many species to the outer limits of their ranges. This creates a wide diversity of habitat, vegetative communities, and species composition not generally found in any single forest type. It is the location of the small whorled pogonia (*Isotria medeoloides*) federally listed as Threatened and listed in Virginia as Endangered. John Dodge (VNPS member) and Dr. Ted Bradley of George Mason University are currently conducting a two-year plant inventory of the forest.

**Manassas National Battlefield Park** - Although rich in Civil War history, this 5,000-acre tract is also significant for its natural habitat. As part of the Piedmont diabase (dark colored igneous rock) uplands, it consists of a mosaic of open fields, fencerows, woodlands and thickets, and patches of secondary forest on a rolling landscape. Most of this area in the Culpeper Basin is underlain by coarse-grained Triassic diabase or metasilstone, both of which weather to circumneutral, clay-rich soils. Four significant communities and 10 occurrences of rare

plants associated with diabase and prairies were located at this site. Some unusual flora located here are: blue-hearts (*Buchnera americana*), marsh hedge-nettle (*Stachys pilosa* var. *arenicol*), buffalo clover (*Trifolium*), Appalachian quillwort (*Isoetes appalachiana*), and hairy beardtongue (*Penstemon hirsutus*).

**Conway Robinson Memorial Forest** - The Virginia Department of Forestry manages this 400-acre forest at the intersection of Rt. 29 and I-66 in Gainesville. The forest is not a working timber forest. It overlooks Little Bull Run on the north side. The Washington (D.C.) Wildflower Preservation Society received the memorial land from Conway Robinson's daughter and it was named in honor of her father, the founder of the Virginia Historical Society. The forest is home for several habitats, including an open meadow maintained over a gasline. Historically, the forest contains the end of the unfinished railroad of pre-Civil War era. Plants found here include: the toothache tree (*Zanthoxylum americanum*) and its insect companion, the giant swallowtail butterfly.

**The Occoquan Bay National Wildlife Refuge** - This refuge, located in Woodbridge, combines both botany and birding opportunities. There are upland meadows and wetlands that are on the shore of the Occoquan River, which flows to the Potomac. The 500 acres support over 700 species of plants and 223 species of birds. The butterfly species counts have reached 70.

The original land received by U.S. Fish and Wildlife Service from the U.S. Army supported 20 different plant communities. Eastern gama-grass (*Tripsacum dactyloides*) of the upland meadows is the largest stand in Virginia and supports rodents that in turn support raptors, including the northern harrier.

*Memo offers good news*

**TO:** Interested Parties  
**FROM:** Joe Maroon, Director, Va. Dept. of Conservation and Recreation  
**DATE:** May 9, 2003  
**RE:** Decision on Proposed Lease of 23 Acres at Occoneechee State Park

Today, I am announcing the decision to deny the request by the Town of Clarksville and their Industrial Development Authority to sublease 23 acres of land for three golf holes at Occoneechee State Park. I will approve the draft Master Plan for the Occoneechee State Park without reference to the proposed sublease. Given the high level of interest in this matter, I thought you might be interested in hearing about the decision.

Governor Warner and I have each sent a letter to town officials. Mine outlines the decision; the Governor's outlines several state initiatives, including developments at the park, which are aimed at helping the area economically. Secretary of Commerce and Trade Michael Schewel is in Clarksville today announcing the initiatives.

In brief, my letter to the town outlines the following reasons for the decision: The transfer of state park land for a non-park use would set an unacceptable precedent for Virginia's State Park system. The proposal would result in the

*(See Memo, page 8)*

• **Decision**

*(Continued from page 1)*

started withdrawing water from the Roanoke River basin through the controversial Lake Gaston Pipeline project, approved in the 1990s.

Several groups, such as the Chesapeake Bay Foundation, the Sierra Club Virginia Chapter, the Mattaponi and Pamunkey Indian Tribes, the Mattaponi and Pamunkey Rivers Association, fishermen, and individual citizens throughout the Commonwealth, turned out to oppose the permit.

VNPS presented its opposition to this project based on the large environmental impacts to the local community, impacts to Virginia's indigenous population, and the largest destruction of wetlands in Virginia in over 30 years. These wetlands, and others along the Mattaponi River, support numerous native plant communities and contain populations of the federally threatened sensitive joint-vetch (*Aeschynomene virginica*).

Opponents also argued that there were other options for providing water to the region, such as installing desalination water treatment plants to remove salt from brackish waters. One such water treatment plant was recently completed in the region.

The Virginia Institute of Marine Science (VIMS) opposed the project due

to the negative impact the intake would have on populations of American shad. Shad are anadromous (migratory) fish species that live their adult lives in the ocean and return to freshwater to spawn. The shad populations have been so impacted in Virginia that a moratorium has been passed on fishing this species. The proposed intake would have been located in the middle of Virginia's prime shad spawning grounds.

The rejected reservoir has experienced a series of ups and downs over the past several years. The U.S. Army Corps of Engineers Norfolk District denied a permit for construction of the reservoir after it determined water needs were exaggerated and impacts to the environment and cultural resources were too great. Governor Jim Gilmore appealed the decision to the corps' North Atlantic Division in New York, which overruled the Norfolk District's decision last October. The decision by VMRC was the latest act in this drama.

Members of VNPS and other opponents to this project will continue monitoring this issue in case Newport News decides to appeal the VMRC decision. Many thanks to the members who wrote letters, attended public meetings, and contacted public officials. This success would not have been possible without your involvement.

*Chris French, VNPS Conservation Chair*

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

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

Address \_\_\_\_\_

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

- Individual \$30
- Family \$40
- Patron \$50
- Student \$15
- Associate (groups) \$40\*
- 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 to be exchanged with similar organizations in a chapter directory

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.

**The Bulletin**

ISSN 1085-9632

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

**Virginia Native Plant Society**  
 Blandy Experimental Farm  
 400 Blandy Farm Lane, Unit 2  
 Boyce, VA 22620  
 (540)837-1600

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The deadline for the next issue is July 1

• Windsor Project

(Continued from page 4)

of the large room Several feet below the surface of the Earth." At each end was a wing "12 by 16, underpinned with brick, built of wood." This policy appears to match the foundations uncovered in all aspects, but tells us only that this house existed in 1802, but not how much earlier it might have been constructed. The policy informs us that \$250 in value is deducted from the

house for "decay or bad repair," leading us to believe that the house was old at that time. It is certain that Clayton willed his 450-acre home plantation to his son Jasper, who passed it to his son Jasper, but it is only speculation and family tradition that our site is part of those 450 acres and this house was the home of the famous botanist.

Clayton, from the time of his arrival in Virginia as a young man in 1715, probably never journeyed from his

home more than a few hundred miles. His education in botany and his retraining to fit the established norm of more "educated men" came from his own readings of items that sometimes took many months to reach him from Europe. Friends of high esteem in the colonies like Benjamin Franklin, Governor John Page and Thomas Jefferson acknowledged his value in the study of flora. The most scientific minded botanists in Europe hailed his achievements with honors and knowingly used his works (sometimes without proper credit) to enhance their own places in history. Like most gifted men of his enlightened age, Clayton took the established facts to memory in order to communicate with his contemporaries, but applied the fire of "reading between the lines" and seeing past the haze of established theories of the given to advance his love of plants into ideas and names that are still used almost three centuries later in the study of flora. It is with this same flare of quest that the Windsor Archaeological Project volunteers return to the site each day to dig - with the hope of solving the mystery of where John Clayton lived.

Robert R. Harper

Principal Investigator at the Windsor Project

• Memo

(Continued from page 7)

removal of public parkland from use by state park visitors; be inconsistent with the voter's recent approval of the 2002 State Parks and Natural Areas Bond Issue that directed the Commonwealth to acquire more land for parks and make facility improvements at existing parks; open the door for other efforts to remove land from the state park system for non-park uses; be a breach of trust with the thousands of Virginians who use our state park system and who recently voted further bond support for those same parks.

The Governor's letter contains the following directives relating to DCR:

- Speed up construction of the cabins, equestrian campground, and visitor contact station (totaling \$4.2 million) autho-

rized under the 2002 State Parks and Natural Areas Bond for Occoneechee State Park. (They were initially scheduled for the last phase of bond implementation.)

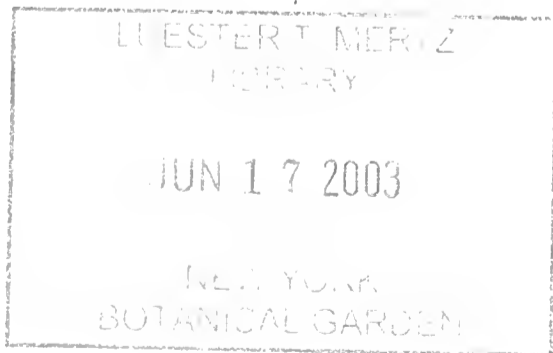
- Actively work with the town and other parties to explore and evaluate the possibility of locating a conference/dining facility at the park. Any such facility would need to be constructed and operated consistent with the master plan for the park, park rules and the park's other uses.

- Work with the town and VDOT to create direct links for recreation between the town and the state park (including a pedestrian and/or bike link).

I believe this is a very fair and balanced outcome that will benefit the town and the park and maintain the integrity of our state park system. If you have any questions, please let me know. Thank you.



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# Bulletin

A publication of the VIRGINIA NATIVE PLANT SOCIETY

*Conserving wild flowers and wild places*

www.vnps.org

## How full is the *Flora* planting hole?

You have all read about the outreach efforts and technical workings of the *Flora of Virginia* Project Board of Directors and Flora Advisory Board. I'd like to tell you something about where the project stands in terms of fundraising. First, we (the *Flora* Project Foundation's Board of Directors) are working with a big budget. We now estimate that the project will cost a little over \$2 million. This will cover all costs of preparing the manual for publication: coauthor contracts, illustrators, editors, taxonomists, fees to incorporate the Virginia Botanical Associates' *Atlas*, accountant fees (for audits), attorney fees (for contracts and intellectual property issues), miscellaneous fees for expenses and fundraising, and director and officers insurance.

Second, we have actually covered a lot of these expenses through agreements, matching funds, and gifts-in-kind. The Department of Conservation and Recreation's (DCR) Division of Natural Heritage has a Memorandum of Agreement with the Foundation of the *Flora of Virginia* Project, Inc. to provide staff, office space, equipment, expenses, administrative support, meeting space, and website access. This component alone is estimated to be worth approximately \$360,000 over the life of the project, making DCR its primary organizational partner. A law firm in Washington, D.C., has pledged work equaling \$45,000 to the project.

(See *Flora Project*, page 7)

## Shale barrens

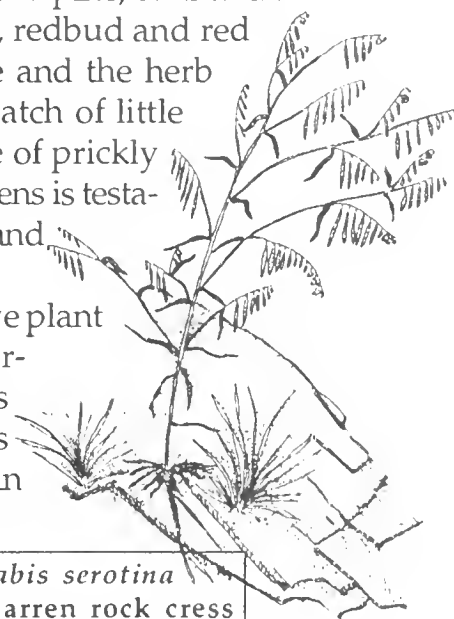
### *Cowpasture River hosts unique habitat*

When paddling down the Cowpasture River in Augusta, Highland, Alleghany and Bath counties or driving its valley, one is bound to notice the rocky, barren slopes which dot the landscape along the river. Rocky, treacherous, steep, and devoid of lush forest growth, these slopes are covered in a distinctive and well-studied vegetation community known as an Appalachian shale barren. Most students of natural history or vegetation in this region are familiar with this very distinctive habitat.

Appalachian shale barrens are found on steep, drought-prone hillsides underlain by shale and undercut by a stream or river. They are hot, facing southeast to west with surface temperatures sometimes approaching 145 degrees Fahrenheit at mid-afternoon. The barrens feature a sparse canopy of Virginia pine, oaks and a mix of other trees including white ash, pignut hickory, redbud and red cedar. Underneath the thin canopy, shrubs are sparse and the herb layer ranges from bare rock to reindeer lichen to a thatch of little bluestem and other grasses and herbs. The occurrence of prickly pear cactus (*Opuntia compressa*) on many of the shale barrens is testament to the barren aspect of these sites. Cliffs, outcrops and large patches of open ground may occur on the barrens.

The shale barrens are best known for their distinctive plant life. Providing dry, open habitat amidst a historically forested landscape, the barrens provide a home for grasses and herbs that cannot grow in shade. Wildflowers abound such as moss phlox in the spring, sunflowers in the summer, and asters in the fall. Amidst the open barrens, species that are uncommon or rare in the region can be found including the yellow nailwort (*Paronychia virginica*), narrow-leaved bluecurls (*Trichostema setaceum*) and the

(See *Shale barrens*, page 7)



*Arabis serotina*  
shale-barren rock cress  
Illustration by  
Nicky Staunton

## ***VNPS Annual Meeting: "Prince William Flora and Fauna from the Mountains to the Tidewater"***

The Prince William Wildflower Society chapter invites you to the 2003 VNPS Annual Meeting September 12-14. Explore the varied flora and fauna in Virginia's only county which spans three geologic provinces, from Bull Run Mountain to the coastal plain on the Potomac River. The Prince William area is historically rich and provides an exciting backdrop for hiking, canoeing, exploring the urban and rural wilds, hearing exciting speakers and visiting with old and new friends.

(See *Annual Meeting*, page 8)

From the president . . . . .

# Plan on attending the 21st Annual Meeting

*"From Mountain Boulders to Sandy Shores"*



I hope you will attend the 21st Annual Meeting of VNPS on September 12, 13 and 14. The members of the Prince William Wildflower Society are hosting the meeting for 2003. When you accept their invitation, you will enjoy the surprisingly diverse wildflowers and natural areas in Prince William County. Natural areas in Prince William, you ask? You bet! Mountain, Piedmont, and Coastal tidal natural areas are all here. Here you will find everything from mountain boulders to sandy shores with wide-ranging diversity of flora.

Martha Slover is lining up those mountain to shore field trips. Check out the article in this issue by Charles Smith, President of PWWS, that tells you more. Watch for a separate registration mailing soon. Please respond as early as possible because the meeting space is limited to 100 attendees.

The business meeting and banquet will be in the Manassas Center for the Arts, the renovated Candy Factory located by our historic railroad and Manassas Depot. There is plenty of parking. The Saturday evening meal will be catered by Boyd & Parker of Oakton. The silent auction, organized this year by Joann Krumviede and Carol Nelson, is always fun. Friday evening's speaker, Michael Kieffer, director of the Bull Run Mountains Conservancy, will provide insight into one of the field trip venues. Our special banquet speaker for the event is Douglas Ogle, a southwest Virginia botanist.

Now that 90-degree days are here, it might be difficult to think of September. We have just begun to enjoy summer. But focus, and think of September. Please do plan to join us for the fun of seeing VNPS friends after a year, for the opportunity to visit unexpected rare plants; and, yes, to squeeze in the business of electing our new president and directors. See you in Manassas!

**Your President, Nicky Staunton**

## Welcome to our newest member: the Northern Neck Chapter

We are happy to welcome the Northern Neck Chapter as our twelfth Virginia Native Plant Society chapter. Ann Messick presented the petition for status as a chapter of VNPS on June 14 at the Board of Directors meeting in Norfolk and it was approved.

The idea for a new regional chapter arose from the Stakeholders Meeting in 2000 when a state-wide predominant factor holding back member participation was identified as distance to events. The John Clayton Chapter had responsibility for the area from Newport News to the Northern Neck.

Michael Sawyer, then president of the chapter, initiated the idea of a new

center of Virginia native plant activity in Lancaster County. At a meeting hosted by the John Clayton Chapter in Kilmarnock on September 17, 2002, Ann Messick and Ellis Squires agreed to serve as coordinators for the new chapter. When efforts by Ellis needed to turn toward his presidency of the Northern Neck Audubon Society, Ann became the person to bring together potential members for a new chapter. The Sterlings, Sid and Sylvia, joined in giving them support from their "mother" chapter. Some members of the John Clayton Chapter moved their membership to form a nucleus for the new chapter.

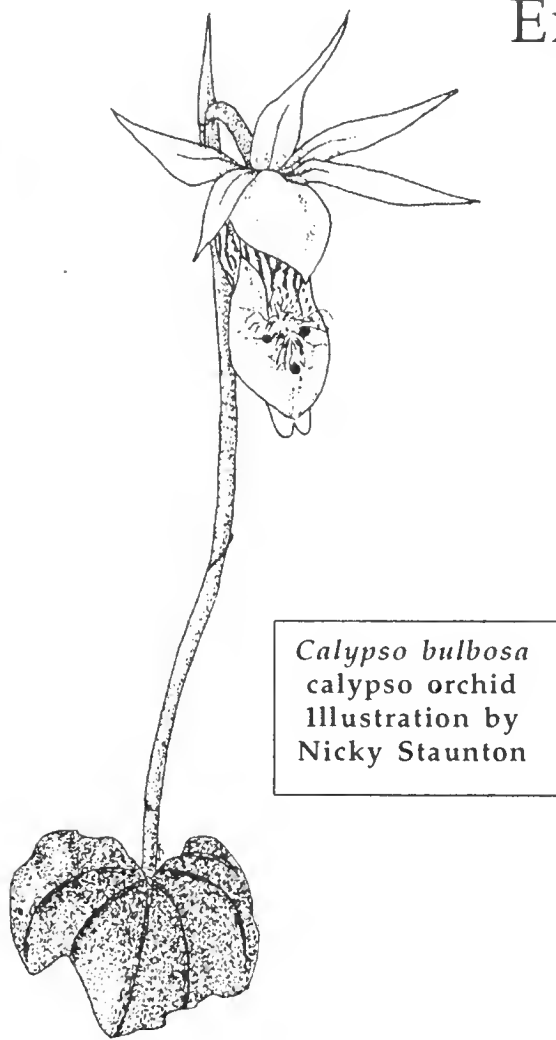
Ann and Ellis had worked together

to obtain recognition and protection for Hickory Hollow, the home of a rare cypripedium orchid, *C. kentuckiense*. This sturdy inhabitant of wet areas is yellow as is *C. calceolus*, but nearly as tall as *C. reginae*, the queen lady-slipper. *C. kentuckiense* is now part of the chapter logo, along with a more commonly found orchid of the upland acidic woods, *C. acaule*, the pink lady-slipper.

The new chapter's petition identified 66 charter members and has been formed within less than a year of that first meeting. It took an impressive amount of vision, effort and determination by the organizers, led by Ann.

*(See Welcome, page 8)*

## Experiencing nature's miracles at the Bruce



*Calypso bulbosa*  
calypso orchid  
Illustration by  
Nicky Staunton

What do the famous naturalist John Muir and 11 travelers on the Virginia Native Plant Society's annual Bruce Peninsula trip have in common? They sought the elusive calypso orchid in the Bruce Peninsula area of Canada. According to a Muir biographer, Muir said that finding the calypso was one of the two supreme moments of his life. From June 8 to 14, a VNPS group sought the calypso and other rare plants.

Our group had three people providing seamless leadership. Nicky Staunton organized the trip and coordinated daily activities. Dr. Stanwyn Shetler, Botanist Emeritus of the Smithsonian, identified plants (at times simultaneously identifying birds while keeping his eyes on the flower at hand), explained the relationship of the plants to their environment, and answered innumerable questions. Elaine Shetler documented the group's finds, supplied plant lists at each location, and made daily car-pooling assignments. Also attending were Edna Alexander and her sister, Carol Brown, Lisa Billow, Irene Caperton, Judith Falk, Jim Hastings, Mary Korte, Rosemarie Palmer and Mary Vogel.

For a traveler from Virginia, the Bruce Peninsula experience actually

begins at Niagara Falls, the first glimpse of the Niagara escarpment that on the Bruce Peninsula is the heart of the UNESCO Biosphere Reserve. The ridge moves on up Ontario, lifting the eastern edge of the peninsula and providing dramatic vistas and caves along the brilliant blue water of the Georgian Bay. In contrast, the land slopes down to the west, resulting in sandy beaches with memorable sunsets along Lake Huron.

Like a visual fanfare, a brilliant patch of Indian paintbrush competes with an adjacent stop sign for the driver's attention when nearing Wildwood Lodge, the group's home base. Around the cabins are gay wings, forget-me-nots and yellow lady-slippers. Blooms of the striped coralroot stand elegantly within a canopy of evergreens. Shafts of sunshine make them appear as miniature stained-glass windows in a darkened cathedral. All of these flowers will be found in abundance in many locations during our stay; however, nearby is a rarer find than the calypso.

The group begins the week with a walk through Kemble Forest, which is made up mainly of maple trees. The attention this day focuses on the ferns. We count 12 varieties, including the rare hart's tongue and the northern holly fern. A surprise during the walk is a beautiful vista of the Georgian Bay, which emerges as we reach a cliff at the edge of the forest. The afternoon stop is Bruce Caves. Our visit overlaps with a local school's field trip that departs while we enjoy lunch. The future of this pristine environment may be assured if a new generation is learning to value it. The Bruce Caves also feature a wide variety of ferns and introduce us to the Steller's rock brake and walking fern.

Day two sees the group on the west side of the peninsula. From a boardwalk accessing Oliphant Fen, we have our first encounters with the sundews, butterworts and pitcher plants. The group lunches beside the cascading Sauble River and returns to more exploration at Walker's Woods, site of the fascinating goldthread, common and three-leaf Solomon's seal, and magnificent marsh marigolds. The boardwalk at

Petrel Point yields sightings of glaucous wild honeysuckle, dark-scale cotton grass, alder-leaved buckthorn and four forms of equisetum. A disappointment is that the showy lady-slipper was not near bloom time.

Dorcas Bay on Lake Huron is the destination for the next morning's travel. There, we find the ram's head lady-slipper in peak bloom. Several of the diminutive plants even obligingly bloom at the edge of the path. Across the alvar are the brilliant splotches of the butterworts' rich blue, the wild columbines' red/yellow, and the pitcher plants' deep red. These are the survivors in the reality show of the alvar's inhospitable environment. Bruce County officials assert that Dorcas Bay is the site of half of the world's dwarf lake iris, and we see some lovely examples. On the return trip, the group stops at Crane River Park and at Dyer's Bay Cross Roads to see more ferns, including the rare Robert's oak fern.

After earlier postponements due to weather and with only one day to spare, the Flower Pot Island trip is on for Thursday. The wait is rewarded with glorious weather. At a fern wall on the island, we see our first green spleenwort, and the nearby grotto is adorned with bird's-eye primrose. There are 105 items on the VNPS list for Flower Pot Island, to which we make three additions. The island is dense with stunning sights including a lighthouse and the noted flowerpots or stacks. But, will we find the calypso orchid, one of the highpoints of Muir's life? Yes! The calypso or fairy orchid is a miniature masterpiece, and we find it in prime condition.

Our group experienced the Bruce Peninsula. We walked in the steps of John Muir and saw his beloved calypso orchid. You may wonder what was the other high point Muir valued in his life. It was meeting Ralph Waldo Emerson. Emerson in his essay, "Nature," wrote: "The invariable mark of wisdom is to see the miraculous in the common." We have, in a sense, met Emerson, too, for we have traveled to the Bruce Peninsula and found the miraculous in the common, or, maybe in our case, we found the miraculous in the uncommon.

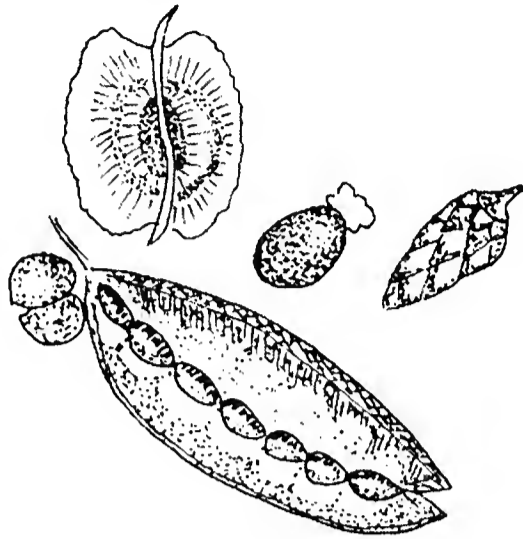
Irene Caperton, Pocahontas Chapter

# Seeds for the future held at Millennium Seed Bank

It was precisely a year ago now that I found myself in the West Sussex countryside, south of London, visiting the facilities of Kew Garden's Millennium Seed Bank. It all began with a casual word mentioned by a friend at the Natural History Museum's Herbarium. Steve Cafferty works at the Herbarium on the Linnean Typification Project, and we had been looking at the Clayton Herbarium specimens sent to Europe over 250 years ago, now part of the collection of the Natural History Museum in London. As we sat drinking tea in the staff lounge, mostly talking about Virginia, John Clayton and the early trade in botanic specimens from the New World, Steve suddenly mentioned that I really should visit the Millennium Seed Bank. Two or three phone calls later, arrangements were made and later that week I was heading south on the M23 with the Quaker friend with whom I had been staying, toward Kew Garden's Wakehurst Place, site of the seed project.

Wakehurst Place, formerly a country estate dating from the 13th century, with a large 16th century manor house surrounded by acres of landscaped gardens and pastureland, provides the setting. One approaches the Millennium Seed Bank site from atop a slope as the facility is built into the rural hillside. Before you, unobstructive to the bucolic vista beyond, is a long horizontal building comprised of a series of low arches. Glass, steel and concrete form a non-assuming structure designed for efficiency and nestled into the landscape. The first impression of this understated structure belies the extraordinary facility housed within.

Entering the visitors' hall you immediately become aware that this is not just the usual tourist stop. Yes, there are informative display panels running vertically down the length of the hall explaining the importance of plants to humanity with an emphasis on threats to global bio-diversity. But this is a working building first and a visitors center second. A full turn reveals that you are standing in a large glass enclosure. Through thick glass walls you see scientists and staff busy going about



their work and suddenly you get the sense that it could be you who is on display. Like Alice gazing into the looking glass for the first time you are confronted with two worlds and wonder to which one you belong. But through advance arrangements made in London, I was able to enter this other world where I met Clare Tenner, International Programme Officer, for a private tour and a rare look beyond the glass.

With security passes in hand, one enters through a series of doors. A long corridor reveals laboratories branching off to the side where seed samples, collected from all over the planet, are starting to be cooled and dried. Staff here are assessing, cleaning and x-raying the seed all within sight of visitors just beyond. As important as this first phase is in the seed conservation process, the real story lies underground, where the seeds are actually held for storage.

Descending a large spiral steel staircase, the reflection of which in the surrounding glass walls seems to form a double-helix, an interesting coincidence in this story of genetic preservation, you enter the underground level. Here, after passing through additional security, one is able to access the storage chambers and final processing rooms of the seed bank.

Having been cleaned, counted and quality assessed above, seeds arrive in this area of reduced humidity and temperature, gradually beginning the storage process. Relative humidity at this point is around 15 percent. Sensors here constantly monitor the air for external radiation and in

the event of the detection, the chamber automatically seals, preventing contamination of the seed; a poignant reminder of the nature of the 21st century world in which we live. The walls of the chamber have been designed to last 500 years. Within this chamber are the actual cold storage units housing the seeds at temperature -20 degrees Celsius and with a final relative humidity of less than 10 percent. Under these conditions seeds are thought to be able to remain viable for not just decades but hundreds of years.

Apart from the seed processing and storage units, the building also contains living quarters for researchers and students who come from all corners of the globe for training in seed collection and conservation. Bedrooms for these international guests open onto a corridor surrounding a sunken courtyard planted with native British species. The project offers training in all aspects of seed collection and conservation, including theory and practice. Such training is an essential component of its many partnerships with various governmental and non-governmental organizations world-wide.

Reflecting back on those 250 year-old herbarium specimens in the Natural History Museum, only half the age these walls in the Millennium Seed Bank are designed to endure, I thought "How might the world change? How might the world be 250 years on?"

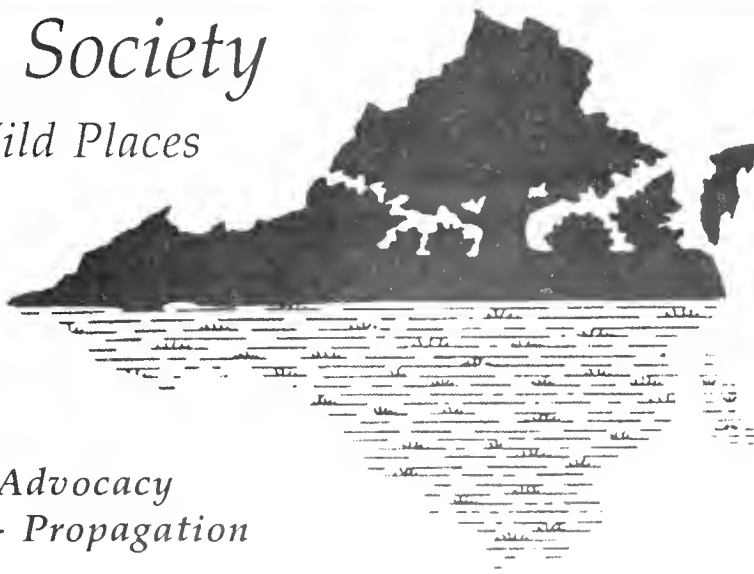
We can't predict the future but we can look to trends of the recent past and, seeing the environmental degradation and loss of bio-diversity, get a sense of the direction of things to come. Who knows what benefits or secrets of medicine yet to be discovered these plants may possess should the plants themselves still exist? Will populations in the wild be wiped out by development or unforeseen events? And what may be the impact of genetic engineering? Could genetically altered plant material escape cultivation and perhaps cross back into wild plant populations? No one knows, which is precisely why measures are being taken now to preserve species worldwide.

(See *The Future*, page 5)

# Virginia Native Plant Society

*Conserving Wild Flowers and Wild Places*

Blandy Experimental Farm  
400 Blandy Farm Lane, Unit 2  
Boyce, VA 22620  
540-837-1600    [www.vnps.org](http://www.vnps.org)



*Education - Research - Advocacy  
Protection - Rescue - Propagation*

## *Virginia Native Plant Society's Position on Conservation*

The Virginia Native Plant Society is dedicated to the protection and preservation of the native plants of Virginia and their habitats, in order to sustain for generations to come the integrity of the Commonwealth's rich natural heritage of ecosystems and biodiversity for purposes of enjoyment, enlightenment, sustainable use, and our own very survival. To this end, we advocate and follow practices that will conserve our natural endowment, and we discourage and combat practices that will endanger or destroy it. We are committed to do all we can to slow the accelerating conversion of natural landscape to built and planted landscape and to reduce its damage to natural ecosystems.

### *Conservation Philosophy and Principles*

Conservation of the native flora is the unifying, highest goal of all activities and actions of the Virginia Native Plant Society. Plants provide the foundations of the world's ecosystems and ultimately sustain us and virtually all other life on earth. They give us oxygen to breathe, food, clothing, medicine, and shelter; they moderate temperatures, conserve water and soil. They also give us beauty, majesty, and mystery that nurture the human spirit. Virginia's natural landscape – from wild coastlines to forested mountains and fertile valleys, from shale barrens and rugged heights to great rivers and swamps – has through the millennia evolved and nurtured plant communities unrivaled in America in richness and diversity. We believe that preserving the Commonwealth's native plants is of the highest importance, and that ultimately this can be done only by saving their native habitats.

Because ours is a rapidly-changing landscape, this is an urgent task. Population expansion and changes in the way we live have produced never-ending development and road-building. The rampant destruction and fragmentation of habitat that results is the most serious threat to our native plants. Foremost among the others, many of them also directly related to human activities, is the spread of invasive alien plants. Already, scientists estimate that 10 percent of the native plants in the United States are at risk of extinction. To avert such significant loss, we believe it is essential to adopt, without delay, approaches to land use that serve the needs both of human communities and of the wild communities that are vital to their well-being.

We believe that conservation is everyone's responsibility. Our daily actions can have positive or negative consequences for nature and the environment, and we work for greater understanding by all Virginians of their native plant heritage and their responsibility to conserve it. Intelligent action by caring, informed citizens can stem much needless loss. Landowners, in particular, even in suburban subdivisions, play a role in conservation and recovery, and the larger the holdings the larger the role. Landscape professionals, a wide range of businesses, local, state, and federal governments all make important contributions. Voluntary organizations, which bring together people with varied perspectives, are especially important in calling attention to issues and in educating the public and key decision-makers.

*(Please continue on page 2)*

While in a broad sense the Virginia Native Plant Society's concern for conservation extends to the animal world and the physical environment, our focus is the native flora in its entirety – the inconspicuous as well as the conspicuous, trees and shrubs, sedges and grasses as well as showy wildflowers. We do not divide the plant world into weeds and wildflowers; each species has its own special history and its own role in the ecosystem. While our attention is mainly on vascular plants (horsetails, clubmosses, ferns, conifers, flowering plants), we also encourage the study and conservation of other plants and plantlike organisms (algae, mosses and liverworts, fungi, lichens) and the education of the public to their place in the ecosystem.

*Native* plants are species or other distinct genetic forms that have either evolved in the wild settings where they now occur naturally or arrived there from where they originated, whether near or far, by natural forces of dispersal operating over time *without* the help of humans. They are integral parts of these ecosystems, and part of our history and heritage as well. *Alien* or *exotic* plants, those that humans have introduced from other places, deliberately or inadvertently, may thrive, but they are not adapted to play the ecological roles of natives. For practical purposes, in North America a species is deemed native wherever it occurred when the first Europeans arrived and wherever it has migrated naturally since then, although it must be presumed that the very earliest peopling of the continent brought with it some Old World plants. On a finer scale, a hard-and-fast distinction is difficult to make. For example, when a species native to one part of the continent is introduced to a part it did not historically occupy, or when a species is reintroduced to a place where it once occurred but has since been extirpated, that species is native on one level, introduced on another.

Without question, alien species make an enormous, essential contribution to human welfare, in the fruits of our agriculture and the beauty of our gardens. Many become naturalized, persisting and spreading without assistance. In Virginia, as in North America generally, naturalized species have long been a significant part of the wild flora, a third or more in many places. Some are beloved as wildflowers or have a fascinating cultural history, and many have proven to be relatively benign in the ecosystem.

A few naturalized introductions have become aggressive pests, however, crowding out native species and causing costly damage or destruction to native ecosystems, agriculture and forestry, and the built environment. This is a serious, ever-growing problem, and we believe that, where feasible and advisable, appropriate measures should be taken to control or eradicate such *invasive* alien species, and to prevent the introduction of new invasives. Nevertheless, we encourage the citizens of Virginia to respect their flora as a whole, without *a priori* discrimination against all naturalized species.

The Virginia Native Plant Society welcomes gardeners and persons with allied interests and encourages them to garden so far as possible with plants native to Virginia, a diverse palette that offers many novel and beautiful elements for the garden or public landscape. These plants are adapted to the local conditions in Virginia's ecosystems and thus less likely to need high maintenance, and they pose less risk of invasive escape than alien species.

### *Conservation Policies*

The foremost task of the Virginia Native Plant Society is to do everything we can to save the present diversity of Virginia's plant communities and natural habitats and secure its continuation. To this end, it is the policy of the VNPS:

- To foster in Virginians of all ages love and respect for the natural world and appreciation of the diversity and interdependence of the Commonwealth's plants and wildlife, with primary focus on plant life in all its natural settings.
- To treat all wild places with respect and care, avoiding disruption of native plant communities through needless trampling or other damage or destruction of fragile habitats, niches, or species, and taking into account the concerns of landowners and of other visitors. A few careless actions can ruin much for many.

- To encourage and support scientific research on Virginia's flora as a whole, in order to increase knowledge and understanding of the plants, their communities, and their ecological requirements and interactions.
- To promote a land ethic that encourages landowners to preserve as much habitat as possible on their land, especially natural areas and protective corridors and waysides that provide for the migration and dispersal of plants and animals.
- To offer activities and programs that educate the public about the importance of preserving Virginia's native habitats and flora and instill the values espoused by the VNPS.
- To urge and support voluntary action, legislation, and regulation aimed at the preservation of rare, threatened, and endangered species or habitats, the curbing of invasive species, and the protection and natural recovery of landscape diversity, through the agency of governments, corporations, organizations, and private citizens.
- To make officials and the public aware of specific strongholds of rare and interesting native plants through programs such as the VNPS Registry that recognizes outstanding plant sites, and to foster and aid efforts to preserve such strongholds by the use of all appropriate means.
- To cooperate whenever possible with appropriate officials and agencies at all levels of government, and with local, regional, and national organizations that share our concerns to fashion a unified conservation effort.
- To encourage developers to find creative ways to save natural habitats and native species whenever possible.
- To use rescue or salvage operations only as a last resort, taking care that salvage does not become a convenient way out for developers, and that rescued species are not transplanted to other native habitats, thus falsifying the local history of natural dispersal, or to sites where their survival is doubtful.
- To combat the spread of alien invasive plants through advocating stricter regulation by public agencies; informing and educating government officials, plant-related industries, and the general public about prevention and control of invasives; and sponsoring and participating in direct eradication and control campaigns.
- To foster habitat restoration, where feasible by natural recovery, allowing the land to revert and reseed itself from local seed sources resident in the soil or disseminated by local dispersal agents such as wind and birds. Where active planting is deemed necessary to success, local genotypes should be used. In either case, the recovering landscape should be monitored and appropriately managed to ensure that native species, not invasive alien species, become established.
- To encourage gardeners, landscapers, and the nurseries that supply them to use native species and local genotypes insofar as possible, obtaining them only from stock that is certified to have been propagated and grown in a nursery, not dug in the wild, and when they do use alien species to exclude any that are known to be invasive.
- To discourage and minimize the use of herbicides and other pesticides on lawns, gardens, and other planted landscapes and in the environment generally, while recognizing that when used carefully and selectively, following the principles of integrated pest management (IPM), they can be a valuable management tool, and that alternatives may not always be feasible or adequate.
- To urge that wildflower-picking be limited to very common species, and that collecting native or non-invasive naturalized plants in the wild be limited to authorized rescues from land about to be developed, or bona fide educational or scientific uses for which alternatives such as taking photographs or collecting cuttings will not serve. Any collecting, whether of whole plants or parts such as seeds, should be conducted with adequate safeguards to assure the continued viability of the wild population, and should recognize that the cumulative actions of many people can be particularly harmful.

**Adopted by the Virginia Native Plant Society Board of Directors June 7, 2003**

The Virginia Native Plant Society Position on Conservation adopted by our Directors at the June 14, 2003, meeting is now our official framework to guide chapters, members, and VNPS actions regarding conservation. I encourage you and chapter boards to read, discuss, and use it.

VNPS goals are set high intentionally in this conservation position, outlining all we would like to do if we were able. These aspirations to protect our native plants and their communities are what drive our programs and actions. Be certain to note the phrases, "if possible" and "where feasible," that recognize the practical constraints we face in a less-than-ideal world. We expect that each chapter will emphasize those aspects of the policy

that fit its resources and will make the greatest difference locally in protecting Virginia's native plants in their natural communities.

This position paper is intended for use within VNPS, and by people reached through the wider distribution of posting it on the VNPS website as soon as possible. You are welcome to quote from the paper or share it with any individuals you think would find it helpful.

Building on this paper, Shirley Gay, as Education Chair, is coordinating development of a more concise brochure (or brochures) on plant conservation that can be put in literature racks or handed out to the public at chapter and other events.

As with any position paper, this one is subject to future board review. Your thoughts, questions or other re-

sponses are welcome. Let us know if there are other subjects for which you would like more detailed guidelines. For instance, a group led by Jessie Strother, former VNPS Conservation Chair, is drafting a paper on plant rescues.

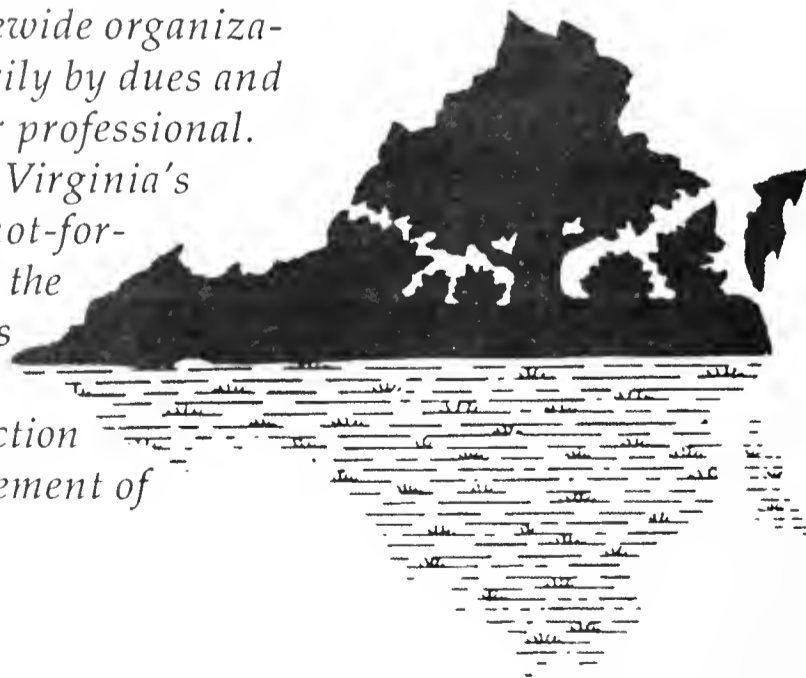
A sincere thank you goes to the members of the Committee for the VNPS Position on Conservation: Dr. Stanwyn Shetler, Jocelyn Sladen, Charles Smith, Mary Ann Lawler, and chair Mary Pockman. The board members' review, suggestions, and final approval are appreciated, also.

Use these guidelines often in your work to protect Virginia's native plants and their communities.

Nicky Staunton  
VNPS President 2003

*The Virginia Native Plant Society (VNPS) was founded in 1982 as The Virginia Wildflower Preservation Society. It is a statewide organization with approximately 1,800 members supported primarily by dues and contributions. Membership is open to anyone, amateur or professional. Its purpose is to further appreciation and conservation of Virginia's native plants and habitats. Incorporated in Virginia as a not-for-profit, publicly supported organization, it is tax-exempt under the U.S. Internal Revenue Code. The Society's work and activities are carried out by volunteers.*

*The Society's programs emphasize public education, protection of endangered species, habitat preservation, and encouragement of appropriate landscape use of native plants.*





# VNPS has an opportunity to plant Seeds of Success

**Seeds of Success** is a conservation and native plant materials development program, jointly sponsored by the U.S. Bureau of Land Management (BLM), the Royal Botanic Gardens, Kew (RBG Kew), and the Plant Conservation Alliance. A number of partner institutes are working with Seeds of Success toward an overall goal to make seed collections from over 4,000 native species by 2010. We are now actively seeking partners in Virginia to join the program, and are very keen to facilitate the involvement of the VNPS.

**Seeds of Success** is the U.S. arm of the Millennium Seed Bank Project (MSBP), an international plant conservation project, catalyzed by RBG Kew, in England. The MSBP aims to collect and conserve seeds from 10 percent of the world's seed bearing flora (about 24,000 species), principally from the drylands, by 2010. This is being achieved through the development of capacity building partnerships in countries throughout the world. To date, partnership projects have been set up in 16 different countries, including Kenya, South Africa, Australia, Madagascar and Jordan. The MSBP works with partners to facilitate the collecting and conservation of seeds in their country of origin. Duplicate collections are held for safety at the MSB in the U.K. Scientific, technical and financial support is provided to help partners develop collecting, banking and re-

search programs and set up or improve their seed bank facilities. Procedures and techniques for collecting and banking seeds, seed germination and plant propagation are shared between RBG Kew and partners. Further information is available from the MSBP website ([www.rbgkew.org.uk/msbp](http://www.rbgkew.org.uk/msbp)).

**Seeds of Success** comprises a number of sub-programs, co-ordinated by RBG Kew and BLM. To date, the largest component has been collecting on BLM lands in the west by BLM staff and Student Conservation Association teams. BLM's first priority is to collect species needed for restoration, but other conservation targets have been identified including native species that are important to rare pollinators, native species closely related to non-native invasive species, and 'flagship' species such as state trees and flowers. The California Native Plant Society is also involved in collecting in the west, and talks have begun with the San Diego Zoo and Botanic Gardens with regard to collecting endemic species of San Diego County. In Texas, the Lady Bird Johnson Wildflower Center is working to collect and conserve the plants of the Edwards Plateau, also prioritizing species of value for restoration. Meanwhile, the Chicago Botanic Garden is collecting from the entire tallgrass prairie flora. This partnership includes a considerable research element including restoration genetic studies, seed longevity

studies and seed sampling studies. All projects include capacity building elements such as in-country collecting courses and workshops, and the training of specialists at RBG Kew in the U.K.

Each **Seeds of Success** partner decides on its own what are the priority species for collection and conservation. The resulting target species lists are co-ordinated by the Seeds of Success national co-ordinator at BLM to minimize duplication of effort across the different sub-programs. Target species lists can be viewed by ecoregion on the Seeds of Success website ([www.nps.gov/plants/sos/](http://www.nps.gov/plants/sos/)). The seed collections, and accompanying herbarium vouchers and data, are stored at partner seed banks and herbaria, the USDA's National Seed Storage Laboratory, and also at RBG Kew. They are available for scientific research, including conservation, restoration and management efforts. In addition, the base collections insure the future of the banked species against the many threats they face *in situ*.

**Seeds of Success** is seeking to establish partnerships with organizations in the east to complement the activities in other parts of the United States. VNPS is an obvious choice given the unrivalled expertise and dedication of its members for the flora of the area. A sub-program in Virginia could also include other organizations, particularly those with relevant expertise such as herbarium techniques or conservation assessments.

MSBP representatives plan to visit Virginia in early October to talk to interested organizations and individuals on potential means to take such a collaboration forward. If you are interested in any way, please let us or Michael Sawyer know. Write to me, Clare Tenner, MSBP International Programme Officer, or Michael Way, MSBP International Co-ordinator (Americas), The Millennium Seed Bank Project, RBG Kew, Wakehurst Place, Ardingly, Haywards Heath, W. Sussex, RH17 6TN, UK or e-mail [c.tenner@rbgkew.org.uk](mailto:c.tenner@rbgkew.org.uk) or call 00 44 (0)1444 894121.

## • The Future

(Continued from page 4)

As these topics are being debated, quietly seeds are being collected and stored in the English countryside, a genetic snapshot, frozen in time, of the world as we have inherited it in the early years of the new millennium. And hopefully, once again, like those 250-year-old Clayton Herbarium specimens, plants and seed will be making the transatlantic voyage to Europe. In the 18th century it was about scientific discovery, exploration, even novelty that those early botanic specimens were sent over. In the 21st century, reflecting the uncer-

tainty of our time, plants will now be sent over for safekeeping, for survival -- survival of Virginia species from whatever may happen in Virginia. Ninety-five percent of British flowering species have been collected, and the goal of the Millennium Seed Bank is to shelter 10 percent of worldwide flowering species by 2010.

Persons interested in participating or knowing more about this project can contact me by e-mail: [michael@dds.nl](mailto:michael@dds.nl) or by mail at: M.A. Sawyer, Nassaukade 68-2, 1052 CR Amsterdam, The Netherlands.

Michael Sawyer, VNPS 1st Vice-President

# Elder: Common shrub has uncommon number of uses

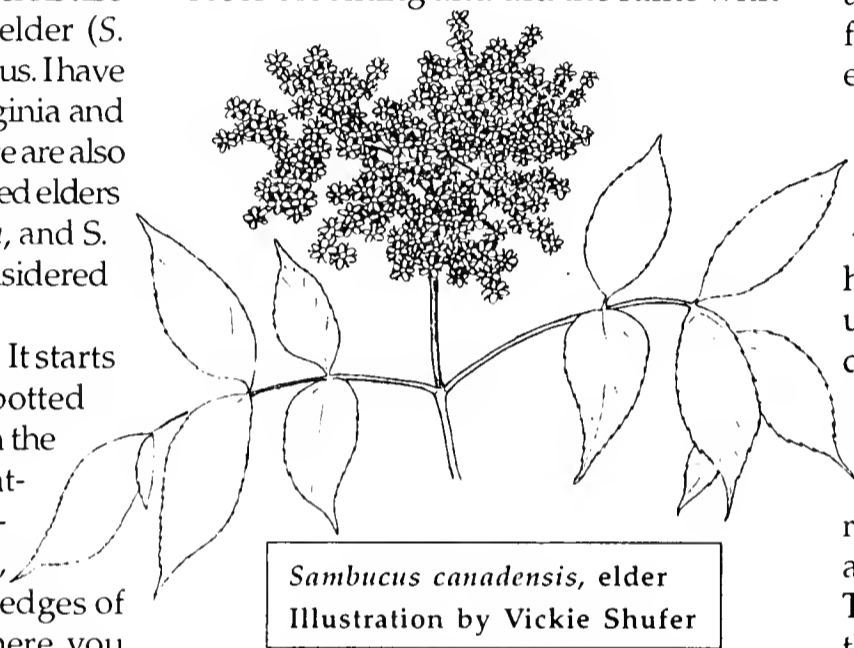
I learned about elder (*Sambucus canadensis*) in college, in a poisonous and edible plants class that I was taking at the University of Louisville. I learned first that "all parts are considered poisonous except the flowers and ripe berries." (Alkaloids -- cyanogenic glycosides) The flowers were said to be used "in pastries, eggs, pancakes, etc.; the fruit made into wine or jelly." I recognized the plant as one I had seen growing up on the farm but never knew the berries were edible.

Elder is a native shrub with representatives throughout the United States. The most common one in the eastern U.S. is common elder (*S. canadensis*). There is also another elder, the red-berried elder (*S. pubens*), that is considered poisonous. I have only seen that shrub once in Virginia and that was on higher elevation. There are also red-berried elders and black-berried elders on the west coast (*S. melanocarpa*, and *S. caerulea*) -- the red fruits are considered poisonous, the black edible.

Finding elder is pretty easy. It starts blooming in May and can be spotted from the car while driving down the road. Look for its large, white flat-topped clusters of flowers growing on shrubs along ditches, stream banks, hedgerows and edges of swamps -- often, in places where you don't want to gather -- roadsides, edges of sprayed fields, and polluted waterways. Leaves are opposite, toothed, and divided into 5-11 leaflets. When I spotted elder growing at my doorstep, I let it grow, as though it had been planted there. It was about four years old before it fully bloomed; the year before it had only a few clusters of flowers.

I waited until the flower heads had filled out and then used my pruning scissors to snip off some of the tiny flowers, minus the stems, into my bowl. I wanted to let most of the flowers remain on the plant to become berries. Soon after this I located a patch of elder plants in an area that was protected from most pollutants. A friend and I collected enough flowers to experiment making elder blossom champagne. A recipe from *The Wild Foods Forum* bimonthly newsletter (Vol. III, No. 4) sounded easy, and we had enough flowers to triple the recipe. The champagne had a great flavor, but a very low alcohol content. I continued experimenting with the flowers, using them in teas, fritters and omelets.

My most recent experiment happened by chance last June. I had gone paddling with my friend and co-author, Lillie Gilbert, on a small creek in north-eastern North Carolina along with a few other people. It was a scouting trip for our next river guide. For me, I discovered some new foraging grounds. The banks on the north side were covered with elder, blackberries and wild roses. Elder was past its peak, but I was able to find a few late-bloomers and clipped off several heads. To keep them fresh, I put them in a large zip-lock bag and added a little water. I also found some wild roses blooming and did the same with



*Sambucus canadensis*, elder  
Illustration by Vickie Shufer

them. When I got home I cut off the flower heads from the elder and removed the rose petals from the stems and placed them in a clear glass bowl. I filled this with water and set it out in the sun for several hours to make elder/rose flower water that tasted delicious. To preserve the flower water, I added an equal amount of grain alcohol, put the mixture in a jar with a lid, and let it sit for about 10 days. Then I strained and bottled it.

Not only does elder flower water

taste good, but it's also good for you. At the Appalachian Herb Gathering in Ohio last summer, botanist and herbalist Christopher Hobbs referred to elder flowers as blood movers. If you were holding heat in one part of your body, as with eczema or other skin conditions, elder flowers would help clear the blood of heat and toxins. In the Native American Ethnobotany Database, Dan Moerman also listed elder flower as a blood purifier. In *The Cayce Herbal*, elder is recommended as a "stimulant to the urinary and reproductive systems and as an aid to digestion." According to Virgil Vogel, in *American Indian Medicine*, elder flowers and fruits were used "as a household remedy for diuretic and diaphoretic purposes." The Iroquois used the flowers in hot water for tea.

The flowers can also be dried. Native Americans would pick the flower heads and leave in heaps for a few hours until the petals fell off and would then dry them. Dried flowers can be steeped in hot water to make a tea. Following the flowers are the berries, developing first as little green balls that gradually turn red, then deepen to a purple and turn almost black before they are finally ripe. The berries can be removed by rubbing the stems gently between your fingers. I've used the berries to make elderberry wine, elderberry pies and elderberry cake. Freshly picked elderberries still retain some of the strong flavor that some people find disagreeable. Drying them on trays in the sun improves the flavor.

Elder is easily started from seed. Scatter the ripe berries in disturbed soil in the fall in a sunny area. The next spring young shoots will spring up and start spreading.

Vickie Shufer, South Hampton Roads Chapter

## Tri-state plant and geology conference slated for October

Reserve October 4-5 for the conference, sponsored by VNPS, the Maryland and West Virginia native plant societies and the U.S. National Park Service. Conference focus is native plants and geology of the Blue Ridge Mountains and Potomac Valley. The event will be at the U.S. Fish and Wildlife Service National Conservation Training Center in Shepherdstown, W.Va., on the Potomac just east of I-81. Confirmed speakers include Avery Drake, USGS Scientist Emeritus, talking about Blue Ridge geology, and Gary Fleming, Community Ecolo-

gist, Virginia Department of Conservation and Recreation (DCR), speaking on the Blue Ridge natural communities. Trip leaders include Carole Bergmann, Cris Fleming, Joe Metzger, John Parrish, Bob Pickett, Rod Simmons and Larry Stritch. Registration (\$45 member/\$55 non-member) includes 3 meals. Rooms are \$84 per night based on a one person occupancy. To register, send check (Maryland Native Plant Society) to: Meghan Tice, P.O. Box 25, Bowie, MD 20719. For information, contact: Meghan Tice, cecropia13@msn.com or 301-809-0139.

## • Flora Project

(Continued from page 1)

Between 15 and 20 members of the Flora Advisory Board have pledged work on the writing of descriptions worth \$125,000. An illustrator has pledged all the fern illustrations worth \$10,000. And a generous VNPS member bought a 1762 edition of *Flora Virginica*, worth \$5,000, for publicity and fundraising purposes. These contributions total \$545,000!

Third, over \$100,000, in cash and stock contributions, has been raised. Adding that to the above \$545,000, and

## • Shale barrens

(Continued from page 1)

smooth coneflower (*Echinacea laevigata*).

If that were the extent of their special plant life, Appalachian shale barrens would not reach their current level of notoriety among biologists. What makes the barrens flora so very interesting is its endemics. An endemic is a species that is specialized and limited to a certain region or habitat type. Shale barrens have no fewer than 10 plant species known to be nearly or entirely endemic to the barren habitat including shale-barren onion (*Allium oxyphilum*), shale-barren pussytoes (*Antennaria virginica*), shale-barren rock cress (*Arabis serotina*), white-haired leatherflower (*Clematis albicoma*), Millboro leatherflower (*Clematis viticaulis*), shale-barren buckwheat

we find our planting hole 32 percent FULL! But, there is even greater news for VNPS members. Where we could easily identify VNPS members, we added up cash contributions, and they total over 70 percent of that \$100,000! AND individual chapters have contributed almost \$10,000, bringing the total VNPS contribution to 80 percent of the cash raised! What a wonderful and generous effort. That very statistic speaks to the dedication of VNPS members and chapters to this important and historic project.

We have farther to go in a very in-

(*Eriogonum alleni*), shale-barren evening primrose (*Oenothera argillicola*), mountain parsley (*Pseudotaenidia montana*), shale-barren ragwort (*Senecio antennarifolius*) and Kates Mountain clover (*Trifolium virginicum*).

While a number of these species are found throughout the shale barren region of Pennsylvania, Maryland, Virginia and West Virginia. Others are limited to just Virginia and West Virginia, and two are extremely limited – the onion to a small area of western Virginia and West Virginia shale barrens, and the Millboro leatherflower to a small region centered around Millboro, Virginia. A composite range map of the special shale barren flora shows its center to be squarely focused on Bath and Alleghany counties and the drainage of the

hospitable fundraising climate, but the foundation's board is fully committed to raising the needed funds - the very reason for the foundation's existence. We are heartened by the VNPS contributions, monetary and otherwise, and are fully immersed in the fundraising process to fulfill our obligation.

Please follow our progress, and keep up to date with the project on the website: [www.dcr.state.va.us/dnh/vaflora.htm](http://www.dcr.state.va.us/dnh/vaflora.htm). And thank you, everyone! Keep up the good work.

Joslin D. Gallatin, *Flora of Virginia Project*

Cowpasture River. All of the endemics except the onion are found in this area and there is a high density of the other rare plants found on shale barrens.

Citizens of the Cowpasture and its tributaries – you are in the heart of the shale barrens!

While excellent shale barren examples abound along the Cowpasture River, few are on public lands. However, along State Route 629 (between McClung and Green Valley), there is a well developed shale barren on the east side of the Cowpasture River north of the road on U.S. Forest Service land. Take a hike and enjoy – you are in the midst of the most fascinating vegetation in the region. Just remember to watch your step!

Chris Ludwig, *Virginia DCR botanist*

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 to be exchanged with similar organizations in a chapter directory

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.

### The *Bulletin*

ISSN 1085-9632

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

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Nicky Staunton, President  
 Nancy Sorrells, Editor

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The deadline for the next issue is October 1

# • Annual Meeting

(Continued from page 1)

Look for your registration packet in the mail soon. It contains a detailed breakdown of the weekend's events and the registration form. Please fill out and return your forms as quickly as possible to assist preparations.

Here is a brief breakdown of the annual meeting schedule of events:

On Friday, September 12, there will be a quarterly board meeting in the afternoon and an evening social that will include registration, chapter and state displays and a dessert social. Michael Kieffer, Executive Director of the Bull Run Mountains Conservancy, will speak on the rich flora and fauna and the recent intensive botanic survey of Bull Run Mountain. Disjunct plant communities on this eastern-most mountain chain in the state play host to nodding trillium and table mountain pine.

Saturday, September 13, is a day full of field trips. The evening's events include a social, silent auction, cash bar and appetizers followed by the annual business meeting and election of officers. A dinner and a program follow the annual meeting (casual dress). Keynote speaker, Douglas Ogle, will discuss "The New York Botanical Garden and Unusual Plant Species and Their Communities in Southwestern

Virginia." As touched on in the most recent Winter Workshop on Virginia's biodiversity, southwestern Virginia has a higher biodiversity than almost any other region in North America. Our uniquely qualified speaker will conduct a slide presentation on this biologically rich region based on 30 years of field work, publications and personal observation. Ogle recently retired from Virginia Highlands Community College where he was associate professor of biology. He is a member of the Botanical Associates that publishes the *Atlas of the Flora of Virginia* and is on the advisory board of the Flora of Virginia project.

The meeting concludes Sunday, with field trips from 9 a.m. until noon.

# • Welcome

(Continued from page 2)

The officers for the newest VNPS chapter are: Ann Messick, president; Amy Wilson, vice-president; Loreta Stover, corresponding secretary; Joan Gillions, treasurer; Jackie Ferriter, membership chair; Judy Ripley, nominating chair; Pam Kedl and Pam Collins, co-chairs, refreshment.

Welcome! Members of VNPS across the state look forward to discovering your unique flora by joining you in your field trips, as well as sharing your knowledge and fellowship as you join in the work to conserve Virginia's flora on the Northern Neck.

## What would you like to buy at the Silent Auction?

That is the question you should ask yourself when choosing something to donate for the Silent Auction to be held on Saturday, September 13. PWWS is seeking items from each VNPS Chapter and from individual members. Items could include plants, decorative garden or yard items, art work featuring Virginia wildlife, publications on Virginia flora or fauna, selections of Virginia made goods such as wines or honey – use your

imagination. Proceeds benefit VNPS. Winners will be announced at the meeting. Sponsors and patrons will be recognized.

Contact Charles Smith (703-361-5125, chr1ssmith@juno.com) or Martha Slover (571-238-5713, mslover@gmu.edu) about item(s) you would like to donate. Auction items may be sent in advance or brought to the Friday, September 12, social event.

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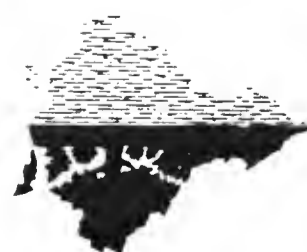


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## *Camaraderie lauded at 21st Annual Meeting*

Friday was a dark and stormy night but the tasty treats, camaraderie and interesting presentation by featured speaker Michael Kieffer made venturing out worthwhile at the 21st Annual Meeting hosted by the Prince William Wildflower Society September 12 through 14.

Kieffer, the Executive Director of the Bull Run Mountain Conservancy, covered geology, topography and ecological communities of Bull Run Mountain in his talk. Ecological communities are reoccurring patterns in the landscape. His presentation preceded the walk on Saturday with a preview of what we would see. Besides pictures of the eco-communities that would make them recognizable in the field, he included pictures and information about plants that were at the very limits of their normal distribution and some beyond.

The Bull Run Mountain field trip was an all-day trip. Of the 11 major plant communities on Bull Run Mountain, we saw nine, including the Weaverton quartzite formation complete with table mountain pines. The boulder fields were impressive too. The mountain area designated as a Heritage Natural Area Preserve encompasses 2,846 acres. Before walking the mountain, it is advisable get a trail map as it is easy to get lost.

Pocahontas member Louise Richards reported that fortunately there were trips also for the mountain-climbing challenged. She took morning and afternoon trips to the Manassas National Battlefield Park and explored historical, archeological and botanical sights. The group was surprised by the large numbers of fall-blooming wildflowers that were sighted. Among the plants noted (blooming and otherwise) were *Bidens polylepis* (tickseed sunflower), *Eupatorium coelestinum* (mistflower), *Dianthus armeria* (Deptford pink), *Agrimonia parviflora* (small flowered agrimony), and *Cypripedium acaule* (pink lady-slipper).

The Saturday evening banquet was held at the "Candy Factory" in old downtown Manassas. The meal was delicious, the silent auction lucrative and the speaker was Douglas Ogle. His slide presentation of "Rare and Unusual Plant Species and Their Communities in Southwestern Virginia" was just one beautiful picture after another with Ogle as the guide.

On Sunday morning, some members opted for the Northern Virginia Community College Nature Plant Trail walk led by Marion Lobstein. This is her home campus and as she has been intimately involved with this trail since its inception, no

*(See Annual Meeting report, page 7)*

## Multi-state conference deemed a success

From October 3 to 5, a native plant conference was held that centered on the Potomac River and the nearby portions of the Blue Ridge Mountains. The conference was put on by the three states that come together in this area: Virginia, Maryland and West Virginia. The meeting took place at the U.S. Fish and Wildlife Service's National Conservation Training Center in Shepherdstown, W.Va., a spectacular meeting facility in a woodsy setting on the Potomac. A Saturday dinner and social was held at the landmark Hilltop House in Harpers Ferry, with a view across the Potomac to the beautiful mountains.

The Saturday morning program began with a detailed presentation on the geology of the Blue Ridge Mountains by U.S. Geological Survey geologist Avery Drake. The area is extremely complicated geologically, which has implications for the types of plant communities found there. A stunningly illustrated presentation on the plant communities of the Blue Ridge given by Gary Fleming, Vegetation Ecologist for Virginia's Division of Natural Heritage, followed Drake. (Note:

*(See Conference, page 8)*

**WIN A CHINCOTEAGUE GETAWAY, PAGE 6**

# From the presidents, past and present . . . . .

## *New president extends hand of educational outreach*

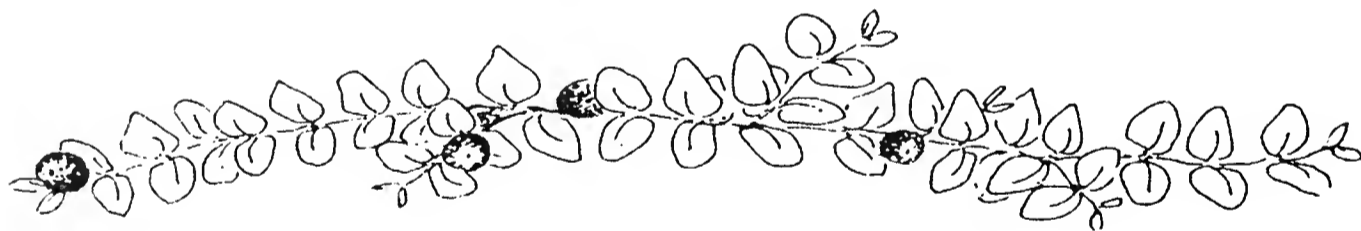
Hello, and thanks to all of you who have put your trust in me as the head of this organization. I feel that I have a big job ahead of me, and large shoes to fill. As I go forward, I want to keep in my mind the VNPS mantra "conserving wild flowers and wild places." Several important steps were made on the conservation front this past year, the most important of which was the Conservation Position that was adopted. Soon we hope to have this four-page document boiled down into a brochure that we can distribute to the general public so that our conservation priorities become better known.

This past week, Chris Ludwig of the Virginia Department of Conservation and Resources-Natural Heritage Division, spoke at a Conservation Forum held in Richmond. He emphasized the different areas of activity that promote conservation of our natural resources including education, research, legislation, land protection programs, the flora project, and off-site conservation of plants. This structure seems to me a good way to measure our accomplishments and examine areas that would benefit from increased activity. As an example, VNPS efforts in education are currently

directed at our members in our spring workshop and annual meeting, and through chapter host talks and field trips. Our efforts could be expanded to include educational materials for schools and the general public. Plant rescue has been our major way of supporting off-site conservation; however, we may soon have the opportunity to participate in the Seeds of Success program begun by Great Britain's Kew Gardens (see related article page 7). We may be able to improve our distribution of information to our members on legislative issues involving natural resource protection. You get the idea -- we have some good programs in place, but there is more we can do.

I appreciate your support in these efforts and also your honest assessment of the efforts that are made, and I am eager to hear your ideas. In the meantime, I hope you will find a way to get out and enjoy the outdoors in the coming seasons. Our chapter hosted a walk at Sky Meadows State Park today, and even though most plants are dormant, we were able to learn a lot about tree structure, bark and fruits. What fun!

**Your president, Sally Anderson**



## *Outgoing president reflects on VNPS membership*

Not "Farewell," but, rather, "I'll be seeing you." As Second Vice President for the next two years, my assigned responsibilities will be much simpler. Sally Anderson has the VNPS brass gavel now, the tool of the VNPS President, and has taken charge. The torch is passed, or in this case, the gavel.

As I reflect on 21 years as a VNPS member, I realize that the society has given me two things that I was looking for when I joined. One is a way to locate Virginia's wildflowers in wild places through other members guiding field trips. There are many other ways to enjoy native plants, but this is my focus. I hope that your expectations have been met and if not, please let us know so we can

help you be able to say the society has given you what you expected and hoped to find.

Advocacy for conservation of Virginia's flora is the other thing I wanted. Plants are very quiet and stationary. They need people to speak for their welfare and community conservation. VNPS is still growing in this arena. I have enjoyed growing in both of my areas of interest with your new president, Sally Anderson. I know that she will enable VNPS to continue to be effective in bringing native plants and people together. People who enjoy native plants and habitats care enough to want to assure their future. *Semper flora virginienensis!*

**Nicky Staunton, Past President & current  
Second Vice President**

# VNPS group seduced by Newfoundland botany

Newfoundland is a land of many large panoramas and small botanical wonders. It is a storied place of beauty and discovery, with a flora guaranteed to mesmerize wildflower aficionados and botanists alike. To a North American botanist, Newfoundland is a classic locale, where famous predecessors endured many hardships to trek through barrens and bogs and bring gem after gem to the light of science. Today, in relative comfort you can retrace some of the steps of these pioneers and relive some of their joys and woes.

By logic, the plant life of Newfoundland should be similar to the flora at comparable northern latitudes on the continent and thus not be especially diverse, but a close look tells another story. Although many botanists had visited Newfoundland over the years from as early as the latter half of the 18th century, it took the extensive field explorations and publications of Merritt Lyndon Fernald (1873-1950) and his colleagues and students in the early 20th century to reveal how remarkable this flora is.

Fernald was a renowned Harvard University professor who kept the Asa Gray legacy alive during the first half of the 20th century, producing the monumental eighth and still the latest edition of the classic *Gray's Manual of Botany*, published the year he died. It includes all his discoveries in Newfoundland in the context of the flora of the northeastern United States and adjacent Canada as a whole. After noting, in an article published in 1918, that the plants of greatest phytogeographic interest have very specialized requirements and thus are localized, he wrote: "They are not to be seen from the stage-coach, steamboat or railroad-train but must be sought in their exclusive haunts. It is for this reason that many easy-going botanists have entirely missed the truly significant plants of regions they have glimpsed from the steamboat or train."

This past July 12-20, my wife, Elaine, and I were among 14 members

of the Virginia Native Plant Society, including President Nicky Staunton, who eagerly embarked on the society's first exploration of Newfoundland, going to perhaps the most interesting part. We, as Fernald did in 1910, visited the botanically rich Great Northern Peninsula in the northwest, a calcareous region dominated by Gros Morne National Park, the north-south Long Range Mountains, and extensive coastal limestone barrens.

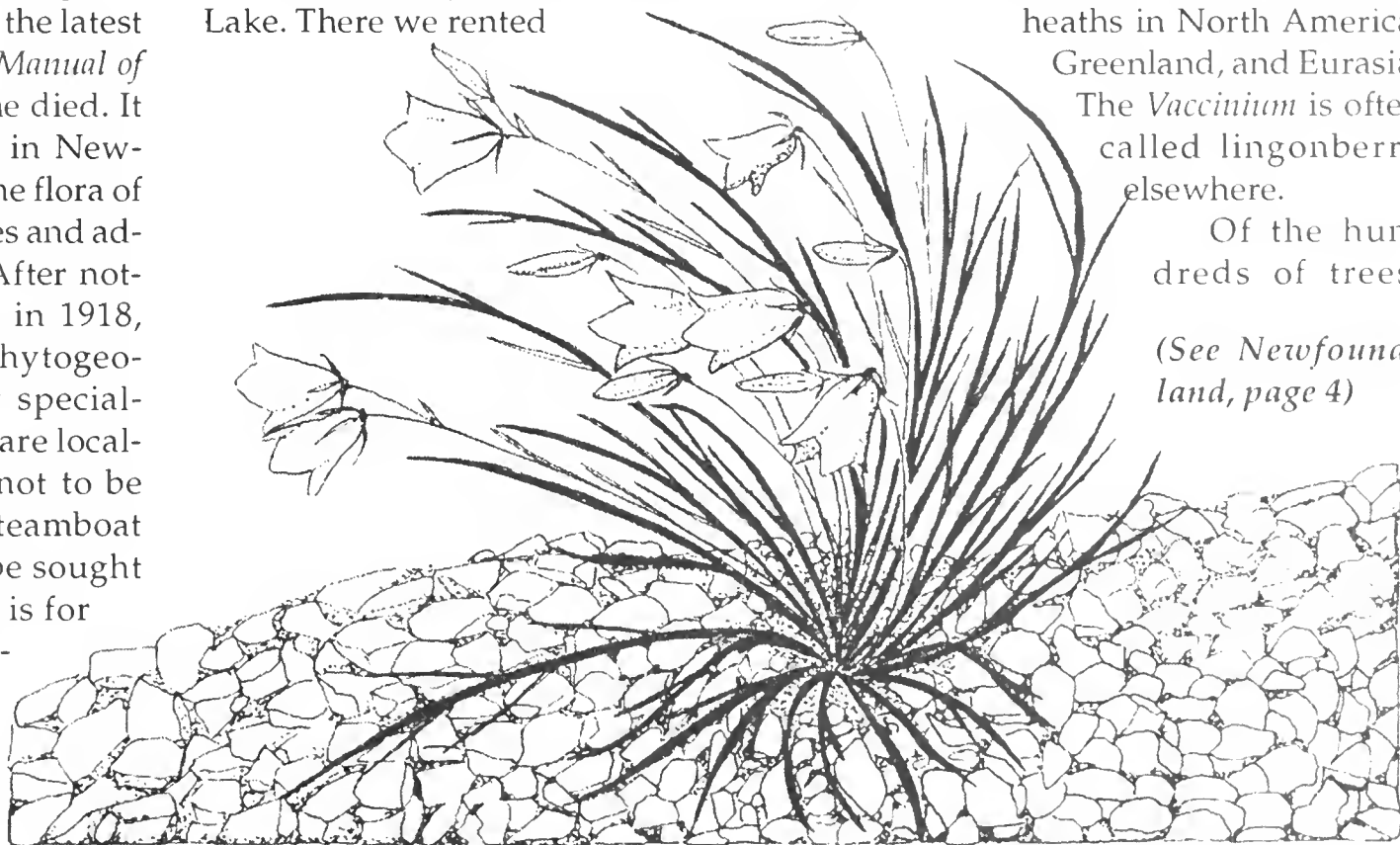
The other VNPS members were Vice President Sally Anderson, Bill and Carol Gardner, Cliff and Shirley Gay, Diane Holsinger, Chip and Dahne Morgan, Joan Nowicke, and Jay and Shelda Shaner. With the help of modern roads and "stagecoaches" (three minivans) and two incredible guides, husband-and-wife team Karl Anderson and Gale Cannon from New Jersey, who seemed to remember every plant they saw and where they saw it, we botanized the peninsula from one end to the other, first south to north and then north to south. We searched out many "exclusive haunts." Although we often could drive right to these haunts, we also did a lot of botanizing on foot, including a few very long walks.

Our tour began and ended at Deer Lake. There we rented

vans and drove north to Rocky Harbour, Port au Choix, St. Lunaire, and several capes reaching as far north as you can go in Newfoundland, including the 1,000-year-old Viking site, L'Anse aux Meadows, where two of the interesting arctic wildflowers that we saw were Labrador-tea (*Ledum groenlandicum*) and Swedish bunchberry (*Cornus suecica*). From these northern points we were able to glimpse Labrador, spot a few small icebergs, and watch humpback whales breaching. Going north we botanized at many points along the way and on the return south revisited several and stopped at a few new ones. Our indefatigable van drivers were Karl, Gale, and Joan, with Nicky taking a turn or two.

The weather in general was beautiful, and we had comfortable lodgings and good food in Deer Lake and the other three towns. For lunches, we bought the makings and fixed our own to eat in the field. A highlight was to top off dinner with pie or a dessert topping made from the locally harvested wild berries, either "partridge-berries" or "bake-apples," *Vaccinium vitis-idaea* and *Rubus chamaemorus*, respectively. These dwarf shrubs, both common there, occur widely in arctic and alpine heaths in North America, Greenland, and Eurasia. The *Vaccinium* is often called lingonberry elsewhere.

Of the hundreds of trees, (See Newfoundland, page 4)



Newfoundland harebells (*Campanula rotundifolia*)  
Illustration by Nicky Staunton

## • Newfoundland

(Continued from page 3)

shrubs, and wildflowers seen, only a few can be mentioned here to illustrate this fascinating flora. Most were captured on film or disk by the avid photographers in our group. Surely, no one left the trip without adding many new species to his or her life list. From forest, bog, fen, marsh, and pond edge to the many kinds of barrens, cliffs, headlands, and shores, the variety of habitats is one of the striking features of this land.

Balsam fir and white spruce are dominants of the largely coniferous forests, with black spruce and American larch often dominating in the more boggy habitats. The most common deciduous trees are the paper birch and balsam poplar, often forming groves. In Lomond Forest in Gros Morne National Park, two of the wildflower treats along the River Trail were the regal showy lady's-slipper (*Cypripedium reginae*) in peak condition, and, a week later, the always impressive round-leaved orchid (*Platanthera* [*Habenaria* to us old-timers] *orbiculata*).

These are just two of the more than 20 species of orchids observed in a variety of forest, wetland, and barrens habitats. From the tall showy lady's-slipper to the tiny white adder's-mouth (*Malaxis monophyllos*), heart-leaved twayblade (*Listera cordata*), and lesser rattlesnake-plantain (*Goodyera repens*) it was an orchid lover's holiday. Everywhere we went, some orchid jewel awaited us, such as the delicate fairy-slipper (*Calypso bulbosa*) at Burnt Cape, and the diminutive but bold pink dragon's-mouth (*Arethusa bulbosa*) that highlighted a fen north of St. Paul's Inlet, with each stalk topped by a single, gaping bloom. The small-flowered variety of our old friend, the circumboreal yellow lady's-slipper (*Cypripedium calceolus*), popped up at what seemed the most unlikely places, as at Phillip's Garden and Burnt Cape. This variety occurs also in western North America and southward in the mountains of the east and the west.

We had a veritable feast of rein orchids (*Platanthera* species), including the relatively common boreal blunt-leaved orchid (*P. obtusata*), the arctic Newfoundland orchid (*P. straminea*), in Phillip's

Garden at Port au Choix, and the long-spurred Hooker's orchid (*P. hookeri*). By July 20, on our return visit, the turf on Lobster Cove Head was ablaze with purple fringed orchids (*P. psycodes*) and carpeted with palate-teasing ripe wild strawberries (*Fragaria virginiana*).

The ferns were a constant fascination. Never before had I seen the moonwort (*Botrychium lunaria*), an arctic species, growing in such weed-like

small bog near our motel in St. Lunaire, are three of the common wetland heaths.

The beaches along the Gulf of St. Lawrence yielded their own interesting species. Oyster-plant or sea lungwort (*Mertensia maritima*), a close relative of our Virginia bluebell, and Scotch lovage (*Ligusticum scoticum*) both range widely on the arctic shores of North America as far north as

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**From the tall showy lady's-slipper to the tiny white adder's-mouth, heart-leaved twayblade, and lesser rattlesnake-plantain, it was an orchid lover's holiday. Everywhere we went, some orchid jewel awaited us. . .**

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abundance that I had to watch my step, as on the turfey shores of Broom Point. The very common wood-ferns sparked endless debate about whether we were seeing *Dryopteris campyloptera*, *D. carthusiana*, or *D. intermedia*. Every new frond or clump provided proof for somebody else's interpretation! The circumboreal male fern (*D. filix-mas*), last met up with by some of us at Kemble Forest on the Bruce Peninsula, is always a nice find, and the Newfoundland variety of the maidenhair fern seen on the serpentine barrens of Table Mountain is the Aleutian maidenhair (*Adiantum pedatum* var. *aleuticum*), otherwise found mainly in Alaska and western North America.

Of the many noteworthy species found in the wetlands, I was particularly intrigued to see the water lobelia (*Lobelia dortmanna*), with its submerged leaves and emergent blue flowers, in Berry Hill Pond. Though they lacked the charisma of the more obvious "wildflowers," many of the sedges and sedge-like plants were pointed out. I mention only the two species of cotton-grass, dark-scale (*Eriophorum viridicarinatum*) and rusty (*E. chamissonis*), and the two species of arrow-grass, common (*Triglochin maritima*) and slender (*T. palustris*), a new one to my life list. Labrador-tea and the superficial look-alikes, bog-rosemary (*Andromeda glaucophylla*) and bog-laurel (*Kalmia polifolia*), which we were able to compare directly in a

Greenland. This species of lovage occurs also in arctic Europe, and the lungwort, which I last saw on the beaches of Reykjavik, Iceland, is circumpolar. The tall seaside or leafy ragwort (*Senecio pseudoarnica*), seen in bud at Flower's Cove, is a disjunct that has its center of distribution on the shores of Asia and Alaska in the Bering Sea region and along the coast down to British Columbia, with a few outposts across the continent.

The beautiful beachhead iris (*Iris setosa*), growing on the turf of Lobster Cove Head, is another Beringian-Newfoundland disjunct, which Elaine and I once collected along the Redstone River in Alaska. It is similar to the familiar, wide-ranging northern blue flag (*I. versicolor*), common in the wetlands of northwestern Newfoundland, but is shorter and has only rudimentary, bristle-tipped petals. At the time it was discovered in Newfoundland, it was known only from Siberia and is still not known to occur anywhere between Alaska and Newfoundland.

As many of the species already enumerated suggest, we, like Fernald nearly a hundred years before us, were struck by the arctic-alpine character of the flora, especially on the limestone and serpentine barrens. He viewed everything through the eyes of a phytogeographer, who focuses on the dynamics of history and process and seeks to explain the origins of floras in terms of geological history, habitat, and migration. He saw clearly that Newfoundland,



floristically, is not merely a patch of continental eastern Canada severed from the mainland. In fact, the purely Canadian element in its flora is small. Rather, Newfoundland is a land apart whose flora has been shaped by its own unique geology and history of ancient land connections and inundations. The large arctic-alpine and western floristic elements in the flora consist of outliers of species that otherwise belong to the circumpolar flora of high altitudes and latitudes or the western coasts. He emphasized the number of limestone-loving species (calciphiles) and the controlling influence of the calcareous habitats.

Dwarf birches and willows, alpine bearberry (*Arctostaphylos alpina*), butterwort (*Pinguicula vulgaris*), moss campion (*Silene acaulis*), three-toothed cinquefoil (*Potentilla tridentata*), black crowberry (*Empetrum nigrum*), milk-vetches (*Astragalus* spp.), mountain-avens (*Dryas integrifolia*), oxytropes (*Oxytropis* spp.), Greenland primrose (*Primula egalikensis*), Lapland rosebay (*Rhododendron lapponicum*), and alpine sweet-vetch (*Hedysarum alpinum*) are but a few more of the many species we saw that evoked the Arctic especially on the limestone barrens and turfs. Many arctic-alpine species are what I call "belly plants," because you have to lie down on your stomach, eyeball to flower, in order to appreciate them fully, while always watching, of course that you don't flatten other rare dwarfs in the process.

As already said, many of the arctic-alpine species are calciphiles. Coming to mind are such flowers as the northern saxifrages at Burnt Cape, particularly the striking circumpolar purple saxifrage (*Saxifraga oppositifolia*) and the island gentian (*Gentiana nesophila*) at Point Riche. The limestone barrens of the Burnt Cape Ecological Reserve on the shores of the Strait of Belle Isle harbor many rare arctic-alpine and calcicolous species, where, fortunately, they are protected. We greatly appreciated the local experts who showed us the plants of Cape Burnt.

I was personally attracted in our travels to the ubiquitous harebell (*Campanula rotundifolia*) that seemed to be thriving in many locations, often in the

sparest of habitats, because I had studied the enormous variation of this species in many other North American locations during my doctoral work. Finally, I was able to see first-hand the nature of the variation here, where it is a calciphile, which is not the case everywhere in its range. With their low stature and tendency to have a single, large, intensely violet-blue flower, the plants here combine features of the harebells of southern coastal Alaska and the harebells of alpine and arctic areas, as in the Rocky Mountains and Greenland.

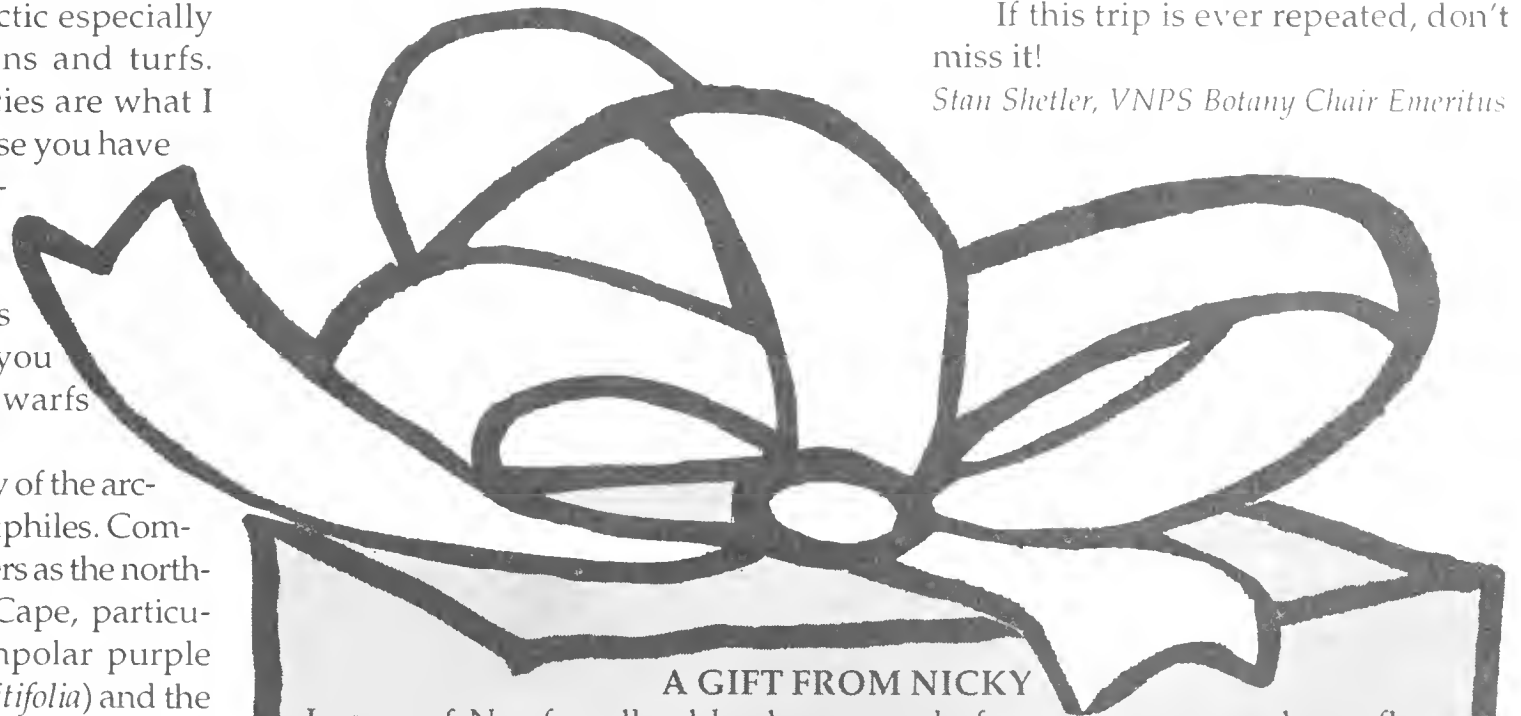
Now for a word about the endemics, plants known only from Newfoundland. These are usually among the rarest plants in a flora. Over the years, Fernald and others have discovered many localized species or local varieties of wider-ranging species in Newfoundland. Some of these, having been found later to occur elsewhere or not to be sufficiently distinct, have since lost their "endemic" status. Two of Newfoundland's rarest endemics are Fernald's braya or rockcress (*Braya fernaldii*) and Long's braya or rockcress (*B. longii*). *Braya* is a small ge-

nus of tiny arctic mustards – true belly plants – with inconspicuous purplish-white flowers that grow on limestone barrens and calcareous cliffs, talus, and gravel. We were privileged to see *B. fernaldii* at Cape Burnt and in a research plot at Pointe Riche and both species in the vicinity of Savage and Sandy Coves. Years earlier I had collected a commoner, wide-ranging braya species on the arctic shores of Alaska, but I needed the help of the late Canadian arctic expert, A. E. Porsild, to identify it.

Finally, botanizing was not the sole preoccupation of everyone. Among the notable species seen: bald eagle, common eider (including whole families of young), pine grosbeak, common redpoll, white-winged scoter, fox, Lincoln's, swamp, and white-crowned sparrows, arctic tern, magnolia and Wilson's warblers, and black-backed three-toed woodpecker. The subtle song of the gray-cheeked thrush was heard coming from the forest one early morning at St. Lunaire. The most obvious mammal, besides the hump-backed whale, was the moose.

If this trip is ever repeated, don't miss it!

Stan Shetler, VNPS Botany Chair Emeritus



#### A GIFT FROM NICKY

Images of Newfoundland landscapes and of some common and rare flora may be enjoyed on the internet. While searching Google Images for *Braya* spp., I linked to the website of the Newfoundland Museum (<http://www.nfmuseum.com/flora.htm>). Also use Google and search for Newfoundland Flora Images and/or "A digital Flora of Newfoundland and Labrador Vascular Plants." The images will enhance your enjoyment of Stan Shetler's Newfoundland article. The entire website is seductively interesting; one page leads to another interesting one and to another. Not only are the images clear, but there is a section for best places to visit, in itself a pleasure. A mystery plant photographed at Burnt Cape was on the site: Vanilla Scented Bog Orchid, *Pseudorchis albida* subsp. *Straminea*.

## Weekend Getaway to Chincoteague Island VNPS Fundraiser Drawing

\$20 tax-deductible donation for one ticket; \$50 donation for 3 tickets

### Drawing held at the VNPS Annual Workshop, March 6, 2004

Win a 3-Day, 3-Night Weekend Getaway at Chincoteague Island, Virginia. Relax in a renovated 1906 farmhouse in the center of the village. The house has 4 bedrooms, 2 full baths, central heat and A/C, microwave, TV, VCR, W/D, porch, outside shower & grill. Available April and May and Labor Day through Thanksgiving in 2004. Have a look at some of the rooms by going to [www.harbourrentals.net](http://www.harbourrentals.net), click onto "3 to 5 bedrooms" and scroll down to Summer Quarters. (Donated by Jim and Joslin Gallatin.) Need not be present to win.

To enter, fill out one or three tickets (For additional tickets, make photocopies). Mail tickets and your tax-deductible donation to: VNPS WEEKEND, Blandy Experimental Farm, 400 Blandy Farm Lane, Unit 2, Boyce, VA 22620.

*\*\*Buy a chance to share a getaway with friends, use for a family reunion, or give as a reward to a good student!*

*You may use this coupon below, or photocopy it the number of times you need.*

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**What: 2004 VNPS Annual Workshop**

**When: March 6, 2004**

**Where: Lewis Ginter Botanical Garden, Richmond**

**Topic: Virginia's Biological Diversity**

Shirley Gay, VNPS Education Chair, announced plans for the 2004 VNPS Annual Workshop. Gary Fleming, Vegetation Ecologist, VA DCR-DNH, will help continue the VNPS 2003 theme of Virginia's Biodiversity. A panel of conservation specialists is also planned for the workshop.

### Biologist posts research papers on DCR website

The presentation by Gary Fleming, Vegetation Ecologist at Virginia Department of Conservation and Recreation-Division of Natural Heritage, at the multi-state conference is now available for download. One file is a pdf powerpoint and the other is a narration similar to his conference presentation. Both versions can be found at the Virginia Natural Heritage website ([www.dcr.state.va.us/dnh/community.htm](http://www.dcr.state.va.us/dnh/community.htm)).

### Invasive guide available

A new booklet on invasive plant control is available from the Alliance for the Chesapeake Bay. The booklet outlines case study restoration projects involving volunteers. An overview of invasive plant control methods in various settings along wetlands is given, as is useful information about volunteer recruitment, deployment and retention.

The book is available for a \$2 shipping cost from the Alliance for the Chesapeake Bay (804-775-0951 or [hmilliken@acb-online.org](mailto:hmilliken@acb-online.org)).

### Annual giving campaign receives positive response

By now, VNPS members should have received the 2003 VNPS Annual Fund Raising letter. Your directors hope you will be able to send a gift of any amount before the end of this year. There are many opportunities to expand our society's education programs. In turn, these programs enable greater appreciation of our native plants and help us conserve wild flowers and wild places. Your 2003 gift will enable us to network with other conservation organizations and carry a new educational outreach to Virginians of all ages.

Within several days of receiving the letter, members began responding and we thank each of you who so quickly let us know you feel the work by VNPS is important to our native plants.

Thank you on behalf of the VNPS Directors.

## Seed preservation partnership underway

After communicating by e-mail for months, it was a pleasure to meet Clare Tenner, International Program Officer and Michael Way, Americas Coordinator, for RBG Kew Gardens' Millennium Seed Bank Project's Seed of Success. They came to Virginia in early October to locate Virginia partners for Seeds of Success. Sally Anderson and Nicky Staunton of VNPS and staff members of Blandy Experimental Farm met with them to explore the possibility of participating as partners.

In the last issue of the *Bulletin*, Michael Sawyer (VNPS First Vice President, currently living in The Netherlands) and Tenner explained Kew's Millennium Seed Project. It is an ambitious project to collect 10 percent of the world's seed-bearing flora -- over 24,000 species -- by 2010. You can learn about the program at the KEW website ([www.rbgekew.org.uk/seedbank/msb.html](http://www.rbgekew.org.uk/seedbank/msb.html)) or <http://www.rbgekew.ca/cbcn/en/index.html>.

The Blandy meeting began a week-long visit with botanists across Virginia. Tenner and Way attended the Multi-state Native Plant Society meeting in Shepherdstown, W.Va.; visited the Massey Herbarium in Blacksburg; the Herbarium of the College of William and Mary; University of Richmond; Division of Natural Heritage; Adkins Arboretum;

Chesapeake Native Nursery; and, BLM Eastern States Office in Springfield. In addition to meeting potential partners, these visits occurred during the peak of Virginia's autumn colors.

Chicago Botanic Garden is already into the program and plans, over the next five years, to harvest, dry and preserve the seeds of 1,500 tall grass prairie plants native to Illinois, Iowa, Missouri and Minnesota. Most partners to date are in the American West. This October trip was the first venture in our Eastern states.

The two will return to lead a two-day training session in 2004, the date to be determined. To have a program presented on the KEW Millennium Seed Bank Project, please contact Nicky Staunton (703-368-9803 or [nstaunton@earthlink.net](mailto:nstaunton@earthlink.net)).

## • Annual Meeting report

*(Continued from page 1)*

plant or animal has escaped identification. She was able to bring an overview and history of the area, tell of the topography of the trail as well as the smallest detail along the path and under the rotted log. It is always a joy to spend time with someone who has personal charm as well as knowledge.

As always, the VNPS Annual Meeting provided an opportunity to

## VDACS adds to list

At its October meeting, the Virginia Department of Agriculture and Consumer Services (VDACS) Board approved amendments to proposed regulation changes enforcing the Endangered Plant and Insect Species Act. VNPS appreciates the action by the VDACS Board for granting approval for the list of plants and insects submitted last year by DCR Division of Natural Heritage.

The next step is for the amendments to the regulations to be approved by Virginia's Attorney General. Then the final form of the regulation must be posted in the Register of Rules and Regulations. With approval, 20 plant and insect species will be added to the regulation. Once the regulations are posted, VNPS will receive a copy of the complete list of species and their Virginia status to share with you.

share ideas, catch up with old friends and acquaintances, learn more about a specific Virginia region and its plants and last, but not least, to meet and get to know new people.

*Daune Poklis, Pocahontas Chapter*

**VNPS OFFICE HOURS - Beginning December 1, VNPS office hours at Blandy Experimental Farm (Karen York) will be from 9 a.m. to 1 p.m. Monday through Friday.**

See the address label for your membership expiration date  
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\*Please designate one person as delegate for Associate membership

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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 to be exchanged with similar organizations in a chapter directory

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

### The Bulletin

ISSN 1085-9632

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

**Virginia Native Plant Society**  
 Blandy Experimental Farm  
 400 Blandy Farm Lane, Unit 2  
 Boyce, VA 22620  
 (540)837-1600

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The deadline for the next issue is January 5

# Thinking about The Bruce in 2004? Sign up today!

The Botanical Society of America, Northeast Region, plans a trip to the Bruce Peninsula, Ontario, Canada. The trip will be June 13-17, Sunday evening until Thursday morning. The group plans to stay at Wildwood Lodge, Mar, Ontario.

The dates and place are the same as those planned by VNPS when there last June. Since the BSA is going to be there, VNPS will not offer its own trip in 2004. Stan

Shetler, a member of BSA, reported that BSA membership is not a requirement to go on trips. Encouraged by that information, VNPS has communicated with Nan Williams, the organizer of this trip, who said we would be welcome to join the group for this year's visit.

Participants will provide their own transportation to the Bruce and once there the group will carpool or travel by bus to locations. The cost is not available at this time.

A focus on ferns, orchids, geol-

ogy and a day on Flower Pot Island are planned.

If you would like to join the BSA trip, please send your name and address to: Nan Williams (e-mail: NNWROWE@aol.com). She will send you a letter and registration form early in February. If you have any questions (for instance, directions to the Bruce, carpooling from Virginia, itinerary, what flora you would expect to see), you may contact Nicky Staunton (nstaunton@earthlink.net or 703-368-9803).

## •Conference

(Continued from page 1)

Gary will be the keynote speaker at the VNPS spring workshop in Richmond). Cris Fleming, formerly of Maryland's Natural Heritage program and a respected teacher of plant identification, talked on the rare plants of the Harpers Ferry area.

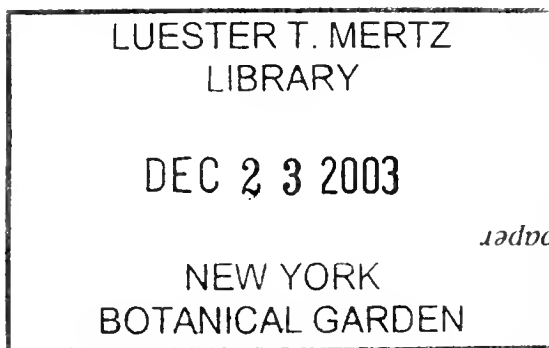
Sunday's program started with a report on the changes taking place in the Appalachian forests presented by Bill Grafton of West Virginia University. To start off the subsequent panel

discussion, Stan Shetler, Botanist Emeritus of the Smithsonian Institution, gave a provocative statement about native plants and the role of native plant societies in plant and habitat conservation.

The afternoons were devoted to field trips and workshops. Carole Bergman of MNPS and I chose a site along the C&O Canal at Snyder's landing where we were treated to riverine habitat and a limestone cliff plant community that included the

globally rare spreading rockcress (*Arabis patens*) and plenty of ferns. Sunday, Cris Fleming led a group to the banks of the Potomac at Short Hill, part of Harpers Ferry National Park located in Virginia. Our best plant finds were the state rare Short's aster (*Symphiotrichum shortii*) in bloom and plants of the sweet-scented Indian plantain (*Cacalia suaveolens*). I'm sure the other field trips were equally interesting.

Sally Anderson, VNPS President



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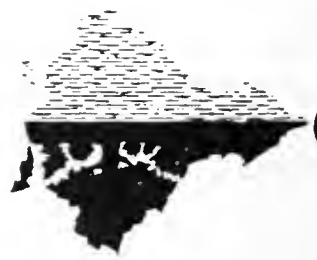


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