

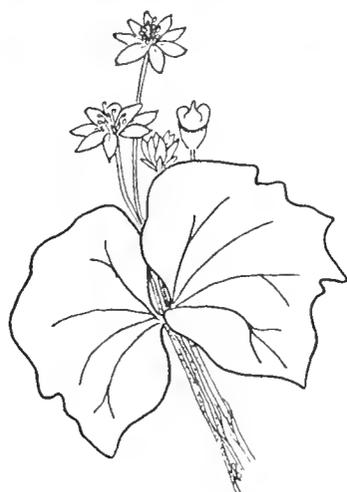


Bulletin

A publication of the VIRGINIA NATIVE PLANT SOCIETY

Conserving wild flowers and wild places

1999 VNPS wildflower



Jeffersonia diphylla, twinleaf
Illustration by Nicky Staunton

Twinleaf to be highlighted in '99

Twinleaf, a little plant with anemone-like, fleeting, white flowers and distinctive, deeply two-parted leaves, is the fitting choice of the Virginia Native Plant Society for its 1999 Wildflower of the Year. One of Virginia's woodland aristocrats and true heritage wildflowers, it is among the earliest of the ephemeral floral gems that dot the forest floor in spring. It superficially resembles bloodroot and blooms about the same time but is less showy and brilliantly white, though more stately.

Linnaeus was the first to name this plant, which he described as a sister species of the mayapple in the genus *Podophyllum* on the basis of specimens collected in Virginia. Later, American botanist Benjamin (See *Twinleaf*, page 2)

Loosestrife still a threat to natives

*Editor's note: An article that recently appeared in a VNPS chapter newsletter has raised some questions, and some answers, about the invasiveness of purple loosestrife (*Lythrum salicaria*), a method of controlling it, and the more important question of what if anything is being done to prevent further spread of the plant. Ted Scott, VNPS Conservation Committee Chair and Invasive Alien Plant Education Coordinator, has coordinated much of the VNPS invasive alien plant action for many years. He was asked to comment on purple loosestrife and the topics raised by the newsletter article. His article follows:*

Purple loosestrife is still a popular horticultural plant, in spite of its invasiveness, and therefore is still available from some nurseries and garden centers in Virginia. It is not uncommon for people to have the experience of growing it in their garden borders without visible spreading. What they don't realize is that the plant is producing hundreds of thousands of seeds each year which accumulate in the soil near the plant and establish what is called a "seed bank." Some seed will be carried by wind long distances from the parent. Some seed will also be washed away with heavy rains into urban storm drains and then to nearby rivers. These too may lie mostly dormant for years before germinating.

Purple loosestrife came to this country from Europe as a horticultural plant in the early 1800s and did nothing to cause alarm until 1910-1930 when populations of it seemed to explode. Some of our other

invasive exotic plants followed this same pattern of lying dormant for years and then suddenly spreading.

Between the time of the initial development of a seed bank and the much later sudden proliferation, very little notice is taken of the plants that do germinate. Then, rather suddenly, we realize the plant is everywhere. There can be any number of reasons for how or why this occurs, depending on the various strategies of the different species for their reproduction.

As for the suggested method of preventing the spread of border plants like purple loosestrife by removing the inflorescence before the seeds form, it could be effective. The problem is the extreme diligence on the part of the gardener that is required for this to be effective for the life of the garden. In my opinion there are very, very few persons who could be so diligent throughout the years of the life of the plant. Even if this were possible, other factors are bound to enter the picture (See *Education*, page 7)

Plan to attend

A Tree Dedication

in honor of John & Phoebe White's VNPS service

WHERE: State Arboretum of Va. at Blandy Experimental Farm

WHEN: Friday, April 9
11 a.m. with lunch to follow

INFO: John Fry, 540-364-3046

From the President

Politicians and professional pollsters would have you believe that most Americans show little interest in political involvement. In national politics, I do not know if that is true, but in state and local arenas, I beg to differ in that assessment. Currently in Virginia, there are several conflicts between the communities and local or state governments over the fates of wildlife acreage.

In some instances, continued persistence by the community members with support or endorsements by environmental groups can persuade the local government to preserve natural areas. Such is the case of Eastern Henrico residents versus the county of Henrico to manage the Elko tract, a part of the wetlands of White Oak Swamp. The result is that most of the Elko tract will be preserved. That is one of the best results.

On the other hand, a conflict over the preservation of wildlife acreage begun by the local residents against local governments and ultimately attracting big players may last for years. It may or may not result in a beneficial outcome for the land in question. Like a pebble tossed into water, with time the case causes expanding attention and interest.

Such is the conflict between the residents of the Mattaponi River watershed and the King William and Newport News, state, and federal governments. There are so many players in this conflict that two agencies within the federal government are at odds with each other - the Environmental Protection Agency and the Army Corps of Engineers.

This situation was nationally publicized. I cannot guess what will be the final solution to this problem, but the local citizens do persist!

Sometimes local residents will oppose the use of a natural area by a large company or local government and lose. That happened when residents of several Middle Peninsula counties opposed Brown Ferris. Brown Ferris wanted to expand its dump site by filling in an area of several acres, including two feeder streams to the Dragon Run. The company was then going to create wetlands to compensate for the area to be filled. The citizens lost, but it was not for their lack of trying.

The bottom line to this discourse is that American citizens do participate in politics. They are active and persistent, and use any legitimate means to achieve what they want. They are particularly concerned in the treatment of the wild areas that they hold so dear. That reaffirms my faith in the American public! Don't you feel the same?

Your president, Marie F. Minor

Financial appeal made for support of programs

After a two-year hiatus, the Board of Directors of VNPS has appealed to members for financial gifts to move forward more quickly the programs of the society. The letter was mailed to members the week of December 20th.

Besides asking for monetary contributions, members were invited to advise the board of their choice of programs to emphasize:

- Part-time staff for VNPS Office
- Chapter creation in areas of Virginia not yet represented
- Conservation education about fragmented forests in Virginia
- A VNPS website
- Broadening educational outreach
- Sponsoring exceptional speakers, including those who command professional fees, to educate members
- Increasing our representation at state and national native plant meetings

- Reprinting our Wildflower of the Year brochures in a book form
- Funding reprints of the Invasive Alien Plant List and Fact Sheets.

There was also an invitation to suggest new programs for VNPS.

The Piedmont Chapter offers a copy of the speech given by Mary Painter (founder of the society) at the dedication of her tree on Blandy's Native Plant Trail.

If your letter did not reach you, VNPS Board of Directors hopes you will respond to this article. Contributions and ideas may be mailed to the society's treasurer, John Fry, at the new address: Virginia Native Plant Society, Blandy Experimental Farm, Rt. 2, Box 214, Boyce VA 22620.

Gifts and ideas may be sent at any time during the year; however, your support is needed now and will be appreciated.

•Twinleaf

(Continued from page 1)

Barton recognized its distinctiveness and renamed it *Jeffersonia diphylla*, in honor of Virginia's famous statesman-naturalist Thomas Jefferson, who at the time was George Washington's Secretary of State and would soon become the nation's third president.

Jeffersonia, as it also is popularly known, belongs to the barberry family (Berberidaceae). The only other species of its genus occurs in Manchuria. The genus is one of a number of genera of plants that display this disjunct, eastern American-eastern Asian pattern of distribution, which has long intrigued botanists. In Virginia, twinleaf is indigenous over much of the western two-thirds of the state, where it tends to favor moist deciduous woods especially on calcareous substrates. The seed has a fatty appendage called an elaiosome, an adaptation for ant dispersal. It is relatively easy to grow in the wildflower garden. Stanwyn G. Shetler, Botany Chair, VNPS

Nature's Partnerships: Plant-Insect Connections

VNPS 1999 Annual Workshop

Saturday, March 13

University of Richmond



The VNPS annual workshop will be a day filled with information about interesting connections between plants and insects. Included in the session subjects are galls, urban habitats for moths and butterflies, native bees, honey bees and bumblebees, and carnivorous plants.

Workshop schedule

"Carnivorous Plants and Insect Interactions" - Philip M. Sheridan, Director, Meadowview Biological Research Station, Woodford, Virginia.

A biologist whose work has involved the propagation of native carnivorous plants and their reintroduction to wetland habitats, Sheridan will describe how insects are attracted to (and digested by) pitcher plants as well as how these and other carnivorous plants can be protected in their native habitats.

"The Importance of Bumblebees and Other Native Insects as Plant Pollinators" - Dr. Brad Goodner, Assistant Professor of Biology, University of Richmond.

In addition to describing the importance of bee pollinators from both an ecological and agricultural perspective, Dr. Goodner will provide examples of rare, highly specific plant/pollinator interactions as well as more generalized ones. He will describe the typical life cycle of the bumblebee, provide a guide to bumblebees of Virginia, and describe a citizen-science project on bumblebee distributions.

"Plant Galls: An Unequal Partnership" - Dr. Raymond J. Gagnè, research entomologist retired from Systematic Entomology Laboratory, USDA

Dr. Gagnè, still active full time with research, will discuss his research on gall midges (Cecidomyiidae), which he chose as his life's work because their plant hosts give an added dimension to the appreciation of nature. He has published more than 150 scientific papers, including two books, one of them, The Plant-Feeding Gall Midges of North America, intended for a general audience.

"Creating Urban Habitats for Moths and Butterflies" - Dr. Donald J. Harvey, museum specialist in the Department of Entomology of the National Museum of Natural History, Smithsonian Institution.

Dr. Harvey was the driving force behind the creation of the Smithsonian's acclaimed butterfly garden on Washington D.C.'s Mall and is the ongoing entomologist-in-charge. He will discuss his work and offer suggestions for creating appropriate moth and butterfly habitats in city environments.

The workshop is limited to 100 participants, so sign up today to avoid disappointment. Registration fee for VNPS members is \$10. The fee for non-members is \$25 (this includes the \$15 VNPS membership fee). In order to preserve your VNPS *Bulletin*, the registration form below may be photocopied. For more information, contact Effie Fox at 540-347-4090.

Name _____

Address _____

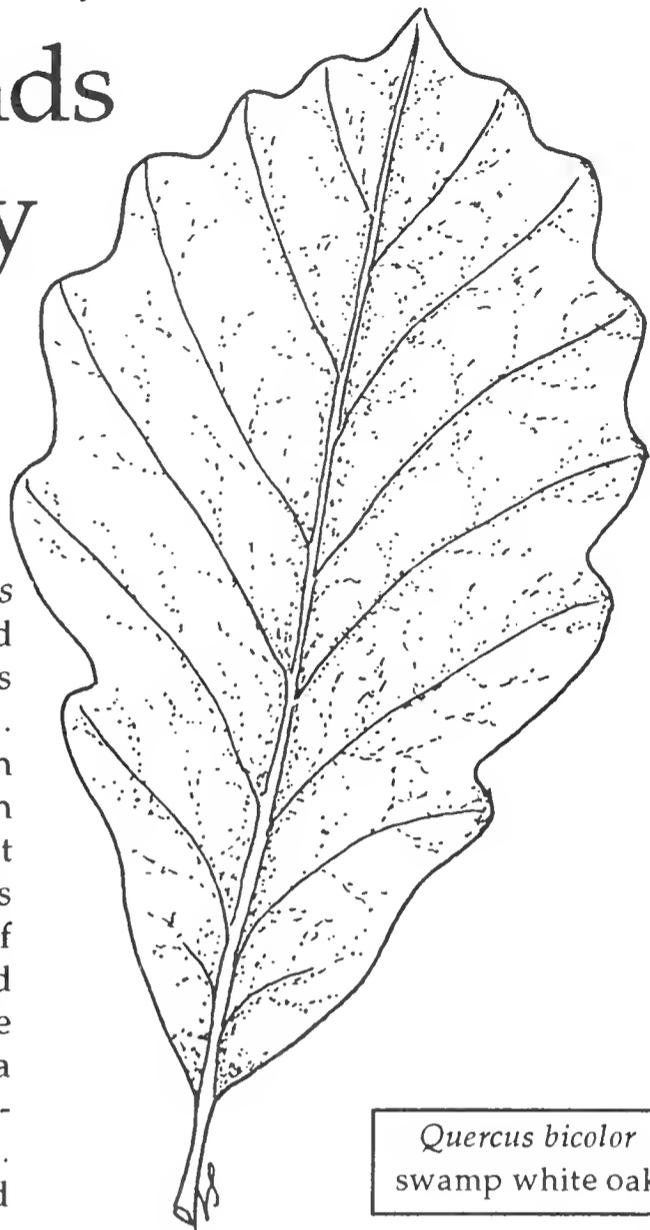
Phone number _____ VNPS Chapter _____ Amount enclosed _____

Mail registration form and fee (payable to VNPS Annual Workshop) to:
Effie Fox, Education Chair, P.O. Box 3362, Warrenton, VA 20188

Forested wetlands contain many interesting native plants



Quercus michauxii
chestnut oak



Quercus bicolor
swamp white oak

swamp chestnut oak (*Quercus michauxii*). Both trees are found within or adjacent to stream valleys and areas subject to flooding. Swamp white oak is at its southern range in Virginia and has been logged considerably in the north. It is the only oak with acorn stalks that are much longer than its leaf stalks. Swamp chestnut oak, found in more upland type habitats, is the more common of the two. I found a small stand in northern Virginia recently that is at least 80-100 years old. Because both species are found

Forested wetlands are found throughout Virginia and contain a variety of unique and rare native plants. Whether you've poked around in the tidal wetlands of the tidewater loblolly pine, bald cypress terrain, or in the lowland riparian forests that surround inland streams and rivers, forested wetlands are great places for botanizing.

Forested wetlands are also important natural systems that perform vital functions such as filtering pollutants and nutrients from the water, providing valuable wildlife habitat and controlling flooding.

Forested areas on a per acre basis, annually, can remove 40 tons of carbon from the air and produce 108 tons of oxygen. Approximately half of Virginia lies within the Chesapeake Bay watershed and these wetlands play a critical role in maintaining water quality throughout the Bay watershed.

Two oak species that are uncommon but can be found if you know where to look are the swamp white oak (*Quercus bicolor*) and

within or close to wetlands, they may be afforded more protection from urban sprawl or other human activities.

One of Virginia's rarest plants, swamp pink (*Helionias bullata*) is federally listed as threatened and listed as endangered in Virginia by action of the Virginia General Assembly in 1989. Swamp pink occurs locally at isolated sites on the coastal plain and in the Appalachian mountains, in Henrico, Caroline, Augusta and Nelson counties. This plant occurs along small watercourses, in springy ground or in other areas where water conditions are stable and rarely subject to flooding. Swamp pink is found in lowland areas in association with red maple, sphagnum moss, skunk cabbage and laurel. Clearing, draining and filling forested wetlands can quickly destroy swamp pink and its habitat.

Jessica Strother, VNPS Director-at-Large/
Conservation Co-chair



Helionias bullata, swamp pink
Illustrations by Nicky Staunton

Reserve your place now for Bruce adventure

The sun rises earlier and sets later on the Bruce Peninsula during the VNPS trip in June. Visitors are glad! A full day of wildflowers typical of the Michigan Basin and along the Niagara Escarpment, followed with a delicious whitefish dinner, a dramatic sunset across Lake Huron and calls of the loon meld to yield satisfaction and sleep that comes to refresh, preparing visitors for a hearty breakfast the next morning and ANOTHER day trip!

Registration is now open for VNPS members to visit the Bruce Peninsula, Ontario, Canada. Nicky Staunton announces her 1999 co-leader will be Dr. Stan Shetler, Botanist Emeritus of the Smithsonian Museum of Natural History. VNPS members will arrive by 3 p.m. on June 12 and leave for home after breakfast June 19. Wildwood Lodge owners, Victor and Shirley Thomas,

will continue to be our hosts in Mar, Ontario, Canada.

The Bruce Peninsula is above Niagara Falls and extends between the Georgian Bay and Lake Huron. A short boat trip from Tobermory to Flower Pot Island is part of the trip's fun. Several days begin with birding and wildlife is occasionally sighted. Photographic opportunities abound, always following the premise of respect for the plants' space, not stepping on them or harming their environment. Evenings and one afternoon are free for participants to explore on their own. Nearly every evening there is an opportunity to update the plant list given to participants before the trip.

Cost per member is \$450 which includes cabin and meals. Participant car pools will furnish transportation while there. Transportation from your home, overnight accommoda-

tions and meals on the road are not included in the fee. Efforts will be made to arrange car pooling for the trip to and from the Bruce if it is needed.

Cris Fleming's report on the 1998 trip is in the August 1998 *Bulletin* (Vol. 17, No. 4). Plans are to put her article on the VNPS website as soon as possible.

To sign up for the 1999 trip to the Bruce, please contact Nicky Staunton. A deposit of \$50 needs to accompany each reservation before February 15. The balance of \$400 will be due as follows: \$200 by April and \$200 by May 15, payable to VNPS and mailed to John Fry, VNPS Treasurer, Blandy Experimental Farm, Rt. 2, Box 214, Boyce, VA 22620.

(Note: There are 17 spaces available with seven spoken for as a result of the last Bulletin article. Ten spaces remain as of mid-December. If needed, a waiting list will be started to fill any spaces that might become available.)

New organization seeks to preserve Virginia's scenic beauty

Scenic Virginia, Inc. is a new organization formed to protect, preserve and enhance the scenic beauty of the state of Virginia. Its principal activity is to educate the public to the economic, social and cultural benefits of highway beautification, scenic byways and sign control. It promotes and carries out programs to encourage natural beauty in the environment, to enhance landscapes, to protect historical and cultural resources, and to improve community appearance with emphasis on the enhancement of scenic approaches to cities and towns.

Representatives from Scenic Virginia speak before appearance commissions, garden clubs, governmental agencies and other individuals and organizations interested in preserving and enhancing visual resources. Scenic Virginia further encourages and coordinates the efforts of geographically dispersed groups sharing a common goal of protecting scenic beauty and preserving the public's investment in its highways and other public places.

Scenic Virginia concentrates its efforts in three areas:

First: Scenic Virginia encourages the establishment and preservation of scenic road systems. Its goals are to designate all eligible roads as Virginia byways; to protect vegetation and viewsheds of existing Virginia byways; to establish consistent requirements for signs along scenic byways; to advocate for specific setback, greenbelt, and landscaping requirements for scenic byways; to establish state standards for alterations to scenic byways; and to encourage property owners along scenic byways to protect their viewsheds.

Second: Scenic Virginia encourages the adoption of local sign controls in cities, towns and counties to reduce the number of billboards in the state and limit their size and height. It promotes an expansion of the logo sign system to aid travelers and explores ways to purchase nonconforming billboards. It develops data for localities and advertisers seeking alternatives to billboards.

Third: Scenic Virginia promotes highway beautification. It educates communities and advocates for flexible highway design, the use of design guidelines for gateway corridors into cities and towns, and the use of design guidelines for business districts. It promotes the use of landscaping on Virginia's roadways and encourages the planting of native material where possible. It encourages aggressive litter control measures and discourages obtrusive outdoor lighting.

Virginia's scenic protections are taken for granted and, in the rush to accommodate new growth demands, the preservation of scenic assets is often overlooked. New businesses, residents and tourists are all drawn to attractive communities. The corridors leading to those communities are important and need every bit as much attention. Scenic Virginia is the organization, the collective voice, to advocate for those protections and to speak for all concerned Virginians in preserving the Commonwealth's visual treasures. Please help in this effort by becoming a member, or sending a donation to: Scenic Virginia, P.O. Box 407, Richmond, Virginia 23218. *Hylah Boyd, President Scenic Virginia, Inc.*

From Near and Far

State native plant societies on the web

- Alabama — www.auburn.edu/~deancar
- Arizona — www.azstarnet.com/~anps
- Arkansas — www.anps.org
- California — www.calpoly.edu/~dchippin/cnps_main.html
- Connecticut — www.vfr.com/cbs
- Florida — www.flmnh.ufl.edu/fnps
- Georgia — www.mindspring.com/~gnps
- Hawaii — www.mrtc.org/~thomasp/nhps
- Idaho — www2.state.id.us/fishgame/inps1.htm
- Indiana — www.inpaws.org
- Maryland — www.geocities.com/rainforest/vines/2996
- Massachusetts — www.newfs.org
- Minnesota — www.stolaf.edu/depts/biology/mnps
- Missouri — www.missouri.edu/~umo_herb/monps
- New Mexico — www.wazoo.com/~dkeeney/npsoc.html
- Oklahoma — www.telepath.com/chadcox/onps.html
- Oregon — www.teleport.com/nonprofit/npsoc
- South Carolina — www.scnativeplants.org
- Texas — lonestar.texas.net/~jleblanc/npsot.html
- Virginia — www.hort.vt.edu/vnps
- Washington — www.wnps.org
- Wyoming — www.rmh.uwyo.edu/wnps.html
- National Wildflower Center — www.wildflower.org

National Tree Trust makes free trees available

The National Tree Trust, a private, nonprofit organization, will release Part One: Seedling Order Form, of their 2000 two-part grant application process for the America's Treeways and Community Tree Planting Programs, in the beginning of January.

Transportation authorities, forestry departments, municipalities, garden clubs, school groups, and other volunteer organizations can apply to receive tree seedlings at no monetary cost for planting on public land in the year 2000.

Part One provides a list of species available and appropriate for each planting region in the United States. Seedlings come in quantities of 100. Part One is due May 31, 1999. The National Tree Trust encourages groups not to delay in requesting and submitting their Part One. Species are allocated on a first-come, first-serve basis and a large demand is anticipated. Part Two: Project Information is automatically mailed to all groups that complete Part One. Part Two asks for more detailed information about each group's tree planting project and is due Octo-

ber 1, 1999. Applicants must complete Part One and Part Two to receive trees.

To receive Part One: Seedling Order Form, or for more information, call Ashley Link at the National Tree Trust at 1-800-846-8733 ext. 27, or e-mail her at alink@nationaltreetrust.org.

House Bill 38: VDGIF funding success story

In 1995-1996, Virginia Department of Game and Inland Fisheries (VDGIF) staff realized that the department was heading for a deficit expense versus revenue situation at the turn of the century. In 1996, the Auditor of Public Accounts confirmed this and added that without new revenue, services would be reduced. With the auditor's affirmation of the department's fears in hand, staff approached friendly legislators who sponsored House Joint Resolution 552 to review the department's financial condition and make recommendations to the General Assembly for 1998. The bipartisan joint committee included five delegates and two senators. The legislative joint subcommittee met three times before the 1998 session--the first to understand the problem and brainstorm, the

Richmond's Maymont show slated for February 18-21

Wildflower gardeners mark your calendars for February 18-21 as a time to shake those winter blues at the Maymont Flower and Garden Show at the Richmond Centre located in downtown Richmond. Cost at the door is \$12 or \$10 in advance. Exhibits and booths include landscaping displays, many using native plants. A shuttle bus for \$3/round trip will leave the Diamond, baseball stadium on the boulevard, to go to the Centre every ten minutes. There is plenty of safe parking at the Diamond parking lot. Maymont hours are Thursday through Saturday, 9 a.m. - 8 p.m., and Sunday, 9 a.m. through 6 p.m.

The VNPS state exhibit will be in the room on the mezzanine. Pocahontas Chapter members will manage the exhibit. All members attending the show are asked to stop by the exhibit and say "Hello." Chapters wishing to have literature distributed at the exhibit are asked to send it to the Pocahontas Chapter.

second to receive public input, and the third to ascertain proposals that were politically possible and reasonably designed to save VDGIF.

The key piece of legislation put forth and drafted for the legislature became known as House Bill 38. HB38 allows the Virginia State Treasury to pay VDGIF the state's 2 percent share of the sales tax collected on the sale of two categories of hunters, anglers, and wildlife watchers equipment purchases based on specific categories set forth in Virginia consumer surveys by the U.S. Census Bureau, U.S. Fish and Wildlife Service, and others. The study, done every five years, became the basis for the two percent allocation. In the 1996 survey, this amounted just over \$600 million in sales (*See HB38, page 8*)

• *Education about loosestrife's dangers helps*

(Continued from page 1)

to prevent the removal of the blossom at the appropriate time, such as illness, travel, or just plain forgetfulness. It could hardly be considered a reliable method to prevent the spread of the plant from a multiplicity of gardens.

A number of other states (Minnesota, Wisconsin, Illinois, Indiana, North Carolina and others) have attempted to initiate control of loosestrife from establishing additional colonies by declaring it a noxious weed and making it illegal to be sold or shipped into the state. When VNPS started its invasive alien plant



Lythrum salicaria, purple loosestrife
Illustration by Nicky Staunton

program, some society members had in mind making it illegal to be sold in Virginia. Wiser heads prevailed and persuaded us to start an educational program that would bring to the public's attention the threat the plant poses and what was happening in other states. In some northern states, where the loosestrife invasion is more advanced, a number of our native plants, especially from wetlands and damp meadows, have been extirpated

At that time *Lythrum salicaria* was recorded in several Virginia locations, but now state records indicate it is established throughout the Commonwealth. This new approach initiated the VNPS publication of the list of

Invasive Alien Plant Species in Virginia and the subsequent fact sheets on individual plants. It appears that a substantial number of people have been alerted to the concern we have for invasive exotic plants. A number of nurseries and garden centers have removed the species from their inventory; yet there are still gardeners who insist on growing it and garden centers that will offer it as long as it is profitable to do so. Thus, we have enjoyed some success, but it seems obvious that there is still more work to be done.

Ted Scott, VNPS Conservation Co-chair/Invasive Alien Plant Education Coordinator

How to help

NOTE: To help VNPS educational efforts, copies of the fact sheet *Invasive Alien Plant Species in Virginia* are available in quantity for you to deliver to nursery/garden center managers in your area, as you request that they stop the sale of *Lythrum salicaria*. Four regional brochures *Native Plants for Conservation, Restoration, and Landscaping* are also available and offer wise alternatives to landscaping with invasive plants. Ask your chapter president for a copy. Alternative ornamental plants are suggested which do not invade natural areas. Couple the list with the fact sheet when you talk with nursery and garden center managers. The contributors establishing the list with VNPS and Virginia Department of Conservation and Recreation are noted on the publication. Participants in the brochure production included the Virginia Nurseryman's Association and state agencies managing land, the Virginia Tech Department of Horticulture and the American Society of Landscape Architects. VNPS also has available for loan a slide show about concerns of invasive alien plants.

Requests for any of the above information can be sent to: VNPS, Blandy, Rt. 2, Box 214, Boyce, VA 22620 or e-mail staunton@erols.com

See the address label for your membership's expiration date.

VNPS Membership/Renewal Form

Name(s) _____

Address _____

City _____ State _____ Zip _____

- Individual \$15 Family \$25 Student \$10
- Patron \$50 Sustaining \$100 Life \$400
- Associate (group) \$40; delegate _____

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 _____ Chapter
in the amount of \$10 \$25 \$50 \$100 \$ _____

Check here if you do not wish your name to be exchanged with similar organizations. Check here if you do not wish to be listed in a chapter directory.

Make check payable to VNPS and mail to:

VNPS Membership Chair, Rt. 2, Box 214, 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

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Marie F. Minor, President
Nancy Sorrells, Editor

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The deadline for the next issue is Feb.. 1

Coastal grant to aid Virginia habitat and watershed projects

The Department of Environmental Quality received a \$2.7 million grant in November from the National Oceanic and Atmospheric Administration for funding the Virginia Coastal Resources Management Program. The grant will fund 47 projects with state agencies and Tidewater localities, which match the federal funds to create inter-governmental partnerships that enhance and protect Virginia's coastal resources.

One project is the \$125,000 Department of Conservation and Recreation program to acquire land on Virginia's

Eastern Shore to protect migratory songbird stopover habitat. This coastal area contains non-tidal and tidal wetlands, exemplary undeveloped beach, well developed dune communities, maritime forest and grasslands, and supports rare animal and plant species and high biological diversity.

Another program is the \$20,525 program administered by Gloucester County to conduct a natural heritage inventory of the 140-square mile Dragon Run watershed to identify significant resources in the watershed and define

boundaries for protection efforts. The Smithsonian Institute ranked the watershed as the second most ecologically significant wilderness in the Chesapeake Bay watershed during a 12,600-square mile study. Dragon Run, which in some places looks like a swamp and in others like a stream, flows through Essex, King and Queen, Middlesex, and Gloucester counties. The grant also supports a conservation easement education program for landowners that includes seminars, guided canoe tours, newspaper articles, a video and brochure.

•HB38

(Continued from page 6)

and \$12 million of additional income. The current VDGIF revenues are almost \$36 million. The bill also allowed the VDGIF board to commit up to half of the \$12 million to a newly established capital improvement account for capital needs (estimated to be \$60 million over the next 10 years).

The broad-based grass roots support for this legislation was amazingly concentrated and large. Because of this support, HB38 passed all committees and both houses with no negative votes. However, the bill was amended to place a future cap of \$13 million a year on it. The Governor signed HB38 in April 1998 and it became law July 1. Under HB38, beginning 30 days after the first quarter

in October, 2000, the department will receive \$3 million per quarter or \$12 million annually until the next survey results are available and this figure is adjusted up to a point not to exceed the maximum of \$13 million. This was the largest single increase in VDGIF history since its inception in 1916. It can be said now that both consumptive and non-consumptive constituents clearly financially support the department.

The remaining question to be asked is how will this new-found revenue affect VDGIF programs into the next century. In an effort to address this question, VDGIF has accepted a proposal to conduct a study to facilitate the department's implementation of the new funding. The study should help VDGIF better understand and work with all Virginians, as well

as several important constituent groups. From a native plant perspective, a portion of the dollars will be used on wildlife management areas to preserve, enhance, or reintroduce native plants and plant communities that are beneficial to the Commonwealth's wildlife.

Article by VDGIF staff. For more information, call David Whitehurst 804-367-4335.

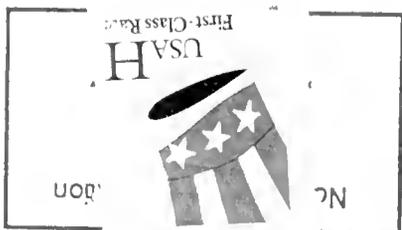
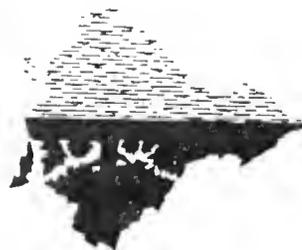
REMINDER: If your chapter or group has events (hikes, lectures, sales, etc.) for the Bulletin spring wildflower calendar, send them to Nancy Sorrells, Rt. 2, Box 726, Greenville, VA 24440 by Feb. 1 or e-mail to lotswife@rica.net

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Bulletin

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

Can you recognize spring's ecological factors?

Wildflower enthusiasts are waiting for the bursting beauty of the spring wildflowers in the deciduous woods. What are some ecological factors that affect the development and flowering of this special group of plants?

The deciduous forest spring wildflowers have a number of environmental challenges to cope with by the end of winter. The temperatures of both air and bare ground are below freezing much of the time in January and February.

However, leaf litter as well as snow on the forest floor can maintain a temperature of 34 degrees F even if the air temperature is 10 degrees F. There is continued shoot development of many of these spring

species in their underground rhizomes, corms, and bulbs. Many species such as trout lily (*Erythronium americanum*) and Dutchman's breeches and squirrel corn (*Dicentra* spp.) will not initiate growth unless exposed to a minimum cold period. This prevents them from starting to grow in the fall or early winter after a warm period. Other species such as spring beauty (*Claytonia virginica*) do not require

such cold exposure and may begin growing in the fall.

The role of temperature in initiating growth in the early spring is a complex interaction of soil and air temperatures. Soil temperature is the more critical factor for starting shoot growth (by stimulating rhizome development) while air temperature is more critical in controlling vegetative growth and flowering. Soil temperatures begin to rise quickly in the early spring as snow melts. A

temperature rise to 49-50 degrees F can take place in only three days after snowmelt.

Soil warming may not be as dramatic if there is no snowcover, but it also may be significant. Air temperature in

(See Spring, page 9)



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- Check out happenings at Blandy, page 3
- Hints for growing twinleaf in your garden, page 8

From the President

After fitfully thinking these past two weeks about what I was going to write for this issue, an idea grew while I was looking at all of the photos taken this past year of my gardens. They evoked memories of the surprises which I had with various plants. For one thing, the drought of the past summer and fall was the longest in my memory, and I have been on this earth for quite a while. The gardens had to be watered every week seemingly forever just so the plants could hang on. I think that is how I got my exercise — moving water hoses around and mowing.

I thought watering was almost a lost cause until I looked at the photos last night. All of the flowers and shrub beds had plenty of blooms during the warm season. But as I said, some were surprises. Here I am looking at common primrose, *Oenothera biennis*. Two years ago, I collected some seed from plants growing alongside the lane leading to the road. The primrose plants grew no taller than 2 feet with single stems topped with dainty yellow flowers. So I planted their seeds in the front to the middle of the dry garden bed. In 1997 they emerged and promised to be well-behaved, but that was their first year and as the name implies, they live two years, blooming the second year.

In the middle of last summer, I began to notice the many stalks emerging from the once-dormant rosettes. The stalks grew, and grew, and grew! Finally, they reached heights from 6 to 7 feet — branched and loaded with blossoms. They dominated the garden and caused me a great deal of embarrassment. Smaller plants behind them were hidden and squeezed between the giant primroses and the almost-as-tall Maryland senna, *Cassia marilandica*. In the fall when the last flowers died, I decided to remove the stalks (I had to use long-handled lopping shears) so that the seeds wouldn't sprout all over the garden. While checking the garden bed this winter, I noticed that I was too late. So, the rosettes were ruthlessly pulled up except for some lining the rear of the bed where they belong.

The second surprise belonged to the obedient plant, *Physostegia virginiana*. I brought the first plants with me when I moved to my present home. They were planted out in the field in a make-shift bed until I could make the "dry" garden bed. In the field, they had pure white blooms instead of the delicate lavender ones which I had seen from the roadsides around here. Thinking that they were unusual, I planted them in the "dry" bed so they could get the water as needed and protection from gnawing critters which seem so plentiful around here. The first year in their new bed, they behaved modestly, growing no more than 3 feet tall. They did not seem to be spreading much, so I planned to transplant them to the new "wet" bed. In the spring of '97, I noticed that they had increased exponentially. Moving them to the "wet" bed might be a disaster in the making. So instead, I bought from another source a few obedient plants for the "wet" bed. Their blooms were the delicate lavender which I admire and they grew no more than 2 feet in height. Meanwhile, the white obedient plants grew until they reached 4-5 feet in height. A good wind storm blew some of them over, but that didn't stop them. The stalks continued to grow vertically from the prone position. They proved to be a mess! Oh, yes, the blooms were still white. *Physostegia virginiana* must have a large gene pool.

The last surprise proved to be a good one. Before I planted it, all of the conventional wisdom espoused by the books on native landscaping stated that growing Southern crab-apple, *Malus* or *Pyrus angustifolia*, was a waste of time. It is especially subject to all kinds of diseases, and the fruits are sour. I planted it because it was a universal pollinator of other apple trees, had a colonial history of its apples being the source of cider, a common beverage in those times, and I wanted to make crab-apple jelly. The one planted in my yard was grafted on a semi-dwarf rootstock so it was unlikely to colonize. It has been growing pretty fast. Last year it first bore pretty white flowers blushed in pink and with a delightful odor. They were followed by a dozen apples which grew to between 2 and 3 inches in diameter. Cautiously I tasted one of them when it became ripe which is when the red blush appears. It was sweet with a hint of spice. So happy was I with that surprised taste, that I ate all of them at once. Needless to say I paid the price with a whopping stomach ache. But, it was worth it! In the future I will try to control myself so that I can make jelly. Like the obedient plant, *Malus angustifolia* must also have a large gene pool. This means that before you make up your mind to buy a Southern crab-apple, realize that you may be playing horticultural roulette.

While there were more surprises in the gardens, prudence tells me that if you managed to get this far, you must be restless, so, I will end this letter now. HAPPY SPRING!

Your president, Marie F. Minor





News from Blandy

New name, new trees, new plans for native plant trail

The native plant trail at the State Arboretum of Virginia is now the Nancy

Larrick Crosby Native Plant Trail, in honor of the trail's main benefactor, a resident of nearby Winchester and a charter member of VNPS. Ms. Crosby cut the ceremonial ribbon when the trail was officially dedicated in November.

Tree-planting continued in the woodland section of the trail this winter. In January a good-sized American holly, *Ilex opaca*, and a chestnut oak, *Quercus prinus*, were moved from other locations in the arboretum. Several smaller trees are on hand, ready to go in the ground a little later.

Two changes in overall plans will affect work on the trail beginning this spring. The first represents a rethinking of the original plans for the section that will cross an old field and adjacent wetland. It has become very clear that in an area

densely overgrown with exotics such as yellow bedstraw and Japanese honeysuckle, and with limited resources, the extensive new plantings these plans envisioned are impractical.

Instead, this portion of the trail will be built around the native and exotic plants that are already present. A botanical survey this year will be an important first step, but some native species are easy to see, including New York ironweed, *Vernonia noveboracensis*; Indian grass, *Sorghastrum nutans*; and masses of swamp milkweed, *Asclepias incarnata*. This approach shifts the emphasis from display to education, a major component of the arboretum's mission, in a habitat that offers a wealth of opportunities to interpret ecological relationships as well as the plants themselves.

The second change is a slight modification of the policy on rare plants, which has been to exclude all species on the Virginia Rare Vascular Plant List. After consulting

knowledgeable people from the Division of Natural Heritage, which is responsible for the list, and from VNPS, an exception has been added that permits use of listed species that are rare in Virginia only because they are at the periphery of their natural range. *Calycanthus floridus*, for example, is abundant farther south, but extends only a little way into southeastern Virginia. There won't be concerted efforts to acquire such species, but the change opens the way to use them when they are offered.

Interested VNPS members are warmly invited to become actively involved in the continuing development of the native plant trail. Volunteers for regular work are always welcome, but there are also ways for people who live at a distance to help. For information, get in touch with Aileen Crawford or Mary Pockman, c/o the State Arboretum, 400 Blandy Farm Lane, Boyce VA 22620.

Mary Pockman, Native Plant Trail committee co-chair

Botanical illustrators featured in Blandy show

Blandy Experimental Farm will host an exciting Botanical Illustrators Art Show this spring. Assistant Curator for Education Mary Olien announced that the art is to be on display in the Blandy library March 12-April 7. Artists with talents for rendering exquisite botanical detail will be featured in the spring show.

State Arboretum to host two-day Garden Fair

The 10th annual Garden Fair at the State Arboretum will be held May 8 and 9 (Saturday and Sunday) from 10 a.m.-4:30 p.m. In addition to being one of the largest plant sales in the mid-Atlantic region, the weekend also features bird walks with the Audubon Society, games for children, music and food.

This year's plant sale will emphasize plants native to Virginia in

The show will be an invitational exhibit and complement wonderfully a visit to the newly dedicated Nancy Larrick Crosby Native Plant Trail, a showcase for Virginia native plants that will be "waking" as the spring sun welcomes them to a new season.

recognition of the Arboretum's commitment to educating the public about native plants.

The State Arboretum of Virginia is located at Blandy Experimental Farm on Rt. 50 in Clarke County, about 1.5 hours west of Washington, D.C. A \$3 per car parking donation is requested.

Blandy Farm is the location of the new VNPS headquarters.

New VNPS address

VNPS members should put this new address in their address books. Although the VNPS office at Blandy is in the same place, the county has given it a new address to comply with the 911 system that uses street names and numbers. The new address is:

**Virginia Native
Plant Society**

**Blandy Experimental Farm
400 Blandy Farm Lane, Unit 2
Boyce, VA 22620**

Southwest Va. field school offers exciting agenda

Have you always wanted to learn more about the flora, fauna and geology of the biologically diverse mountains of Southwest Virginia? The Virginia Department of Conservation and Recreation (DCR) is sponsoring the third annual Appalachian Natural History Field School May 14-16 at Hungry Mother State Park in Marion.

This field school provides an outstanding opportunity for hands-on nature study in one of the state's most beautiful regions. Southwest Virginia is home to many rare species of plants and animals. In May, spring flowers and migrating birds will be at their peak. An outstanding staff has been assembled from a variety of agencies including the Natural Heritage Program, State Parks, Virginia Department of Game and Inland Fisheries, and U.S. Fish and Wildlife Service. Botanist and VNPS board member Allen Belden (DCR Natural Heritage) is among the staff. Other field school staff include zoologist Chris Hobson (DCR Natural Heritage); ornithologist and Chief Ranger at the Wilderness Road State

Park, Gary Williamson; mussel recovery biologist Leroy Koch (U.S. Fish and Wildlife); ichthyologist Mike Pinder (DGIF); herpetologist Dr. James Organ; and field school coordinator Angela Thorp.

With Hungry Mother State Park as the base, the weekend will feature field trips to outstanding and scenic natural areas including Pinnacle Natural Area Preserve, the Clinch River, Whitetop Mountain and Grayson Highlands. Participants will study in the field with a team that includes experts in herpetology, ornithology, botany, aquatic biology and zoology. The cost of \$225 per person includes two nights lodging at Hemlock Haven Conference Center, meals and transportation between sites. A 10 percent discount is available for additional family members. Registration is limited to 25. For more information contact Angela Thorp at Hungry Mother State Park 540-783-1057. To register contact VA State Parks Reservation Center at 1-800-933-PARK. (In the Richmond calling area, 225-3867)

Garden tour to support Galapagos work

For the second time, the Charles Darwin Foundation Inc. (CDF, Inc.), and Landscape Designer John C. Magee will co-sponsor a garden tour of his designs in the Washington, D.C. area. He is known for his environmentally friendly designs, which feature the use of native plants. The CDF, Inc. is a not-for-profit membership organization dedicated to promoting conservation, education and scientific research in and on behalf of the Galapagos Islands. CDF, Inc. is the headquarters for an international membership of more than 8,000, and is responsible for raising funds from individuals and institutions to support projects in Galapagos.

The CDF, Inc. and John Magee have joined forces to promote awareness of the impact of introduced species in natural ecosystems. The funds collected will support scientific research and protection of unique plant species in the Galapagos Islands, through one of the CDF, Inc.'s programs: "Gardening for Galapagos." This self-guided garden tour will take place on May 22, from 10 a.m.- 6 p.m. Tickets are \$10. For more information, contact John Magee 703-478-9428 or euphorbia@aol.com or CDF at <http://members.aol.com/euphorbia/>; Charles Darwin Foundation, Inc. 703-538-6833/34; or darwin@galapagos.org

Edible plants workshops to be held at False Cape State Park

A series of wild food foraging workshops, taught by naturalist Vickie Shufer, will be offered at False Cape State Park. "Spring Edibles" will be taught March 20-21, April 10-11 and May 29-30. Shufer is the editor of *The Wild Foods Forum* and South Hampton Roads chapter president.

Participants in the two-day workshops will identify and gather wild edible plants, look for animal tracks and trails, and hike isolated beaches at False Cape State Park. Located on the southeastern portion of Virginia Beach, the park provides a diversity of habitats

Mix of events featured at Wintergreen Symposium

The Wintergreen Nature Foundation is pleased to announce the 16th annual Spring Wildflower Symposium, to be held at Wintergreen Resort, May 7-9. The event will offer an exciting mix of hiking, slide presentations and practical "hands-on" work with some of the region's most noted scholars and naturalists.

Participants can learn plant identification in a beginner's workshop, hike the beautiful forest coves of the Blue Ridge, and practice their photography with professionals. Enthusiasts can explore the traditional uses of the native flora, propagation, and gardening with Virginia's stunning array of beautiful wildflowers. Also available will be the opportunity to delve into the mysterious life histories of wildflowers, to understand the threats to our native flora and to meet and share with others a common interest in wildflowers. The wide range of topics, titles and instructors provides a variety that will appeal to beginners or botany scholars.

Instructors for the event include Russell Shoeman, photographer and author of *The Nature of Golf*; Joan Feely, from the U.S. National Arboretum; Cris Fleming, ecologist for the Wildlife and Heritage Division of Maryland Department of Natural Resources; Colston Burrell, owner of Native Landscape Design and Dr. Ted Bradley, Biology Department at George Mason University to mention only a few.

For more information or to register, contact Laura Covert at The Wintergreen Nature Foundation for a brochure 804-325-8172, or wtnfn@aol.com or check out the web site at www.twnf.org.

such as unspoiled shorelines, dunes, maritime forests, and marshes.

Workshop cost is \$60 which includes food, lodging and bus transportation into the park. For more info, contact Vickie Shufer at 757-421-3929 or e-mail wildfood@infi.net.

Virginia Wildflower Celebration 1999

The nine chapters of the Virginia Native Plant Society celebrate the rich diversity of the native flora of the Commonwealth each year in April and May. For the next two months, Society members will share their enthusiasm for wild plants and wild places on field trips and wildflower walks, and during garden tours, plant sales, and a variety of other programs throughout the state.

You are cordially invited to any of the activities listed below; they are all open to the public. As some events require reservations, fees or additional instructions, use the telephone numbers provided to obtain further information. Plants propagated by members will be available at chapter plant sales.

The 1999 Virginia Wildflower of the Year, twinleaf, qualifies as one of Virginia's woodland aristocrats and true heritage flowers. *Jeffersonia diphylla* is among the earliest of the floral gems that dot the forest floor in spring. Typically *Jeffersonia diphylla* blooms in late March and early April in Virginia southward, but the flowering time passes so quickly that only the most vigilant observers catch this early wildflower in bloom. This hardy perennial is indigenous over much of the western two-thirds of Virginia, but absent from the coastal plain.

Calendar of Events

March 18, Thursday, 7:30 p.m. Mark Garland, Audubon Society naturalist to speak on relationships between Virginia flora and fauna. Regular Potowmack Chapter meeting, Green Spring Gardens Park, Alexandria, 703-642-5173.

March 20, Saturday, 1 p.m. Buffalo Creek Nature Area trip, near Evington, VNPS Registry Site, Sandra Elder (Blue Ridge) 804-525-8433.

March 21, Sunday, 10 a.m. -12:30 p.m. Great Falls Park, Va. wildflower walk led by Marion Lobstein, 703-536-7150.

March 27, Saturday, 11 a.m.-3 p.m. annual plant sale, South Hampton Roads Chapter, Francis Land House, Virginia Beach, Vickie Shufer, 757-421-3929.

March 27, Saturday, 2-4:30 p.m. Randolph-Macon Botanic Garden Work Day (rain date April 10) Dorothy Bliss (Blue Ridge) 804-845-5665.

March 27, Saturday, 4 p.m.-dusk, Loudoun Wildlife Conservancy field trip at Banshee Reeks Park, Leesburg. Beaver dams, ravine and pond habitat. Bring binoculars. Phil Dale (Piedmont), 540-338-6528.

March 28, Sunday, Teddy Greenways and Trails conference to be in Roanoke

The Virginia Governor's Conference on Greenways and Trails will be held May 2-4 in Roanoke. Keynote speakers will be Ian McHarg, landscape architect/planner and author of *Design with Nature*; Ed McMahan; American Greenways Program Director; and Chuck Flink, President, Greenways, Inc.

Roosevelt Island visit led by Marion Lobstein. Smithsonian Associates tour. Check out this webpage <http://www.mnsinc.com/mblobst> or call 202-357-3030 for exact times, fees and additional info.

April 3, Saturday, 1-4 p.m. Catawba walk, meet at Homeplace Restaurant, dinner after. Butch Kelly (Blue Ridge) 540-384-7429.

April 8, Thursday, 7:30 p.m. Kathleen Kust, landscape architect, speaks on the Lorton site. Regular Potowmack meeting. Green Spring Gardens Park, Alexandria, 703-642-5173.

April 9, Friday, 11 a.m. Tree dedication at State Arboretum for the white ash (*Fraxinus americanus*) planted on the Virginia Native Plant Trail to honor John and Phoebe White. Ceremony followed by luncheon. Those attending luncheon should send names and \$10 check to VNPS (attn:Dedication), 400 Blandy Farm Lane, Unit 2, Boyce, VA 22620.

April 10, Saturday, 10 a.m. Spring Ephemerals at Arcadia. Meet at Jennings Creek bridge, Rt. 614. Rich Crites (Blue Ridge) 540-774-4518.

April 10, Saturday, 4 p.m.-dusk,

The event includes workshops, field trips and trail-related exhibits, trail planning, design; construction, maintenance; funding; public relations, advocacy and marketing; and management.

Field trips, workshops and excursions to the New River and New River Trail State Park/mountain bike festival at Explore Park as well as a barbe-

Beaver Walk, Banshee Reeks Leesburg, Phil Daley (Piedmont) 540-338-6528.

April 10, Saturday, 9-noon. Roosevelt Island walk led by Stanwyn Shetler. (Potowmack) 703-920-1913 or 703-534-8179 for reservations.

April 11, Sunday, C & O Canal (Carterock Area) trip led by Marion Lobstein, Smithsonian Associates tour. Call 202-357-3030 for exact times, fees and additional info.

April 17, Saturday, Calmes Neck field trip on Shenandoah River near Boyce (see twinleaf). New VNPS registry site. Gary Fleming (Piedmont) is trip leader. Call Fran Endicott 540-837-1471.

April 18, Sunday, 10 a.m.-12:30 p.m. Great Falls Park, Va., wildflower walk led by Marion Lobstein, 703-536-7150. Reservations required.

April 18, Sunday, 2-4 p.m. Balls Bluff, Va., wildflower walk led by Marion Lobstein, 703-536-7150.

April 24, Saturday, South Hampton Roads Plant Rescue, time & place TBA. Vickie Shufer, 757-421-3929.

April 24 & 25, Saturday and Sunday, Garden Tours, PWWS hosts tours of local gardens featuring native plants in their landscapes. Free. Call Nancy Arrington for brochure 703-368-8431.

cue and entertainment are included. There will be a reception with Ian McHarg signing his new book. Included is a strategy session to determine the future of Virginia trails.

Continuing education unit credit from Virginia Tech will be offered to all attendees. For more info, call 1-804-798-9945, or e-mail: VAGwayConf@aol.com.

Calendar of Events

April 25, Sunday, 1-5 p.m. Natural History Day and Plant Sale (Jefferson Chapter) at the Ivy Creek Natural Area. There will be numerous events to enjoy as well as the annual native plant sale. Call June Griffin 804-293-2605.

April 25, Sunday, Thompson WMA and State Arboretum of Virginia led by Marion Lobstein, Smithsonian Associates tour. Call 202-357-3030 for times, fees and additional info.

April 29, Thursday, 10 a.m.-2 p.m. Thompson WMA wildflower walk led by Marion Lobstein. For reservations, Marion Lobstein 703-536-7150.

April 30, Friday, Guided tour of

Native plant symposium

Mark your calendar for the Lahr Symposium on Native Plants to be held at the National Arboretum in Washington, D.C. March 27 from 8 a.m. to 5 p.m. The program is organized by curator Joan Feely and features native plant experts lecturing on the history, identification and landscape use of native plants. Concurrent sessions provide in-depth presentations and discussions. Area nurseries will sell natives. Registration is required; minimum 50 and maximum 125 participants. Fee is \$60. For a complete description or registration form, call 202-245-4521.

Highway Administration produces native plant reference book

Roadside Use of Native Plants, a handbook reference for those who restore, design landscape, or manage native plant habitats, is now available from the Federal Highway Administration. The handbook contains primers on roadside restoration and management concepts. For each of the 50 states there is a native plant species list, other resources, and valuable appendices. The state-by-state information is provided as a starting point in decision-making. This handbook is aimed at preserving existing native remnants and restoring natural landscapes. Fax or call to obtain your free copy: Bonnie Harper-Lore, Vegetation Management, Federal Highway Administration, 651-291-6000 (fax); 651-291-6104.

Thompson WMA and Blandy led by Marion Lobstein. Call Mary Olien at Blandy 540-837-1758 x30 for info and reservations.

May 1, Saturday, 1 p.m. Bent Mountain trip, meet at Bent Mountain Elementary School. Jim Bush (Blue Ridge) 540-929-4775.

May 1, Saturday, 9:30-11:30 a.m. Trillium walk at Thompson WMA (Potowmack) For reservations & directions call 703-534-8179/703-920-1913.

May 8, Saturday, Prince William Wildflower Society annual plant sale, 9 a.m.-noon, Bethel Lutheran, Rt. 234, Manassas. Nancy Vehrs 703-368-2898.

May 8, Saturday, 9 a.m.-2 p.m. Blue Ridge Plant Sale, Community Arboretum, campus of Virginia Western Community College.

Wildflower Pilgrimage

The 30th annual Wildflower Pilgrimage, sponsored by the Blue Ridge Wildflower Society, Science Museum of Western Virginia and the Roanoke Valley Bird Club will be held April 23-25.

Keynote speaker on Friday evening will be author Leonard Adkins, who will present "Wildflowers of the Appalachian Trail." Adkins' new book, *Wildflowers of the Appalachian Trail*, will be available for purchase and signing at a reception following the program.

The weekend's events feature a variety of hikes and walks for all ages and abilities. To register or receive a brochure, call the museum at 540-342-5727.

Botany courses offered in spring and summer

Marion Lobstein will be offering a short spring wildflower identification course for Fairfax Audubon Society on March 31 and April 7 (evening lectures) and April 10 (fieldtrip to Balls Bluff, Va.). For more information contact Penny Ittner at 703-858-3818.

She will also be offering a plant identification course during the summer at Blandy Experimental Farm and State Arboretum of Virginia. The course is listed as EVEC 493/793 - Field Botany (3 credits through the University of Virginia).

May 16, Sunday, National Arboretum tour led by Marion Lobstein, Smithsonian Associates tour. Call 202-357-3030 for additional info.

May 16, Sunday, 10 a.m.-12:30 p.m. Great Falls Park, Va., wildflower walk led by Marion Lobstein, 703-536-7150.

Rowing center grounds open

The Magruder Dent Rowing Center in Charlottesville will be open for Historic Garden Week in Virginia. The Virginia Rowing Association's Temple Allen Boathouse is set on 6.5 acres of great natural beauty. The house, which contains 75 boats, is home to the University of Virginia's rowing crews and the Rivanna Rowing Club.

The natural beauty of woods, water and lawn has been thoughtfully enhanced by the creation of woodland, perennial and annual gardens designed, planted and cared for by Easter and Chris Martin. A large portion of the area had to be cleared of invasives such as kudzu, oriental honeysuckle and mimosa before the plan was launched. A number of native trees, shrubs and other plants can now be found here, including a variety of oaks, sassafras, viburnum, spicebush, Virginia bluebells and partridgeberry. A visiting entomologist called the butterfly garden one of the best he has seen.

The center is located at 276 Woodlands Road about a mile from the Ivy Creek Natural Area. For more information on the complex, call Easter Martin, 804-296-4560.

It meets from 9 a.m. to 4 p.m. June 21-24, June 28-July 1, and July 5-8. This course will cover basic principles of botany with emphasis on the classification, identification, and evolution of flowering plants. It will integrate lecture and laboratory with an emphasis on fieldtrip experience concentrating on identification and ecology of flowering plants of the Mid-Atlantic region.

For additional information call Blandy Experimental Farm at 540-837-1758, ext. 21 or Marion at 703-536-7150.

Red List of endangered plants contains alarming facts

The International Union for Conservation of Nature and Natural Resources Red List of Threatened Plants was highlighted at the 1999 Federal Native Plant Conservation Initiative (FNPCI) in Texas. In a letter to Secretary of the Interior Bruce Babbitt, Ms. Olwell, FNPCI Chair cited that on the global list are over 33,000 plant species considered at risk, 12.5 percent of the known vascular plants of the world.

The four alarming conclusions concerning U. S. native plants are:

1. Twenty-nine percent of the United States' 16,000 native plant species are at risk of extinction
2. The United States has the fourth highest percentage of at-risk native flora among the world's nations (after St. Helena, Mauritius, Seychelles)
3. The 4,669 U. S. native plant taxa at risk are found in every state and

represent the highest number of threatened plant taxa for any single country.

4. Over 90 percent of these at-risk plants are endemic to the United States, and thus if action is not taken they stand to be lost.

Peggy Olwell, FNPCI Chair, described strategies to protect these unique plant species, plant communities, and other wildlife, including pollinators and dispersers, from extinction. The positive side of the Red List is that only 395 of the world's estimated 270,000 higher plant species are believed to be truly extinct. Thus, timely intervention can save the vast majority of threatened plants.

You can access the Red List on the internet: www.nps.gov/plants/redlist.htm, and for the Red List: www.fws.gov. For more reading about this problem, see the section

on "Vascular Plants" by Duncan M. Porter and Thomas F. Wieboldt found in the book *Virginia's Endangered Species*. This volume was edited by Karen Terwilliger, published in 1991 by McDonald and Woodward Publishing Company, Blacksburg, and sponsored by Virginia Department of Game and Inland Fisheries in cooperation with Virginia Department of Agriculture and Consumer Services, Virginia Department of Conservation and Recreation and Virginia Museum of Natural History. (Listing of Threatened and Endangered species in Virginia is accomplished by VDACS in consultation with DGIF and DCR)

To update listings since 1978, see the Virginia DCR home page list of Threatened and Endangered species. You can access the list for your county www.state.va.us/~dcr/vaher.html.

Chip mills threaten Virginia's eco-tourism

Chip mills are a threat to wood product manufacturers and to Virginia's tourism industry according to the Virginia Forest Watch, a statewide alliance of conservation groups. Forest Watch supports legislation introduced by Bernie Day (D-10th District). Day's Virginia Chip Mill Study Act proposes that the state study the environmental and economic impacts of ever increasing numbers of chip mills operating in Virginia.

David Muhly, chairperson of Virginia Forest Watch, said, "Chip mills encourage large-scale clear cutting. They cut it all. It doesn't matter if it is small six-inch trees, or large saw logs, softwood pines, or large majestic oaks, they'll cut them all." Another Forest Watch member, Dr. Nancy Gilliam, is a resident of Delegate Day's home county. Dr. Gilliam said the chipping of whole trees is a threat to saw mills and furniture makers in Patrick County.

Forest Watch has gathered data from a survey of wood chipping operations in Virginia and neighboring states and has sent a map of all chip mill sites to legislators who will be considering the bill. Dr. Gilliam said, "We are especially concerned with those mills

which are chipping whole trees. According to our research, there are presently 21 such mills in Virginia and an additional 43 in surrounding states within a 75-mile radius that can easily import Virginia trees. There's a lot more economic value and jobs attached to whole wood products than there is to wood chips."

Gerry Scardo, a Virginia Forest Watch member from Dickenson County, said, "We have to look out for our future. The U. S. Forest Service has documented that on national forest land, tourism brings in 38 times more dollars and 31 times more jobs than timbering."

One of the largest chip mills in the United States is located near Lynchburg and produces over two million tons of chips each year....capable of grinding up 200 truckloads of trees per day. Virginia Department of Forestry figures report that logging in the western sections of Virginia has increased by 50 percent in the last eight years. In addition to the negative effect of clear cutting, the watersheds will be impacted.

In response to the question of what is the source for the trees to be

chipped, the trees for the average chip mill logs come from private landowners and national forests. There is such a shortage of softwood that tree farms will not provide enough chips. They are headed straight at the hardwood forests in Virginia and elsewhere. Hardwood removal is expected to exceed growth within a 1-10 year period. Two mills in Pennsylvania are sourcing out of six national forests plus whatever private landowners will sell. About half of the trees cut on national forests is going for pulp for paper manufacturing and one of the primary purposes of the chipping of timber is wood chips used in products such as particle board.

The Chip Mill Study Bill HJ730 passed out of the House over to the Senate in February. Should this bill pass the Senate, results of the study with recommendations are due to the Governor and the 2001 Session of the General Assembly.

For more info, contact Gerry Scardo, e-mail: jscardo@compunet.net or David Muhly, chairperson, Virginia Forest Watch, 209 Malin Drive, Wytheville, VA 24382 540-228-4156 or e-mail: davem@naxs.net.

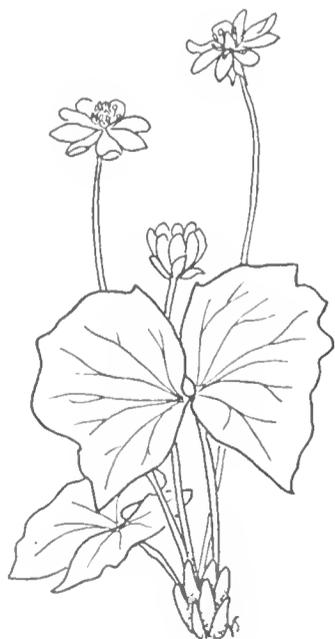
For the Wildflower Gardener

VNPS members share their twinleaf secrets

The presence of plants such as twinleaf (*Jeffersonia diphylla*), green violet (*Hybanthus concolor*) and shooting star (*Dodecatheon meadia*) indicates calcareous soil. They're often found on north-facing slopes, shaded and cool even in summer.

This information, gleaned from *Finding Wildflowers in the Washington-Baltimore Area* (Cristol Fleming, Marion Lobstein and Barbara Tufty) helped me realize why twinleaf was not growing well in my garden's hot, dry shade and acid soil. Along with most other wildflower gardeners, I've learned that while many natives are easy to grow in a wide range of soils and climates, some, like twinleaf, need conditions more like those of their wild habitats.

The consensus among VNPS gardeners I consulted in Jefferson and Blue Ridge Chapters is that, though twinleaf occurs there in the wild, their soil is not naturally alkaline enough for it to grow well. In addition to a shady, cool eastern or northern exposure and extra humus in the form of compost or leaf mold in the soil, they add lime to get plants to grow well in their gardens. Fran Boniti planted a clump of twinleaf on top of a slab of con-



crete that she'd buried a couple of inches. This method allows limestone to leach slowly into the plant's root zone and she doesn't have to remember to add lime each year.

Ted Scott had beautiful clumps growing in his garden near Orange. He says the soil was full of rotted greenstone, was very high in organic

Twinleaf available at Jefferson sale

Appropriately, *Jeffersonia diphylla* will be available for sale at the spring plant sale of the Jefferson Chapter of VNPS. The Jefferson Chapter's sale is Sunday April 25, 1-5 p.m. at the Ivy Creek Natural Area. The day's events include a natural history day as well as the native plant sale. There will be numerous events to enjoy. Call June Griffin 804-293-2605 for more information.

matter and had a pH of 6.7. Quintin McClellan, owner of a native plant nursery in the Blacksburg area, adds limestone sand to areas where he wants twinleaf to grow. Limestone sand, actually blue-gray in color, is available very reasonably priced from any quarry. He says it will last forever, helping to sweeten the soil, and won't wash out of the soil like lime does.

All three propagate twinleaf from seed, and seem to agree, in Quintin's words, to "just let nature do the trick." He starts freshly collected seed in 4-inch-deep flats. Ted uses pots and a commercial mix; Quintin adds one part limestone sand to four parts each rotted leaves and rotted manure. Containers are heeled in the ground and covered lightly with chopped leaves through the winter. Seeds begin germinating the following spring. This method is also used at Monticello's Thomas Jefferson Center for Historic Plants. Fran scatters seed directly underneath the mother plant. All stressed the importance of using

fresh seed, collected just as it's turning brown even before the hinged lid of the jug-shaped seed pod opens, and keeping the soil watered through the summer. Ted recommends removing the eliosome to make seeds less attractive to ants that might carry them off. Seedlings grow slowly and can be transplanted while dormant in a year or so. They will begin flowering in three to five years. Plants can also be propagated by division in late summer or fall while they're dormant.

Twinleaf is one of the earliest natives to bloom. Peggy Cornett, Director of the Center for Historic Plants, says it blooms there in time for Jefferson's April 13th birthday. Since its pure white, eight-petaled flowers are so fleeting, its value in the garden comes from the handsome light green foliage. It's worth the extra effort either to find a location moist enough yet not soggy, or to water and mulch during dry spells, to keep the foliage looking good through the summer. Planted beside a rock (limestone if possible) or a tree trunk, a single clump will be a beautiful accent. If it grows well for you, you'll find it increases by seed and roots to form lovely drifts.

(See *Jeffersonia*, page 9)



Jeffersonia diphylla, twinleaf
Illustrations by Nicky Staunton

•Spring

(Continued from page 1)

early spring may vary in one day from 32 to 77 degrees F. Most insect pollinators do not become active until temperatures reach 55 degrees F. Bumblebees are an exception in becoming active at 41 degrees F.

The overhead tree canopy begins developing by mid-April and is completed by early May. In the deciduous forest in March, 50 percent of the sun light is available, by mid-April it is 32 percent, and it drops to less than 10 percent by early May. The filling in of the canopy not only affects the light intensity that reaches the forest floor but also the amount of moisture that reaches the ground because it blocks rainfall.

In addition to the role of average soil and air temperatures for an area of deciduous forest, microclimate factors such as precipitation, soil moisture, relative humidity, evaporation, wind, orientation of slopes, altitude, soil temperature at various depths and nutrient variation are all important factors in controlling shoot development as well as flowering.

For example, the threshold temperature of summation of air temperatures is 40 degrees F for spring

beauty and wild bleeding heart, but 50 degrees F for Dutchman's breeches and is slightly higher for squirrel corn. In the same general area for the same species there can be a two- to three-day delay of development on north-facing slopes compared to south-facing slopes.

By the end of March less than 50 percent of days reach freezing temperatures and by early April less than 10 percent. It is during this narrow time window from March or early April until early May that a balance must be accomplished by these species—enough warmth to begin and continue above ground development, enough light and moisture to sustain photosynthetic activity so that energy can be locked in underground storage structures, yet still enough warmth that insect pollinators may be active. Some authors contend that differences in moisture availability because of the changing canopy cover is as or more critical to spring wildflowers than is light intensity.

The ecological factors affecting spring wildflower development and flowering are complex but fascinating to consider. See how many of these you can observe this spring.

Marion B. Lobstein, PWWS Botany Chair

•Jeffersonia

(Continued from page 8)

In the wild, twinleaf grows with several less habitat specific spring ephemerals that are good companions in the garden. These include spring beauty (*Claytonia virginica*), toothwort (*Dentaria* spp.) and Dutchman's breeches (*Dicentra cucullaria*). Be sure to include other more permanent natives that share twinleaf's cultivation requirements and will accent its butterfly wing shaped leaves. Some good choices are merrybells (*Uvularia* spp.), Jacob's ladder (*Polemonium reptans*), columbine (*Aquilegia canadensis*) and bleeding heart (*Dicentra eximia*). Two slow growing ferns, maidenhair (*Adiantum* spp.) and rock polypody (*Polypodium virginianum*), thrive in a neutral to alkaline soil and would also be good companions.

Though twinleaf is not readily available in the nursery trade, check to see if plants can be purchased at your local chapter plant sales or find a fellow gardener who will share seeds or plants. I have compiled a list of nurseries that sell propagated plants. For a copy, send a SASE to Twinleaf/VNPS, Blandy Experimental Farm, 400 Blandy Ln., Unit 2, Boyce, VA 22620.

Nancy Arrington, Horticulture Chair

See the address label for your membership's expiration date.

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Boyce, VA 22620

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The Bulletin

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The deadline for the next issue is April 1

Extend spring with an adventure to the Bruce

The VNPS pilgrimage to Canada's Bruce Peninsula is scheduled for June 12-19. Co-leaders for our 1999 trip are Dr. Stan Shetler, Botanist Emeritus of the Smithsonian Museum of Natural History and Nicky Staunton, on her sixth trip. Ted Scott designed and led the Bruce trips originally.

The Bruce Peninsula is between Lake Huron and the Georgian Bay and is a continuation of the Niagara Es-

carpment. Wildwood Lodge, Mar, Ontario, will be "home" for the week and is located on the shore of Red Bay and Lake Huron. The Ojibway tribe controlled the land until 1836. European settlers arrived in 1840. Canadian John Macoun botanized the area and Professor M. L. Fernald visited the Bruce in the early 1920s, describing it as being a "place out of time." Two-thirds of the Peninsula was under lake

water 11,000 years ago.

The Canadian spring offers unusual orchid species such as the rams head (*Cypripedium arietinum*), fairy slipper (*Calypso bulbosa*) and showy lady's slipper (*Cypripedium acaule*). The rare lakeside daisy (*Hymenoxys herbacea*) will be visited in its Alvar home. Robert's fern (*Gymnocarpium robertianum*) will also be "at home" for a visit in its Alvar pavement gryke (crack).

There will be birding trips during the week. Last year, the American bittern was posing in a field on the Isaac Lake Road. Common loons are heard and usually seen. Wildlife viewing could reveal porcupine, fox, snapping turtles and spawning carp churning the water of Dorcas Bay.

The cost for the trip is \$450 which covers lodging and food (scrumptious and bodacious!) for the week and the boat trip across the Georgian Bay to Flower Pot Island. Day travel will be by carpools. The route from Virginia into Canada usually is broken up with an overnight in Buffalo with road costs paid by the participants.

There are several spaces remaining for this trip. To learn more, the August 1998 VNPS *Bulletin* describes the Bruce trip in an article written by 1998 co-leader Cris Fleming. For more info, contact Nicky Staunton 703-368-9803 or e-mail: staunton@erols.com).

Fundraising appeal nets good response

The Finance Committee of the VNPS Board has sent letters of appreciation to the 130 members who have already responded to the solicitation that was mailed in December. With individual gifts ranging from \$10 to \$500, a total of almost \$5,000 has been received so far. About half of the members asked for a copy of Mary Painter's dedication speech and more than half responded with suggestions as to the use to which the gifts could be put. Elaine Smith, the Board Corresponding Secretary, is collating the suggestions and the committee hopes to issue a report to the membership by summer.

Responses to the appeal continue to be received at our Blandy Farm address and are always welcomed. The members of the Finance Committee are preparing and mailing thank you

letters. A formal report to the VNPS Board is anticipated for the March meeting.

On the agenda for the Finance Committee is an investigation of sources of funding outside the membership, such as foundations and government grants. Because these grants are usually directed at specific activities such as research or education instead of general support, the committee's efforts will need to be coordinated with other chairs such as Conservation, Education and Publicity. Members with interests in these areas are invited to offer ideas to any member of the board. Your chapter representative, who may also be the chapter president, is perhaps your most accessible board member.

John Fry, Treasurer

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Bulletin

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

New registry site added in Clarke Co.

At the recommendation of the Piedmont Chapter, the VNPS has recently added Calmes Neck Bluffs, in Clarke County, to the state registry of outstanding sites. The site is the first listing with multiple ownership. The leading owner, Fran Endicott, is a long-time member of the chapter who has often opened her property for field trips.

Calmes Neck Bluffs features bluffs, slopes, and ravines along the Shenandoah River. Two outstanding natural communities which occur here have been inventoried, with at least eight rare or unusual plant species, including sweet-scented Indian-plantain (*Cacalia suaveolens*), spreading rock cress (*Arabis patens*) and riverbank goldenrod (*Solidago rupestris*). The rich, mesic slope forest is home to a spectacular diversity of spring wildflowers, including harbinger-of-spring (*Erigenia bulbosa*), twinleaf (*Jeffersonia diphylla*), dwarf larkspur (*Delphinium tricorne*), Dutchman's breeches and squirrel corn (*Dicentra* spp.)

(See Registry site, page 4)

Annual Meeting

Celebrating our native plant heritage

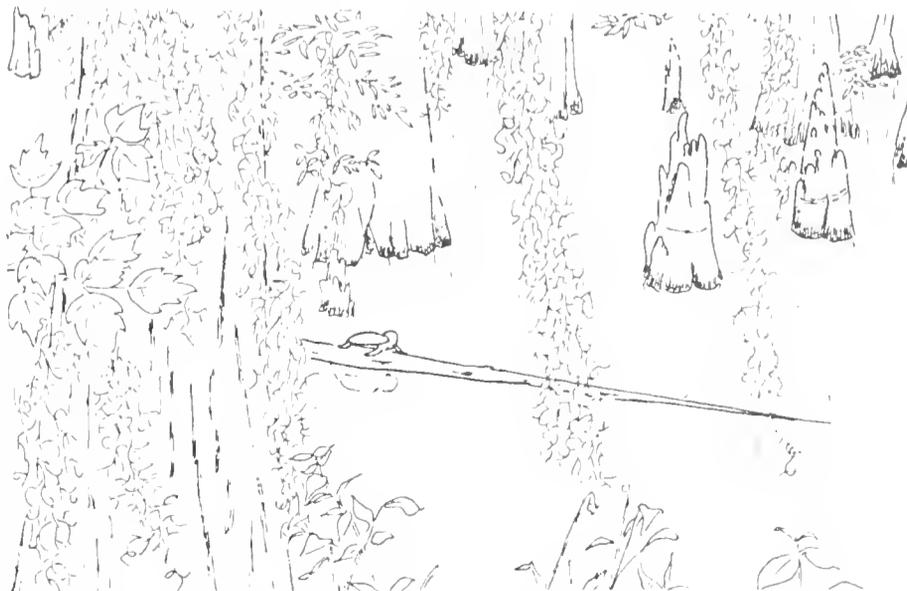
The 1900s are almost gone, but what a century it has been; what a sustaining force our native flora has been to man. Come celebrate this natural heritage and look to the future with host chapter South Hampton Roads at the VNPS Annual Meeting September 17-19 in Norfolk.

"Our Preserved Heritage and Promise for the Future," is the weekend theme. Accommodations will be at the new Sheraton at Waterside, downtown Norfolk. Friday will include the traditional casual social evening, with a program presented by South Hampton Roads president Vickie Shufer that centers on the past and present of our natural heritage. Expect some delightful surprises as she introduces some of our wild edibles. Not only is Vickie the host chapter president, but she is editor

of the internationally-circulated periodical, *Wild Foods Forum*.

Several Saturday field trips will reflect the unique relationship of water and our wetland natives. View the majesty of Lake Drummond in Great Dismal Swamp, and towering, moss-covered bald cypress in First Landing Seashore State Park. Stand among water oak and tupelo in the Blackwater River floodplain; glide along the shores of North Landing River, and experience Back Bay Wildlife Refuge. Many of the field trip sites will be profiled in the next *Bulletin*.

Evening festivities should be lively with a combination of a "mystery auction" and an animated post-banquet speaker, Michael McConkey, owner of Edible Landscapes in Afton, Virginia. Don't miss the last official VNPS weekend of the century!



Bald cypress trail, First Landing Seashore State Park, Illustration by Nicky Staunton

From the President

As membership chairman of one of the chapters, I receive the membership information on each member as filled out on his/her application. Of the interests checked off, botanical surveys and native plant walks are the most popular. But I am also an active chapter member who goes on the walks and attends the meetings. Of the number of members who listed botanical surveys as one of their interests, I see very few participating in the walks. Why is that?

When I attend the VNPS Annual Meeting which is open to all members, I notice that barely six percent attend. It offers a chance to meet members of other chapters, meet the state officers, and go on some great walks and hear some great talks. Why don't more members attend?

Whether a chapter is holding a plant sale, exhibit, or developing a public garden, very few of the chapter members involve themselves in these events. Why is that? Many members state on their applications that they either have "no time" or "little time." No doubt there are compelling reasons for this. But may I remind you that joining an organization is like opening a checking account. You only get out of it what you put into it! If you decide that the organization no longer is of any interest to you, ask yourself what have you contributed to it? My message to you this spring is to get out and get involved, take hikes, attend meetings, browse the rows of plants at the chapter sales. How involved are you in your chapter's activities? I think that you will find the answer!

Your president, Marie F. Minor

Tree planted to honor hard work of Whites

John and Phoebe White were honored in early April for their 16 years as Treasurer and Membership Chair, respectively, of the Virginia Native Plant Society.

Friends from the Virginia Native Plant Society and the Piedmont Chapter had a white ash (*Fraxinus americana*) planted in their honor at the Native Plant Trail in the State Arboretum of Virginia at Blandy Experimental Farm, Boyce.

The Friends of the State Arboretum of Virginia participated in the venture with suggestions and placement of the tree, which is a sturdy and straight tree at the en-



Fraxinus americana, white ash
Illustration from *Forest Trees of Virginia*

trance to the Nancy Larrick Crosby Native Plant Trail. A luncheon and a walk past the spring blooms on the trail followed the dedication.

Updated nursery source list

The VNPS list of nurseries that sell native seeds, perennials and woody plants has been updated and now includes e-mail addresses and websites. Copies are available through local chapters or send a SASE to VNPS Source List, 400 Blandy Farm Lane., Unit 2, Boyce, VA 22620.

Watch for VNPS t-shirts

Coming soon! Virginia Native Plant Society t-shirts decorated with Virginia wildflowers and stamped with the VNPS web address, motto and logo will be ready soon. More information about ordering and how local chapters can raise money from t-shirt sales will be available in the next *Bulletin*.

Board approves dues increase

In order to help meet the rising costs of running a state-wide organization, the VNPS Board approved a small increase in annual membership dues at its March 6 meeting. This June 1 increase affects several membership categories as follows: Student \$15; Individual \$20; Family \$30; and Life Member \$500.

The membership categories of Associate \$40, Patron \$50 and Sustaining Member \$100, remain the same. Also, the introductory rate of \$15 for an individual new member will remain effective for the first year of membership.

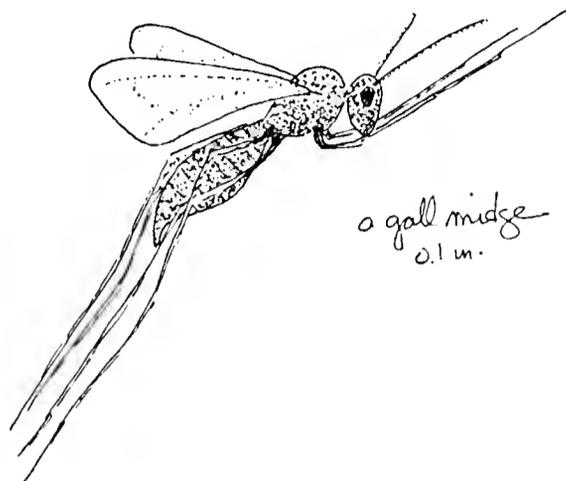
Discussions of increasing dues began last September at the Annual Meeting when the proposed 1999 budget showed a shortfall. It was brought to the board's attention that various factors contributed to the shortfall last year, for example, educational publication costs and related mailing cost increases, lack of two traditional fundraisers and the anticipated costs related to our establishing an office at Blandy Experimental Farm, in Boyce, Virginia.

The finance committee proposed the increase to the board at the November 1998 Executive Committee meeting and again at the full board meeting in December 1998. After much discussion, it was decided that a modest increase of \$5 in the first three categories listed above was warranted to help meet the rising operating costs. However, it was also recognized that this dues increase is a rare measure that will not satisfy budget needs by itself and must be accompanied by increased fundraising, grants, self-sustaining (fee based) programs and a broader membership base over time.

Members who wish to renew early before the June 1 dues increase may do so through their chapters or by filling out and mailing in the renewal form in this newsletter accompanied by a check made out to VNPS.

Charles Smith, Membership Chair

Plant-insect partnerships explored at VNPS workshop



"Nature's Partnerships: Plant-Insect Connections" offered varied information to the 118 VNPS members who attended the workshop. Phil Sheridan's slides of carnivorous plants gave us an inside view of a leaf that had been sliced open to reveal inches of insects packed in it.

Sarracenia purpurea and *S. flava* occur in Virginia in sandy, wet soil in southeastern counties. Plants can grow to 44 inches high. Queen bumblebees are the chief pollinators. The greatest threat to the

plants is habitat destruction (www.pitcherplant.org).

Bees, beetles and other insects were the subject of Dr. Brad Goodner's presentation (University of Richmond). A brief overview of the presence of insects on earth preceded hearing about plants and insects evolving together. In the beginning, pollen too heavy for wind dispersal remained on the insects that were feeding on pollen. Pollinators are Hymenoptera, (short- and long-tongued bees); Lepidoptera (butterflies); Diptera (See *Insects*, page 8)

Lucky winner will receive plant reference books

The Virginia Native Plant Society Fund Raising Chair, Nicky Staunton, announces that the Society's Board of Directors has approved the raffling of an invaluable set of books for field botanists, botanical students and native plant gardeners.

The winner of the raffle will receive two reference books, together worth nearly \$200, that are indispensable to serious students of the flora of our region. The first is the *Manual of Vascular Plants of Northeastern United States and Adjacent Canada* by Henry A. Gleason and Arthur Cronquist (2nd ed., 910 p., 1991), which retails for \$69. Complementing it is *The Illustrated Companion to Gleason and Cronquist's Manual—Illustrations of the Vascular Plants of Northeastern United States and Adjacent Canada* by Noel H. Holmgren and collaborators (937 p., 1998), which retails for \$125. The winning ticket will be drawn at the September Annual Meeting in Norfolk.

The manual is the condensed but updated and revised text of *The New Britton and Brown Illustrated Flora of the Northeastern United States and Adjacent Canada* by H. A. Gleason and collaborators (3 vols.), published in 1952 and long out of print. The manual, includes identification keys and descriptions for all species of ferns, fern allies, conifers, and flowering plants known to be native or naturalized in the Northeast at the time of publication. As

such, it is the only definitive guide that is relatively current for the region, but it lacks the illustrations of the parent work.

Now the black-and-white illustrations of the *Illustrated Flora*, plus some new ones, are finally available again in the just-published, separate, *Illustrated Companion*. This hefty volume (7 x 10 x 2 1/4 inches) includes one or more line drawings for nearly every species included in the *Manual*. It is indexed by both the scientific and the common names, and the individual pages of illustrations are cross-indexed to the *Manual*.

Good keys, descriptions, and diagnostic illustrations are essential to the proper identification of plant

species. The winner, with the *Manual and the Illustrated Companion*, will have all of these aids and thus will be equipped with the tools of the professional botanists for this region.

The *Manual* is also the editorial guide for VNPS publications. If the set is not high on your library list, it would be a wonderful gift to the school of your choice to accompany botany class work by a high school or college student in your family.

The funds raised from member donations for the raffle chances will support VNPS programs in education about conserving native plants.

For every \$2 you receive a chance at winning this set of books. For \$10, you will receive 12 coupons.

VNPS Raffle Coupon for Gleason and Cronquist's *Manual* & *The Illustrated Companion to the Manual*

--Preserve your Bulletin, photocopy this coupon--

YES! I want to enter the Raffle for the book set of *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*, AND *The Illustrated Companion to the Manual*.

Name _____
 Address _____
 Phone _____
 Amount enclosed ____ for ____ (number of coupons)

\$2/coupon
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coupons

My donation entitles me to a chance(s) at winning Gleason and Cronquist's *Manual* and its *Illustrated Companion*. Make your check payable to VNPS and mail to Virginia Native Plant Society, Blandy Experimental Farm, 400 Blandy Farm Lane, Unit 2, Boyce VA 22620.

For Wildflower Gardeners

Impressive native plant sessions featured at conference

Native plants were featured in an impressive number of presentations during the Professional Horticulture Conference of Virginia and Trade Show at Virginia Beach in January. This annual four-day conference is sponsored by several organizations including the Virginia Nurserymen and Landscapers Association and the Virginia Department of Forestry.

Tony Avent, owner of Plant Delights Nursery in Raleigh, North Carolina, presented separate programs on native perennials for shade and sun. With the enthusiasm of an evangelist he raved about his favorite 200 or so natives — some as common and well-known to native plant gardeners as may-apple (*Podophyllum peltatum*) and others such as a green and gold (*Chrysogonum virginianum*) called 'Greystone' that flowers non-stop. He and other nurserymen are interested in selections or variations of natives (usually naturally occurring) that are more attractive, easier to grow and better suited to today's gardens.

Baptisia, including white-, blue- and yellow-flowered species, is a favorite group of his. 'Prairie Smoke,' a natural hybrid (the result of unsafe sex according to Tony) of *B. australis* and *B. alba*, has the vigor and blue flowers of the former and the charcoal gray stems of the latter. It was discovered by

Rob Gardener in a row of seedlings at the North Carolina Botanical Garden. Yellow-flowered 'Prairie Moonlight,' also from NCBG, will be available in a couple of years.

Three groups of native shade plants receiving a lot of attention from nurserymen are wild gingers (*Asarum* spp.), heucheras and trilliums. Some heucheras such as 'Raspberry Regal' have showy flowers while 'Chocolate Ruffles' has large chocolate brown leaves. Several trillium species are being propagated by tissue culture and should be available in a few years.

The third "strictly natives" program I attended was on woody plants and was presented by Larry Steward, a horticulture professor (and VNPS member) from Troy, Virginia. I liked Larry's commonsense approach to natives. In addition to matching the right plant to your particular site, realize that native doesn't automatically mean more suitable or more disease and pest resistant (remember invasive exotics) and, above all, native doesn't mean no maintenance.

The 15 trees on his "favorites" list were chosen for their attractive flowers, fruit and fall foliage as well as their adaptability to Virginia landscapes. He recommended many native shrubs including little-known groundsel-tree (*Baccharis halimifolia*), a coastal

native with very showy cottony seed heads, and Alabama snow wreath (*Neviusia alabamensis*), a rare spring-blooming woodland native.

Larry's recommended vines included the virgin's bower clematis (*C. virginiana*) that blooms in late summer and fall with clouds of fragrant, white flowers. Also receiving praise as a wonderful substitute for the rampant Oriental wisteria was our better behaved native (*W. frutescens*) available in a rare white-flowered form along with the familiar blue.

Additional presentations of interest to native plant enthusiasts included several on tree care and wetland restoration, the latest information on safe pesticide use, blending natural and urban landscapes and a butterfly gardening presentation by VNPS member and garden designer Holly Cruser.

This was a first-class conference with knowledgeable and professional speakers, and a large trade show of educational exhibits and displays of equipment and plants. The attention paid to native plants was very encouraging. Perhaps Tony Avent's enthusiasm will cause Virginia nurserymen to carry even more natives so that gardeners can buy locally instead of mail-ordering from nurseries such as his! Nancy Arrington, VNPS Horticulture Chair

•Registry site

(Continued from page 1)

and expanses of Virginia bluebells (*Mertensia virginica*).

The dry-mesic forest has a very high species richness of woody plants and specialized, rock-inhabiting herbaceous species. While other areas of Calmes Neck have been developed for residential and agricultural use, much of the portion under registry is rela-

tively undisturbed. The Piedmont Chapter is fortunate in having a member like Fran who is enthusiastic about the natural resources of her property. She is also an expert birder, active with her chapter of the Audubon Society. VNPS is happy to have a chapter which has now registered three of our 13 statewide sites.

John Clayton Chapter
hosting plant sale

The John Clayton Chapter will be having its Spring Wildflower Sale together with the Virginia Living Museum on May 8, 9, 15 and 16. Sale times are 9 a.m. to 3 p.m. on Saturdays and noon to 3 p.m. on Sundays. The sale will be located at the Virginia Living Museum, 524 J. Clyde Morris Boulevard, Newport News. For more information, call 804-642-0923 or 757-595-1900.

Hemlock dilemma: Parasitic insect destroying native hemlocks

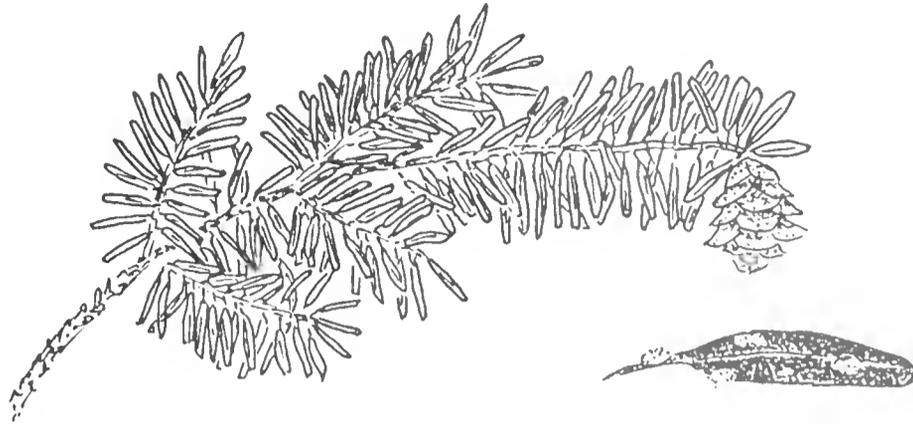
From southern New England through Virginia and into northern North Carolina, the woolly adelgid, a parasitic insect, is affecting hemlock trees. According to forest entomologist James Rhea, in the late 1980s 90 percent of the hemlocks in Shenandoah National Park were healthy, now only five percent of the Park's hemlocks are. "North of Charlottesville, the trees are pretty heavily impacted; south of Charlottesville to Roanoke, the impact is scattered but increasing," he says.

Even there, says Rhea, many hemlocks are visually sick and expected to die within the next few years. The woolly adelgid attacks both Canada hemlock (*Tsuga canadensis*) and Carolina hemlock (*Tsuga caroliniana*). The following article, written by VNPS Publicity Chair Nancy Hugo, appeared in the February 13, 1999 Richmond Times-Dispatch.

"In the wild, it's gone," says Virginia Tech forester Dave Smith describing prospects for hemlocks in Virginia forests.

"In 10 to 15 years we will not have hemlock stands," says James Ackerson, Forest Ecologist for Shenandoah National Park.

The reason for these dire predictions is a parasitic insect called the woolly adelgid that is sucking the life from hemlocks in Virginia forests. I had been hearing about the woolly adelgid for years and was under the impression it was headed to Virginia from the north (hemlocks in Connecticut and New Jersey have been particularly hard hit), but I was wrong. The



Eastern hemlock and woolly adelgid
Illustrations by Nicky Staunton

Asian insect responsible for the problem entered the West Coast in 1924 on nursery stock and was first recorded on the East Coast in Richmond. The inventory card at the Virginia Department of Agriculture that records the pest's identification here in 1952 doesn't tell us whether the sample was collected from nursery stock or from a homeowner specimen, but the woolly adelgid was clearly here in 1952. "Almost the entire East Coast infestation came from there," says Ackerson of Richmond's unwelcome immigrant.

Forest ecologists, tree lovers, and homeowners should all be interested in this phenomenon because not only does it affect the character of our woodlands (particularly west of Richmond where the tree is more common) but it affects whether or not we should choose hemlocks for home landscapes. I have been stewing for two years over whether or not to plant a hemlock hedge at my new home like the one I loved at my old

home. Horticulturists advised against it because of the woolly adelgid, but because no other tree suited my shady spot as well and my old hedge was still so healthy, it was hard to strike hemlock from my considerations. Confusing, too, were the comments of more than one nurseryman who seemed unaware of the problem. "Never heard of it," responded one when I asked if he warned hemlock buyers about the woolly adelgid.

Also confusing is the fact that there seem to be so many healthy hemlocks in the Richmond area. Several reasons for this have been suggested to me. One is that hemlock owners may be spraying the trees to control the adelgid. "We're spraying for it religiously," says Peggy Singlemann, Manager of Horticulture at Maymont Park, who says spraying with horticultural oils has saved hemlocks there. It's also possible that some hemlocks in the Richmond area haven't been affected yet, that they are getting so much water they are (See *In the wild*, page 8)

.....Ladybugs to the rescue!

Two glimmers of hope exist on the hemlock horizon—one for controlling the woolly adelgid biologically, the other for saving specimen hemlocks with sprays that treat the infestation. The biological control offers hope even for forest hemlocks, but it has just begun to be tested. Two years ago in Rockbridge County near the Blue Ridge Parkway and last year in western Albemarle, researchers released thousands of tiny

Japanese ladybug beetles that feed on the woolly adelgid. These beetles, which are much smaller than familiar ladybugs (as small as poppy seeds) are the adelgid's natural predators in Japan, and scientists hope they will reproduce here without proving harmful to other aspects of the environment, and control the woolly adelgid as they do in Japan. So far, according to lead scientist Mark McClure, the results look promising and two

more releases are planned for the Blacksburg area this spring.

It will take years to tell whether or not the Japanese ladybug beetles will reproduce at a rate that keeps up with the adelgid, however, and in the meantime, hemlocks are dying. To save those that they can reach and that have high visual impact, foresters (and homeowners) are spraying hemlocks with insecticidal soaps and horticultural oils (both act to suffocate the insect).

There is also a systemic insecti- (See *Help for hemlocks*, page 7)

Galapagos endemics threatened by invasive exotics

The Galapagos Islands are known as the land of giant tortoises, or of Darwin's finches--not as the land of the Galapagos daisy tree, or the giant prickly pear cactus, two of the islands more famous endemic plant species which attract little attention when compared to their more "active" neighbors.

The islands have been referred to as a living laboratory of evolution. As Robert I. Bowman once said "No area on earth of comparable size has inspired more fundamental changes in man's perspective of himself and his environment." Strong words. Over 700 scientific papers have been published on the flora and fauna of the archipelago. The most famous, *On the Origin of Species* published in 1859 by Charles Darwin, changed forever our perception of our beginnings and sparked a controversy that exists to this day.

What is especially unique about Galapagos is that it has remained relatively untouched by the hand of man. The Island of Fernandina is considered to be the largest pristine island on earth. Of the approximately 600 plant taxa found in the archipelago, 41 percent are considered endemic. On the island of Santa Cruz there are six separate "life zones" in 600 meters of elevation starting with a lowland arid desert, and ending with lush highland forests of moss-covered trees and valleys of ferns.

I've enjoyed my visits to the islands and upon my return home each time, I've tried to spread the word about what a wonderful and fragile place this is. But as wonderful as it may be, the time for contentment is running out. As we humans learn more about our effects upon our surroundings, whether they be intentional or not, one thing is clear over and over - whenever we have introduced a species into a foreign land, it has had the potential of causing dramatic changes to local ecosystems. Galapagos, unfortunately, is no exception to that rule.

As I'm writing this, I've just returned from a portion of the Galapagos National Park on Santa Cruz Island called "Media Luna," or in English, "Half Moon." Media Luna is home to several endemic species of Galapagos plants and animals, including cacaotillo (*Miconia robinsoniana*), a plant which is now in danger of extinction on this island due to its inability to compete with the introduced quinine tree (*Cinchona succirubra*). *Cinchona* was first introduced to

As I stood with park guard, Angel Rene Valle Carrion, atop Media Luna which is an extinct volcano crater, I could see the line separating the *Miconia* and the encroaching quinine. It's the same thing on the other side of the next hill, where the *Cinchona* is choking out stands of *Scalesia*. Rene looked at me and said "I dream of the day when all of the *Cinchona* are gone." I could see the look of determination and love for the islands in his eyes. The Galapagos National Park

Miconia are beautiful plants, members of the family Melastomatacea, one of the oldest families of plants on earth. John C. Magee, founder of CDF

Galapagos in 1938 as an attempt to raise quinine for malaria treatments. However, the wrong species was brought and it has never been used as an agricultural product. It has escaped cultivation and spread to over 4,000 hectares of land in the highlands of Santa Cruz, choking out native forests of *Miconia* and the giant sunflower tree (*Scalesia pedunculata*).

Miconia are beautiful plants, members of the family Melastomatacea, one of the oldest families of plants on earth. Inside the forests of *Miconia*, the endemic nocturnal sea bird, the dark-rumped petrel (*Pterodroma phaeopygia*), nests in tunnels on the ground. They then use the *Miconia*, which slant outward from the hillsides, as sort of a launching pad for flight. These two species have evolved together over time, forming one of the fragile combinations between endemic plants and animals that makes the Galapagos so unique. If the quinine does take over, not only will the *Miconia* and *Scalesia* forests be lost, but the dark-rumped petrel may become extinct on Santa Cruz.

Service (GNPS) has been trying to keep the quinine from spreading further into the *Miconia* forests. At the present time, manual eradication of the trees, is the best solution. The GNPS, along with the Charles Darwin Research Station (CDRS) are running continuing test plots to find the best method of removal and eradication.

In an effort to turn the tide against introduced species in the islands, the CDRS, and the GNPS have set forth on the task of eradicating quinine from the island of Santa Cruz. Although in some cases, there has been successful eradication of newly introduced species, there has never been a successful eradication of an established exotic invasive plant species. National park systems from around the world are watching in anticipation of the successes in this campaign. If successful, it will prove to everyone that an established exotic species can be removed and habitat restored to its natural condition, and it will be a moral boost for the park systems of the world against threats of introduced species.

Their work is an incredible hard-
(See Gardening, page 10)

From Near and Far

New journal for native plants

Native plant lovers will be interested to hear of a new journal, *Native Plants* - aimed at "growing and planting for conservation, restoration, and reforestation." This journal will be published by the University of Idaho. The magazine editors are soliciting contributions. The publishers hope to centralize user-friendly information regarding native plants that may not be currently published. Recognizing a diverse audience, both peer-reviewed and non-peer-reviewed articles will be considered. *Native Plants* will be published twice annually beginning in 2000.

SUBMISSION GUIDELINES FOR NATIVE PLANTS

Two types of manuscripts are welcome: 1. GENERAL ARTICLES / SHORT NOTES include articles that are not research *per se* (lack strict experimental design and statistical analysis), but have important information for growers and planters of native plants. Articles could include new planting techniques, useful equipment, cultural techniques, habitat restoration, restoration techniques, production trends, technical information, descriptions of new species or cultivars entering nursery production, etc. 2. REFEREED RESEARCH ARTICLES (and scientific reviews) should have sound application of scientific method, appropriate statistical analysis, and include an introduction, methods and materials, results, discussion, practical implications (stating how and why this is important to growers and planters of native plants), and references. If possible, please include the names and contact information for two potential reviewers of your manuscript.

For more information, contact Kas Dumroese, Editor, Native Plants, Forest Research Nursery, University of Idaho, Moscow, Idaho 83844-1137, or call 208-885-3509 or e-mail natives@uidaho.edu.

Augusta couple donates preserve

An Augusta County couple, Dr. Robert Mueller and his wife Elizabeth, became the first Virginia landowners to dedicate their private property as a Virginia Natural Area Preserve earlier this year.

The land, a 29-acre Shenandoah Valley fen, will remain a natural area in perpetuity. The preserve will be managed by the Department of Conservation and Recreation (DCR).

The marsh contains a variety of wetland plants including bog buckbean, pussy-willow, queen-of-the-prairie, shining ladies' tresses, prairie sedge and smooth loosestrife.

"This is an exciting first for the Commonwealth," said Virginia Secretary of Natural Resources John Paul Woodley Jr. "We are grateful for the Muellers' generosity and forward thinking. Dedication is a valuable tool for protecting significant natural resources, and

we hope that interested landowners would strongly consider it."

The preserve, which is the 24th in the state, will be called Folly Mills Creek Fen Natural Area Preserve.

For more information about the preserve program, contact the DCR at 804-786-7951 or visit the website at: <http://www.state.va.us/~dcr/dnh>

Tree lab has seed separation services

The National Tree Seed Laboratory, run by the Forest Service, is expanding into the seed testing and seed processing of native plants and endangered plant species. If you are in need of this service you can contact the lab by phone 912-751-3551 or look up the website http://willow.ncfes.umn.edu/seed_lab/ntsl_01htm to find out more. The seedlab has equipment to separate the seed from its seed parts and then get rid of the debris to produce pure seed.

Trees transplanted, not axed

Rather than cutting down 3,000 trees at the University of Virginia's new research park in Charlottesville, Virginia, developers are saving and transplanting them. The trees, some of which are 50 to 60 feet tall, are being replanted along the winding, mile-long main road. Although the project will cost nearly \$250,000, officials say that is half of what it would cost to transplant trees from a nursery.

• Help for Hemlocks

(Continued from page 5)

cide called Merit that has been used in some forested areas to combat the adelgid, but it cannot be used on a wide scale (restrictions on its use would allow only about 10 hemlocks per acre to be treated with it), and it has risks of its own. In his bestseller *A Walk in the Woods*, Appalachian Trail hiker Bill Bryson takes the National Park Service to task for not doing more to save hemlocks affected with the woolly adelgid, but in this case the problem is not simply a lack of money or political will.

While it is true that there is not a lot of political interest in saving hemlocks, it is also true that there are operational obstacles as well as political ones to saving the trees. "There isn't a spray that can be sprayed from airplanes to knock this out, because it lives on the underside of leaves and doesn't move much," says James Ackerson. "You've got to drench the whole tree, particularly the undersides of the branches, so it's a matter of spraying a lot of product from underneath with a high powered sprayer. We will spray any tree we can get a pumper to on the road, but there are certainly more trees we can't reach than we can." According to Ackerson, a few thousand hemlocks in Shenandoah National Park are being sprayed, and by some estimates there are 100,000 hemlocks in the Park.

• In the wild, hemlocks may be a thing of the past

(Continued from page 5)

surviving the infestation, or that the infestation may not yet be heavy enough for the tree to show noticeable decline.

It's also possible, says Forest Health Specialist Tim Tigner, that the trees are infested but homeowners haven't recognized it yet. Tigner says that evidence of the adelgid is very hard to see between June and September. Remnants of the insect egg masses may be hanging on then, but it's in winter that they are most noticeable. Look for white, Q-tip-sized blobs of fluff along the branches' undersides. This "white stuff" surrounds the egg masses.

According to Forest Entomologist James Rhea, the key to saving a hemlock infested with the woolly adelgid is discovering it early and treating the tree immediately. "If you wait until you see the tree suffering— after its foliage has begun to thin and there's a tremendous amount of flocculence [white fluff under the branches], you can maintain the tree, but it will never be what it was," he says. According to Rhea, as soon as you notice any white fluff, you should contact a professional or begin to treat the tree yourself. Depending on other stresses the tree might be experiencing, says Rhea, it can take four to nine years for

the woolly adelgid to kill a tree.

So what fool would still be considering planting hemlocks when she knows the woolly adelgid is on the loose? A serious lover of hemlocks, that's who. My affection for hemlocks goes back to a fourth grade infatuation with Longfellow's "Evangeline" (remember the murmuring pines and the hemlocks?), proceeds to a mid-life success with a hemlock hedge, and culminates in a religious experience in the Skidmore area of the George Washington National Forest where ancient hemlocks both murmured and sang. The gardener in me also sees hemlocks as the perfect solution for my current landscape situation where I'd like a needled evergreen that gets thicker as it's trimmed (hemlock), an evergreen with a graceful branching structure (hemlock), and an evergreen that's a pleasing medium green to offset darker shrubs in front of it (hemlock).

My cool, shady spot is also about as amenable to hemlocks as any habitat around Richmond gets. It took me a while to find a tree expert who'd support me in my determination to plant hemlocks, but I finally found one— sort of— in Tigner. He says he wouldn't plant a hemlock anywhere in Virginia unless 1) you were willing to lose it to the woolly adelgid at some point or 2) you were willing to keep it small enough that you or a professional could spray it once or twice a year to control the woolly adelgid. Ordinarily, I'm opposed to spraying for a zillion reasons (not the least of which is that it's too much trouble), but for hemlocks I'll use environmentally friendly horticultural oils and keep my hedge at 10 to 12 feet so I can spray it myself. Call me crazy, but I've just planted seven hemlocks.

Nancy R. Hugo, VNPS Publicity Chair

The adelgid is a pest with a peculiar history

According to Tim Tigner, the woolly adelgid has had a peculiar history in Virginia. First recorded in Richmond in 1952, it showed up in a significant portion of the state for 20 or 30 years, but "it never did much."

In the 1970s and early 1980s, it began to be found in significant numbers, particularly in the Roanoke area,

but even those infestations didn't seem particularly virulent. Then, in the late 1980s, according to Tigner, "it just sort of blew up," particularly in the northern Blue Ridge mountains.

Shenandoah Park was significantly affected and, according to Tigner, there is significant hemlock mortality now from Nelson and Rockbridge counties north to Front Royal.

• Insects

(Continued from page 3)

(flies) and Coleoptera (beetles). The importance of these insects as pollinators is reflected by the fact that 15 percent of our diet depends on insect pollination; two-thirds of the flowering plants rely on a biotic vector; 73 percent of the plants are visited by insects. There can be specificity between plants/insects: orchid and long-tongued moths; figs/fig wasps.

Dr. Raymond Gagne, author of *The Plant-Feeding Gall Midges of North America* shared information with us about Cecidomyiidae, his specialty in research. We learned about the American elm as host tree for one of these

midges. Dr. Gagne explained to us the relationship of the elm and midges and effects of the midge galls on blooming and seed setting of the elm.

There is an urban butterfly/moth garden on the Washington, D.C. Mall established by the Smithsonian under Dr. Donald J. Harvey's direction. The garden began in 1995, and in the narrow space between sidewalks and walls or curbs, a predominantly native plant garden now attracts a variety of butterflies for visitors to enjoy. Signs explain the butterfly life cycle and the caterpillar host plants. Nectar plants are highlighted. Reduction of habitat for butterflies occurs from lawn expansion and destruction of native habitat by construction.

(www.npwrc.usgs.gov/resource/distr/lepid/BFLYUSA/va/toc.html)

The VNPS is very grateful to John Haydon, head of the Biology Department of the University of Richmond for the use of the science building auditorium and to the Pocahontas Chapter for bringing and setting up refreshments. The workshop committee members were: Nancy Arrington, Effie Fox, Nancy Hugo, Stan Shetler and Nicky Staunton. (Requests for future workshop subjects can be sent to: Workshop Committee, VNPS at Blandy Experimental Farm, 400 Blandy Farm Lane, Unit 2, Boyce VA 22060)

Nicky Staunton, VNPS Conservation Chair

Wildflower Events

Orchid Walk - Sunday May 16 at 2 p.m. Nicky Staunton will lead a free walk to view the orchids of Conway Robinson Memorial State Forest. Contact Nicky Staunton (Prince William Wildflower Society), 703-368-9803.

Green Spring Garden Day Plant Sale - Saturday May 22, 10 a.m. to 3 p.m. Plant sale in Fairfax County; Potowmack Chapter will offer a large selection of native plants. Contact 703-642-5173.

Fraser Preserve bird and wildflower trip - Saturday May 22, 8 a.m. Birders Glen Gerada and Kathy Burger and VNPSer Nicky Staunton are trip leaders for this Nature Conservancy walk in Fairfax County. Contact 804-295-6106.

Dameron Marsh Natural Area Preserve - Saturday May 22, 9:30 a.m. Join Natural Heritage Program conservation planner Sandra Erdle for the first Nature Conservancy trip to this new state preserve in Northumberland County. Contact 804-295-6106.

Flame Azaleas on the Blue Ridge Parkway - Saturday, May 29, 10 a.m. at Smartview Park (milepost 154). This should also be a good trip for lady-slipper. Bring your lunch. Contact Paul Cowins (Blue Ridge Wildflower Society) 804-239-4884.

Wetland Ecology, Nearby Nature Walk - Saturday May 29, Prince William County, Bill Sipple is trip leader. Contact 703-490-0455 for brochure and registration form.

Lorton plant survey - Saturday May 29, 10 a.m. to 2 p.m. Help the Potowmack Chapter survey this tract. Contact Kathleen Kust 703-836-5868.

Wildcat Mountain Natural Area - Saturday May 29, 10 a.m. Visit this 655-acre preserve in Fauquier County. Trip sponsored by The Nature Conservancy, contact 804-295-6106.

Rhododendron Day on the Blue Ridge Parkway - Saturday June 5. Meet at Peaks of Otter visitor center, noon. Bring lunch. Contact Cindy Sandberg (Blue Ridge Wildflower Society) 540-929-4459.

Cumberland Marsh Preserve canoe trip - Saturday June 5, 9 a.m. - Paddle on the Pamunkey River through this 1,094-acre preserve owned by The Nature Conservancy. Contact 804-295-6106.

Clinch River Canoe Trip - Saturday June 5, 9 a.m. to 5 p.m. - Visit the Clinch River in Russell County and see Virginia's hotbed of rare mussel and fish species. The Nature Conservancy field trip, contact 804-295-6106.

Wildbranch Workshop in Outdoor, Natural History and Environmental Writing - June 13-19, Sterling College Craftsbury Common, Vermont. For more information call 1-800-648-3591 or e-mail wldbrnch@sterlingcollege.edu

South Hampton Roads Chapter Annual Picnic - Sunday June 27. Meet at Lynnhaven House, Virginia Beach, 4 p.m. Contact Vickie Shufer, 757-421-3929.

Eastern Shore Escapes - The Nature Conservancy is offering a number of nature-based tours to Mid-Atlantic natural areas. Three different escapes are offered: bicycling, kayaking and hiking. For more information call 1-888-VASHORE.

See the address label for your membership's expiration date.

VNPS Membership/Renewal Form

Name(s) _____

Address _____

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Individual \$15 Family \$25 Student \$10

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Associate (group) \$40; delegate _____

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 _____ Chapter
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Check here if you do not wish your name to be exchanged with similar organizations.

Check here if you do not wish to be listed 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

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Nancy Sorrells, Editor

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The deadline for the next issue is July 1

Gardening for Galapagos campaign aims at eliminating quinine

(Continued from page 6)

ship (which my feet can attest to). There is no access by road so they have to hike in. It sometimes takes several hours to reach the quinine and once they do, they have to chop the roots with an axe until they are able to push the trees over. Add to that, the equatorial sun and temperatures that hover around 100 degrees Fahrenheit and you can see that it's not a task easily accomplished. None of that matters though, all of the park guards want to see the quinine removed.

Not many plant projects anywhere in the world attract much fund-raising concern. We've all seen pictures of animals being abused and have been shocked by the horror of their pain. Every time we see these images, we are moved to act. The situation with the *Miconia* and *Scalesia* forests in Galapagos is just as tragic.

When I visited the islands in November 1996, I was fortunate to go with Dr. David Anderson's group from Wake Forest University to Espanola Island and help with the Waved Albatross project. As we were traveling around the island, he pointed out to me one of the last stands of giant prickly pear cactus

(*Opuntia megasperma* var. *orientale*) which had nearly become extinct from overgrazing by feral goats. I asked him why it had not been repatriated since the goats had been removed and he simply said, "it's hard to raise interest in saving plants." I then returned to the CDRS in Santa Cruz and noticed the station botanists working in a small back room of one of the buildings there.

This was the beginning of the "Gardening for Galapagos" campaign. Being a lover of plants, I knew that my friends, who are also plant lovers, would be willing to help bring more funds to the botany department of the CDRS. On May 30, 1998, we held the first "Gardening for Galapagos" garden tour in Northern Virginia with the Charles Darwin Foundation, Inc. (CDF, Inc.). The CDF, Inc. is a not-for-profit organization responsible for raising funds for conservation programs and scientific projects in the Galapagos Islands. The CDF, Inc. also sponsors events to educate the public about the problems facing the

Our hope was to tie together the use of native plants in our own gardens with the troubles facing the na-

tive flora of Galapagos. The garden tour was a fun event and we had great feedback from the participants. They were as excited as we were about plant people saving plants. There will be another tour this year on May 22. We hope it will be just as fun, and once again the weather will smile upon us.

Since last year's garden tour, "Gardening for Galapagos" has grown and become an international campaign, appealing to the gardeners of the world to help save the unique flora of the Galapagos Islands. The CDF, Inc. is planning many events in the future to help promote this campaign. The funds raised at these events will be restricted to the "Quinine Eradication Program."

For more information on the garden tour, or the "Gardening for Galapagos" campaign you may contact the CDF, Inc., 100 North Washington St. Suite 232, Falls Church, VA 22046; 703-538-6833; darwin@galapagos.org; www.galapagos.org or John C. Magee .2716 W. Ox Rd Herndon, VA 20171, 703-478-9428, euphorbia@aol.com; http://members.aol.com/euphorbia.

Author John C. Magee is a VNPS member and founder of the Charles Darwin Foundation and the Gardening for Galapagos campaign.

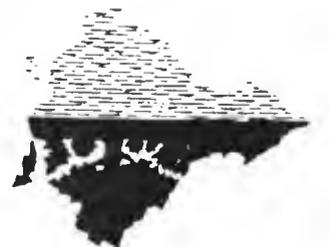
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Bulletin

A publication of the VIRGINIA NATIVE PLANT SOCIETY

Conserving wild flowers and wild places

Beautiful Bruce wows VNPSers again

We were promised a beautiful place. How true! Great accommodations? Yes. Delicious food? It was certainly good and plentiful. Grand company and leaders? Very true. Marvelous flowers? Very, very true. And perfect weather? Well...let's change that last adjective to diverse but undaunting! As 19 members of the Virginia Native Plant Society arrived on the Bruce Peninsula for the annual mid-June trip it was hot, even for Virginians, then it turned quickly to cold, quite cold, and quite rainy. On the wettest day, we waited only until the worst showers were over, then donned a range of colorful rain wear that rivalled the orchids we were seeking, and went to Dorcas Bay as planned. We were re-

warded with the last blooms of the ram's head orchid, (*Cypripedium arietinum*), several striped coralroot orchids (*Corallorhiza striata*), two tiny insectivorous treats on the shore, butterwort (*Pinguicula vulgaris*) and bladderwort (*Utricularia*), both in full bloom, and an unexpected herpetological bonus, many northern water snakes slipping among the cracks of the huge limestone slabs. The first day's boat trip to Flowerpot Island was also weather-spiced. We had a good hike through carpets of bunchberry (*Cornus canadensis*) and starflower (*Trientalis borealis*), past the only remaining fairy slipper orchid (*Calypso bulbosa*)--spring came early to the Bruce this (See *The Bruce*, page 8)

Member alert: Power line easements to receive herbicide

Central Virginia Electric Co-op (CVEC) plans herbicide application to their power line easements to replace mowing operations. Many Virginians who have granted easements to CVEC are concerned about pesticide application and ask that right-of-way mowing continue. Montebello Clean Mountain Coalition (MCMC), formed by citizens to halt the pesticide program, cites the landowners' right to exclude their land from spraying, as well as health, environment, and organic farm concerns. CVEC has offered a compromise to notify customers when pesticide application is planned

and to help with initial mowing if pesticide use is opposed. CVEC will not spray property where landowners sign an agreement to maintain easement vegetation. Some landowners can agree to this; however, others are not able to do the maintenance themselves or afford to have it done. Without their signatures, herbicide will be applied to their land. Twelve miles of land, 40-50 feet wide, in Montebello, Virginia will be immediately affected. A third concern is that CVEC power line easements cross the Tye's north and south forks, springs and (See *Power lines*, page 2)

Come to Annual Meeting & discover Virginia's Tidewater

The South Hampton Roads Chapter cordially invites members to visit Virginia's Tidewater for the VNPS Annual Meeting, September 17 through 19. By the time you leave, you will know why we call it Tidewater! Norfolk, Virginia Beach, Chesapeake and Suffolk members are preparing an exceptional experience for all. The year 1999 is a time to recall the past by reflecting on your first memories of "wild flowers and wild places." Think of the days gone by when you were first out in a meadow, hiking in old growth forests or boating on pristine waterways. Visit and participate in these things once again. Friday evening events will include an introduction presentation by SHR President and naturalist, Vickie Shufer. She will discuss the diverse plant communities participants will encounter over the course of the weekend. "Our Preserved Heritage" will be evident as the meeting unfolds and groups enter into some of the thousands of acres under protection.

The hosts are particularly pleased to offer a wonderful canoe fieldtrip. West Neck Creek, the North Landing River and Pocatoy River make up a large portion of the Southern Area Watershed. Surrounding lands are domi- (See *Annual Meeting*, page 2)

VNPS ANNUAL MEETING REGISTRATION FORM INSIDE!!

From the President.....

From Friday, September 17 through Sunday, September 19 the South Hampton Roads Chapter in Norfolk and Virginia Beach will host the exciting events of the Virginia Native Plant Society's Annual Meeting. For years I did not attend these annual meetings because aside from the scheduled wildflower walks, I did not think that there was anything else of interest. But I was wrong! Since I have been attending these events, I have met some wonderful members, enjoyed the camaraderie and, of course, the wildflower walks, as well as the other events. It is a wonderful way to meet members of other chapters, or in the parlance of the business world, network.

Each Annual Meeting is hosted by a different chapter. So one gets to see a different part of the state each year. The events may be as different and as unique and varied as the plants and habitats found around the Commonwealth. Wildflower excursions are planned for both Saturday and Sunday. There may be a raffle at a meeting one year and a silent auction at a meeting another year. This year, the purchase of a raffle tickets gives everyone the opportunity to win a valuable set of botany books. The banquet and keynote speaker on Saturday night gives everyone an enjoyable evening with native plant enthusiasts across the state and presents an opportunity to attend to important society issues during the meeting portion of the evening. The highlight comes when the audience is treated to a program by an interesting speaker on a topic related to interests of the society.

With this year's meeting and events being held in Norfolk and Virginia Beach, there will also be opportunities for you to visit the many museums there, both through organized VNPS trips and independent visits before or after the Annual Meeting. In fact, there is so much to do down there, that you may have a hard time deciding what you want to do with your spare time. So, come on and join me this year at the Annual Meeting. I just know that you will get a kick out of it!

Your President, Marie F. Minor

P.S. The Illustrated Companion to Gleason & Cronquist's Manual of the Vascular Plants of Northeastern U. S. and Adjacent Canada and the manual (value \$200) will be given to the raffle winner at September's VNPS Annual Meeting. For a donation of \$2/ticket or \$10/12 tickets, you could win this definitive set of botanical books. Contact a member of your chapter's board of directors to make your donation and receive your raffle ticket. With 827 plates of multiple illustrations detailing botanically significant key features in your library at your fingertips you'll have THE tool to identify your "mystery" vine, shrub, tree or herbaceous plant.

• Annual Meeting

(Continued from page 1)

nated by agricultural use, but a significant portion of the land directly adjacent to the rivers has been preserved by The Nature Conservancy to protect upland and wetland plant assemblages. This watershed contains extensive areas of critical habitat for the 38 rare and endangered plant and animal species concentrated along this river system, the highest concentration east of the Blue Ridge Mountains. With its extensive areas of forested wetlands, marshes and pocosins, the North Landing area was named the top natural area in Virginia. Panoramic photo opportunities abound. No experience necessary for this gentle trip; chapter member Kevin DuBois, a wetland scientist, is a certified eco-tour guide.

Other field trips allow you to revisit colonial times and customs by watching weaving and dyeing demonstrations using native plants; there will be birding and butterfly watching; a chance to hike inland and coastal dunes; observe freshwater, brackish and saltmarsh habitats; and travel to pine barrens. Some examples of native

flora with historical significance will go home with attendees via a chapter-sponsored fund-raiser. These authenticated seedlings are from parents planted in the 1700s and 1800s at famous Virginia sites. Also up for adoption will be a pair of Johnny Appleseed's rambo apple trees, direct offspring from the last known living tree that John Chapman planted.

After the fieldtrips anyone not into napping may scurry across the block to newly opened MacArthur Mall or sit at the waterfront cafes to watch people and boating activities. Better yet, take an early look at the wonderful plants for sale provided by the evening speaker, Michael McConkey, owner of Edible Landscapes. He promises to bring a truckload of his favorites and is donating a percentage of sales to VNPS. The Saturday banquet will be held in the Sheraton's Claremont Room, after which McConkey will take center stage. Michael's first plunge into gardening began with native plants. His backyard bordered on a woods that descended

• Power lines

(Continued from page 1)

related brooks which contain naturally reproducing wild eastern brook trout. Next year, the herbicide expansion into Tye areas past Crabtree Falls is part of CVEC's Integrated Pesticide Management Plan. There is no comprehensive plant inventory of the CVEC power lines. Herbicide application for this central Virginia stretch could eradicate rare or threatened plants established in a final refuge from development. A plant inventory should be mandated on land that will receive herbicide. Mowing would assure that plants, insects and other life in and near the right of ways could reestablish their life cycles. MCMC has suggested eight control methods. Precedent has been set in North Carolina where four utilities agreed to give notice, right of refusal, posting, and organic farm considerations involving 75,000 miles of easements. For information, e-mail MCMC's Chris Hoffman at: hoffman@cfw.com
Nicky Staunton, Conservation Chair

toward Northwest Branch Creek of the Patuxent River in Maryland. Roaming the woods freely, he enjoyed tasty berries and brought home treasured turtles and plant discoveries. His mother "gave" him a hillside eroded from excavation where he enjoyed his first successful transplants: violets, lilies and yucca. Later travels found him among other lovers of edible plants. A decade after his first experiences at cultivating wild edibles and new discoveries, Michael transplanted himself. The plant-rich mountains of Afton, Virginia became home and the start of his nursery of little-care ornamental edibles called Edible Landscapes. With stories of plants growing in our backyards and around the world, McConkey hopes to share his enthusiasm with you for the plants he loves! It is individuals like Michael and those attending this weekend meeting that hold the "Promise for the Future." And so, the youngest VNPS chapter welcomes all to the VNPS Annual Meeting in Virginia's Tidewater.

Conservation threat

Loophole ruling on draining endangers Virginia wetlands

Virginia wetlands are being harmed by ditching for development, a practice used in bygone days to gain agriculture land. Governor James Gilmore has been called upon to reestablish protection of Virginia's non-tidal wetlands from Tulloch ditching. An article by Carl H. Hershner from "Wetlands Program" of Virginia Institute of Marine Science *Technical Report*, May 1999 noted: that "The term 'Tulloch ditching' is being used to describe the practice of digging drainage ditches in wetlands with careful removal of the excavated materials from the wetland. The object is to drain the area, so that it will no longer be subject to wetlands regulations, creating the potential for alternative uses. The practice became prevalent in Virginia when the United States Court of Appeals for the District of Columbia upheld a ruling by the U. S. District Court which prevented the Corps of Engineers from using the 'Tulloch Rule' to prevent the practice."

Southeastern Virginia is the first

location impacted by a ruling June 18, 1998 by the U. S. Court of Appeals for the District of Columbia. The drainage of 2,000 acres began when the U. S. Army Corps of Engineers was judged to have no authority to require developers to offset the losses with new wetlands. Another 5,000 acres are in immediate danger with more than 500,000 acres in Virginia potentially at risk. Even Prince William County has a possible five acres to be impacted with wetland excavation according to the Chesapeake Bay Foundation's Bay Savers June 1999 *BULLETIN*. Nontidal wetlands are the most likely to be impacted. Essentially, this ruling makes it unlikely Virginia can reach a no net loss of wetlands much less an eventual gain in wetland acreage which are goals of both Governor Gilmore and the Bay Program.

Unlike Virginia, North Carolina determined that wetlands ditching and draining still falls under its authority to manage water quality within the state. The issue has not surfaced in Maryland or Pennsylvania, where the

states have their own regulatory programs that were not affected by the Tulloch decision. Virginia, though, does not have a program that requires permits to alter or destroy wetlands, leaving the primary regulatory responsibility with the corps. Earlier this year, a coalition of eleven environmental groups urged Governor Gilmore to take "immediate and aggressive action" to halt the ditching, which was called "the most significant threat to wetland protection that Virginia has faced in many, many years." The coalition also argued that the Department of Environmental Quality has authority under the State Water Control Law to regulate activities in wetlands.

The Corps adopted the "Tulloch Rule" (pronounced "Tul-ic") in 1993 to close a loophole in the Clean Water Act. While the act regulated dredging and filling wetlands, it did not necessarily protect wetlands from activities such as land clearing and ditching which, in turn, could cause the sites to be drained. Steve Martin, corps environmental scientist, Norfolk District, estimates that about 1,800 acres of draining is under way in the city of Chesapeake, 265 in Suffolk, and five in Newport News. Martin said, "planned or likely" drainage could impact another 4,300 acres in Chesapeake, 80 acres in Suffolk, 1,175 in Virginia Beach, 25 in Newport News, and more than 50 acres in Poquoson. It is felt that the ecological effect of so much draining could alter the Great Dismal Swamp water table, destroy habitat for migratory birds, amphibians and increase the potential for flooding according to the Alliance for the Chesapeake Bay's *Bay Journal* (April and June 1999).

Nicky Staunton, VNPS Conservation Chair

For more information:

Federal Register online via GPO Access

http://www.access.gpo.gov/su_docs/aces/acesl0.html

Text of Court of Appeals opinion

<http://www.cadc.uscourts.gov/common/opinions/199806/97-5099a.txt>

Virginia Department of Environmental Quality <http://deq.state.va.us>

US Environmental Protection Agency Wetlands homepage

<http://www.epa.gov/owow/wetlands/>

National Wetlands Inventory homepage <http://www.nwi.fws.gov/>

Norfolk District U. S. Army Corps of Engineers <http://155.78.30.111/>

North Carolina's Wetlands Draining Policy

<http://h2o.enr.state.nc.us/wqhome.html>

To contact Governor Jim Gilmore, State Capitol, Richmond, VA 23219 by mail or by phone: 804/786-2211; FAX: 804/3771-6351; by e-mail: governor@gov.state.va.us.

Native plant societies plan outing at unique Crow's Nest peninsula

Rod Simmons, VNPS Registry Chair for Potowmack Chapter (also, President of the Maryland Native Plant Society), has been doing field work at Crow's Nest in Stafford County and proposed a joint native plant society camp out and field meeting in July at this unique site. Crow's Nest

is a 5,000-acre peninsula (5 miles long and 2 miles wide) formed by the confluence of Potomac and Accokeek Creeks, about half a mile upstream of the Potomac River. It has some of the largest trees in Virginia--old growth chinquapin oak, red oak, tulip poplar, white ash, hickory and beech with

deep forested ravines. Glade fern is found there, along with two active bald eagle nests and a 650-nest heron rookery. It is extremely important as nesting habitat for neo-tropical migratory birds known as interior forest dwelling species such (See *Crow's Nest*, page 10)

What is a native plant?

Rethinking alien natives or when natives are not natural

Biologists have always been intrigued by questions of origin and dispersal. How and why do species arise? How do they spread from their points of origin? Are there hotspots or centers of evolution and dispersal? Thus, through the years biogeography has been a fertile field of scientific research and discourse, and the question of means of dispersal has long fueled vigorous debate and disagreement. Given present-day understanding of plate tectonics, consideration of plate movements over geologic time must now be added to the traditional arguments about long-distance dispersal versus incremental migration.

In recent geologic time, of course, human intervention has been a factor as well, and increasingly in our day we must reckon with humans as agents of dispersal in all of our speculations about the spread of species.

Increasingly, too, biologists are finding that, in the name of conservation, some of their most natural, vital allies are confounding the questions of origin and dispersal with well-meaning but questionable schemes of protecting and/or spreading "native" species.

For the biogeographer, therefore, it is very important to know whether or not a plant or animal has arrived at its present habitat by natural forces, unassisted by humans. This may be difficult to determine, but, the problems notwithstanding, the distinction between "native" and "alien" (exotic, introduced) has always been very useful. It is at best a relative distinction, however. "Native" plants have become very fashionable of late, and sometimes we forget this relativity, a fact that prompted me several years ago to express some thoughts about (See *Native*, page 9)



Parthenocissus quinquefolia
Virginia-creeper
Illustration by Nicky Staunton

Think of plant communities, not plant collections

Early Saturday morning, the Virginia Living Museum in Hampton is a beehive of activity on the day of the Annual Native Plant Sale. Members of the museum staff and members of the John Clayton Chapter are busy hauling and arranging plants for the sale. Already a line of eager customers is forming planning shopping strategies. People like to get there early to get first choice of plant material, although, we have learned long ago not to bring all of our best plant material out at once. Still the selection is generally greatest first thing on Saturday morning.

It is encouraging to see such enthusiasm and interest in native plants. This is, after all, what we have been working for, right? Maybe not. For the past few years I have seen people happily leaving the plant sale, their arms and shopping carts full of native plants. One of this, two of that, a complete array of plants from ferns, to perennials, to woody shrubs and I thought how wonderful it is that people have learned

to appreciate the subtle beauty of native plants. Still, something bothered me about this retail scenario.

Looking to my own garden, there is a low lying shady area where, over the past two years I created a native fern garden with plants rescued from construction sites in James City and York Counties. In this small swale, I have Christmas fern, rattlesnake fern, sensitive fern, adder's tongue fern and more, all mixed in with a collection of showy orchis and bloodroot. I was proud that I could say that I had over seven different species of fern, all in an area approximately eight feet square. The scene was attractive enough still something felt wrong; though the plants grew and had survived it was not as it would have been in nature. Never before, on any of our field trips, had I seen such variety, in a small space. It was more common to find colonies of plants, one species gradually giving way to another over a larger area. Variation in terrain creates different (See *Communities*, page 10)

Restoring a native habitat

Ten years of work pays off in nation's capital

We have spent ten years as volunteers restoring the natural habitat of an eroded, trash-strewn, vine-covered and overused 30-degree slope in Rock Creek National Park.

The area, located 10 blocks west of the White House in Washington, D.C., covers 10 acres. It stretches about a mile along the east bank of Rock Creek. Our aim is to restore the area to a natural condition containing native vegetation.

At first we simply removed trash. We have recycled several tons of bottles and cans and filled hundreds of garbage bags with trash. We work under a permit issued by the U.S. National Park Service which specifies our tasks. Except for a chain saw, wheelbarrow and weed whacker, we use only hand tools. We prevent erosion by directing runoff with a series of water bars or check dams and by placing cribbing along trails.

We have closed more than 6,000 feet of unneeded trails. First we repair erosion damage by filling gullies with soil. Second, we replant with native seeds, transplants or soil bioengineering techniques. We cover the replanted area with oak leaves gathered from our neighborhood each fall. The leaves conserve mois-

ture and protect the bare soil. Tree branches on top hold the leaves in place and prevent foot traffic.

After five years of effort we brought porcelain-berry (*Ampelopsis brevipedunculata*) and Japanese honeysuckle (*Lonicera japonica*) under control by manually cutting vines and digging out their roots. Treetops that once grew sideways laden with vines now grow toward the sky. We cut 100 honeysuckle bushes (*Lonicera* sp.) level with the ground whenever they flower. Some bushes never regrow.

In early June we shear off the flower heads of garlic mustard plants (*Alliaria officinalis*) covering approximately two acres. All spring and summer we cut burdock (*Arctium minus*) stems.

The past three years, with the help of the park service staff, we sprayed tree of heaven (*Ailanthus altissima*), Norway maple (*Acer platanoides*), paper mulberry (*Broussonetia papyrifera*), golden-rain tree (*Koelreuteria paniculata*), Japanese scholartree (*Sophora japonica*) and periwinkle (*Vinca minor*) with Garlon 4.

Our successes have let loose an explosion of English ivy (*Hedera helix*). Although English ivy now tops the list of alien species we remove, we leave the plants alone if they are needed to stabilize the slope. In 1998 we limited our attack on English Ivy to its growth on trees, tree stumps, flat areas of ground and the edges where benign species are spreading.

In 1998 we completed our fourth year of a five-year experiment to eradicate Japanese knotweed (*Polygonum cuspidatum*) by cutting the stems of the knotweed plants at their base every month during the growing season. Our experiment is under the supervision of Dr. Leslie Sieger of San Diego State University. Less knotweed has regrown each year. In 1998 plant growth seemed stunted and the number of knotweed plants had decreased by about 80 percent.

Native species are replacing

knotweed and other once dominant aliens. Woody plants returning to our park include red mulberry (*Morus rubra*), sycamore (*Platanus occidentalis*), silver and red maple (*Acer saccharinum* and *A. rubrum*), elm (*Ulmus* sp.), tuliptree (*Liriodendron tulipifera*), redbud (*Cercis canadensis*), sassafras (*Sassafras albidum*), pawpaw (*Asimina triloba*), black willow (*Salix nigra*) and river birch (*Betula nigra*). The native vines Virginia-creeper (*Parthenocissus quinquefolia*) and poison ivy (*Toxicodendron*) are spreading in the area.

Native herbaceous plants spreading into the park include white snakeroot (*Eupatorium rugosum*), mist-flower (*E. coelestinum*), Virginia knotweed (*Tovara virginiana*), pokeweed (*Phytolacca americana*), several species of violets (*Viola* spp.) cocklebur (*Xanthium chinense*), beggar ticks (*Bidens frondosa*), wild blue phlox (*Phlox divaricata*), common, nodding and big-seeded smartweed (*Polygonum hydropiper*, *P. lapathifolium* and *P. pennsylvanicum*), bottlebrush grass (*Hystrix patula*), sweet cicely (*Osmorhiza claytonii*), asters (*Aster* sp.) and ragweed (*Ambrosia artemisiifolia* and *A. trifida*). Bonset (*E. perfoliatum*) appeared for the first time in 1998.

We attempt to replace the plants we remove by gathering native seeds and spreading them. In the fall of 1998, we collected 250 pounds of acorns from the city street trees. We tossed them into the park where we hope a few will elude the squirrels and become oak trees.

We collect discarded Christmas trees from our neighborhood to stabilize the creek bank. We wedged 180 Christmas trees into exposed roots of trees, and we anchored other Christmas trees directly onto the creek bank, using five-foot metal fence posts and wire cable.

Christmas trees catch sediment washing down the hill. When the creek rises after rainfall, it covers the (See *Rock Creek*, page 8)



Osmorhiza claytonii
sweet cicely
Illustration by Nicky Staunton

Shenandoah Chapter helps put the wild back in Wildwood Park

The 11 acres on the North River comprising Wildwood Park were purchased by the town of Bridgewater in 1972. North River, a tributary of the Shenandoah River in the Shenandoah Valley, flows through the town located in Rockingham County. The park is in the flood plain and was actually created when the dam was built years ago. It is an ideal place to fish and very scenic, as the river makes a 90-degree turn then flows against a NE-facing cliff a few hundred yards before the dam.

Nature had taken over with thick underbrush and vines and beautiful tall trees. Only those willing to walk into its denseness ventured there to enjoy the wildlife, plantlife and solitude. I found it forbidding partly because of the invasiveness of Japanese honeysuckle. In the early 90s, a river lagoon that was thick with aquatic plants and the creatures that thrive there, was "cleaned out" with heavy equipment and replanted with grass and picnic tables along its banks to make it more inviting to picnickers. Then, in September 1996, Hurricane Fran rolled into the Valley and the North River flooded terribly fast, sweeping across Wildwood, bringing debris from upriver. More debris was created with the destruction of standing trees in this floodplain area which were unable to withstand the tremendous power of the swiftly-rising floodwaters. The tall trees looked like a giant's version of "pick up sticks." A few months later, another flood swept through as temperatures warmed and melted snow.

What was left in Wildwood Park was of nature's creation and could have been left to nature to deal with. However, because the safety of people using this public place was in question, and the site's appearance did not look "right," all the downed trees were cleaned out taking any remaining understory. Because the river rock was now exposed where vegetation had once been, approximately 50 loads of soil were brought in to give new plants something to grow in more easily.

What was left around the river boundary were some hardy tall trees that had withstood the high waters, and grass planted to hold the new soil. Some azaleas and shrubs commonly used in foundation plantings were planted courtesy of the town. But what really became the issue that created our restoration project, was the opening of a public road in this wild

area. Safety of children playing at a jungle gym next to the road, and car pollution in such a fragile place brought town residents together. Eventually the road was closed to cars although pedestrians enjoy the area. Because it is flat and hard-packed, it is also wheelchair accessible.

Members of the Shenandoah Chapter have been intimately involved with this restoration project. One of the first steps concerned the restoration with native plants of the destroyed riparian forest buffer system. This buffer system is simply a heavy planting of trees from a river bank inland which creates a root system to act as a cleansing filter for run-off and also holds soil to help prevent erosion. The planting restores habitat for birds and wildlife by providing the shelter of a previously missing understory and by selecting plants that provide food in the form of berries and nuts. Because of clean water issues associated with the Chesapeake Bay watershed, we hoped for grant money.

To summarize a rather lengthy process involving Bridgewater residents and town government over eight months, the town agreed to participate in a matching grant for restoration of the riparian forest buffer system and then partner with John Wayland Elementary School (JWE) students to use Wildwood Park as an extension of their classroom learning activities involving environmental studies to be supported by additional grants the school was awarded. Michael Hill and I, members of the VNPS Shenandoah Chapter, had the pleasant task of selecting the plants to fit the budget of the town's grant and the grants the teachers made available. Our guide for these selections was "Native Plants for Conservation, Restoration, and Landscaping" the brochure developed by the Virginia Department of Conservation and Recreation and the Virginia Native Plant Society. The "Nursery Sources of Native Plants" also available through VNPS, helped locate the plants although nothing replaces actually going to local nurseries and evaluating what's available. Some nurseries are very helpful in locating natives even if they are not usually stocked.

Northern Neck natural area threatened by industrial park

VNPS members should be aware of threats to the Hickory Hollow recreational area in Lancaster County on the Northern Neck. Hickory Hollow (HH) has been in existence 27 years. It is owned by the county which is trying to rezone it for an industrial park. Until

The grants JWE received which have helped fund plant purchases are as follows: Rockingham County Educational Foundation, Virginia Commission for the Arts, Virginia Environmental Endowment and Chesapeake Bay Restoration Fund. The town of Bridgewater's grant from the Alliance for the Chesapeake Bay through the Shenandoah Valley Pure Water 2000 Forum provided about \$5,000 for the purchase of trees and shrubs. To date approximately \$9,000 has been spent.

Beginning in May of 1998 with a planting of understory trees and perennials suited for wetter areas, there have been eight major events when JWE, the community, or VNPS, had the pleasure of planting approximately 100-plus varieties of 420 shrubs, small and large trees; and 830 perennials. At the spring planting, half of the buffer trees and shrubs planted were inoculated by Sam Fosseley with mycorrhizal fungi in an on-going test of its effectiveness as a "boost" to plant growth. Sam brought local Virginia Master Gardeners to help with planting.

At all of these events, the threat of invasive alien plants is discussed, the existing plants at Wildwood identified and some time is spent removing invasives. This will always be an on-going task. What has happened since the spring of 1998 is exciting because it is a positive example of a town government working with community members and schools, and VNPS to become better stewards of the environment. Many of the newly planted trees and shrubs have been labeled by Dr. Hill for a study he is conducting and also to help people learn the identity of these "new" old neighbors. I'm hoping more homeowners will choose natives for their landscapes because they see what's available at Wildwood Park. Restoration continues as grants are available. For information on the grant process, contact JWE teachers at www.rockingham.k12.va.us. If you would like a guided tour, I can help and may be contacted by e-mail at: wcgardner@rica.net. Native plant donations are always welcomed, too!

Carol W. Gardner, Shenandoah Chapter

the last two months they said only a piece of approximately 60 acres adjoining Route 3 would be used for an industrial park. Now they are saying that the entire 370-acre area will be considered for an industrial park. (See *Hickory Hollow*, page 7)

Virginia Native Plant Society

Annual Meeting
September 17-19, 1999

Visit Virginia's Tidewater as guests of the South Hampton Roads Chapter. Explore the habitats of the area, hear stimulating speakers, and visit with old and new friends at the 1999 VNPS Annual Meeting. You will be glad you did!

Weekend Schedule of Events

All events at Sheraton Norfolk Waterside. VNPS activity is on the fourth (4th) floor.

Friday, September 17

- 3 p.m. Rooms available for check in
Dinner on your own - Waterside festival marketplace is right next door
7-10 p.m. Eppington Room. Registration and space for chapter and state displays, raffle sales, cash bar, social gathering
8:30 p.m. Opening remarks - Brandon Hall, across the hall from Eppington
8:45 p.m. Evening presentation on Coastal Flora in Brandon Hall

Saturday, September 18

- Breakfast on your own
8 a.m. - 4:30 p.m. Fieldtrips. All trips leave from hotel parking lot
5 p.m. Social begins. Raffles and plant sale, Brandon Hall
5:30 p.m. Annual business meeting, election, Brandon Hall
6:30 Cash bar, continued raffles, plant sale
7-8 p.m. Dinner in Claremont Room
8:15 p.m. Late announcements, guest speaker, Michael McConkey, owner Edible Landscapes, Afton, Va.
9:30 p.m. State and chapter raffle winners announced.

Sunday, September 19

- Breakfast on your own
9:30 a.m. - 1 p.m. Quarterly Board Meeting at Fred Heutte Center, 1000 Botetourt Gardens, Norfolk
9 a.m. - noon Optional fieldtrips

Have a safe trip home and thank you for visiting SHR

Accommodations

A block of 50 rooms is reserved for VNPSers for Friday and Saturday nights at Sheraton Norfolk Waterside Hotel, 777 Waterside Drive, Norfolk, Va. 23510; (757)622-6664; Fax (757) 622-4571. Non-smoking is available. **Callers must identify themselves as VNPS and must call for reservations by Aug. 25 to guarantee space.** After this date rooms will be released to other groups and same rate may not be available. VNPS group rates for 9/17 & 9/18 are: \$89 single/dbl; \$114/triple or quad. Check-in is 3 p.m.; check-out is noon. Room reservations will be held until 4 p.m., 48 hours prior to scheduled arrival unless guaranteed by a one night's deposit. **Location & directions to the hotel:** Sheraton Norfolk Waterside: 777 Waterside Drive Each room has a view of either the Norfolk waterfront or skyline. Outdoor pool, many amenities. Hotel is off Waterside Drive exit of Rt. 264. Once on the southside of peninsula tunnel, remain on I-64E until you see the Rt264/Norfolk exit to the right. Come in on 264 to Waterside Drive exit. This exit is to the left as you are approaching downtown. Exit and at the first traffic light turn left into the Sheraton parking lot. After check-in valet parking is available or convenient, covered and secured self-parking in Dominion Tower Garage you will pass upon entering hotel lot. \$3/day.

Alternative lodging - Best Western Center Inn, 235 N. Military Hwy. Norfolk, 23502, (800)-237-5517, (757)-461-6600 \$59-109; **The Ramada Madison**, 345 Granby Street, Norfolk, 23510, (757) 622-6682, (888)402-6682 \$89-149; **Old Dominion Inn**, 4111 Hampton Blvd., Norfolk, 23508, (757)440-5100, (800)946-4645 \$79-140.

SATURDAY FIELD TRIPS

Please specify on the registration form the field trip number in which you plan to participate. Be sure to mark a second choice in case your first choice is at capacity when your registration is received. Times listed are for actual trip. Travel time not included. Lunches provided for all trips. Recommended for all trips: hats, repellent, sunscreen and appropriate footwear. Youth activities will be available for half a day on Saturday. In addition, two trips Sunday morning (VMSM and botanical garden walk are wonderful for children).

FULL DAY FIELD TRIPS

1 FALSE CAPE STATE PARK - The Outer Banks of Virginia 9 a.m.-2 p.m. Participants meet at Little Island City Park and travel by park bus through Back Bay National Wildlife Refuge to False Cape State Park. A nature walk across the barrier island spit will lead the group from freshwater marshes, through maritime forest, across dunes to a beach plant community. A number of rare plants, including red milkweed (*Asclepias lanceolata*), sundew (*Drosera rotundifolia*), and possibly cranberry (*Vaccinium macrocarpon*) may be observed on this hike. Seashore mallows and tickseed sunflowers should still be colorful in the marshes, while in the forest and dune zones, fruits of wild grapes, ground cherry and wild beans will be ripening. Plants common to the barrier island spit will be identified, adaptations to coastal environment observed. Shoes appropriate for sand/marsh. Limit: 20. Trip charge: n/c

2 FIRST LANDING/SEASHORE STATE PARK - Old Cape Henry Lighthouse - Virginia Beach 9 a.m. - 2 p.m. Site of the First Landing of English settlers April 26, 1607. Botanizing and birding along Long Creek Trail. Pass stately examples of *Taxodium* bedecked with Spanish moss (*Tillandsia usneoides*). Observe partridgeberry (*Mitchella repens*) scrambling across footpaths. *Solidagos*, horse sugar (*Symplocos tinctoria*) water tupelo (*Nyssa aquatica*), sinewy ironwood (*Carpinus caroliniana*) and water willow (*Decodon verticillatus*) should be in evidence. Osprey nests and activities visible. Lunch at The Narrows section along Broad Bay. Travel from lunch site by car around to the open beach dunes flora. Old Cape Henry Lighthouse, built by instructions from newly elected President Washington, has stood the test of time since 1792, guiding mariners entering the Virginia Capes. Trip charge: minimal car park only/ \$2 to go inside lighthouse.

3 BLACKWATER ECOLOGICAL PRESERVE- Zuni Pine Barrens 9 a.m. - 2 p.m. Visit the not-so-barren pine barrens, 319 acres of amazing diversity. Included among the plant communities: longleaf pine (*Pinus palustris*), almost a dozen genera of *Ericaceae* from sparkleberry (*Vaccinium arboreum*) to our huckleberry (*Gaylussacia*) friends. See flora representative of pocosin, river bluff, cypress swamp, old field and riverine communities. Trip charge: n/c Limit: 20.

4 NORTH LANDING RIVER NATURAL AREA PRESERVE - south Virginia Beach; combined canoe trip & short hike*** Total time on site 9 a.m. - 4 p.m. 2 water sessions/ hiking times are: 9-noon and 1 - 4. Lunch is between noon and 1 p.m. No experience necessary for canoes. We can allow 14 per water tour and will have half the group on hike while other half is on water. Certified guide, SHR member Kevin Dubois leads a leisurely water tour, putting in at West Neck Creek past rice cutgrass (*Leersia oryzoides*), big cordgrass (*Spartina cynosuroides*) and royal fern (*Osmunda regalis*). Traveling south on North Landing River, panoramic photo opportunities abound. On Pocatoy River you will discover the high diversity of marshes in the river complex. There will be a lunch stop here. Hike includes mill dam site and Alton's Creek. Trip Cost: \$30 canoe fee only. Limit: 14 each water session. ***Please note that this is a multiple-choice trip. Choose either hiking or canoeing as a half-day trip or do the entire day by combining hiking and boating. Mark field trip 4 for whole day. See below for appropriate half-day number. Full day trips will take precedence.

HALF DAY FIELD TRIPS

5A NORTH LANDING RIVER canoe only, afternoon session. Trip charge \$30.

5B NORTH LANDING RIVER hiking only, morning session Trip charge: n/c

6 NORTHWEST RIVER PARK - Chesapeake walking tour, woodland and open trails. 9 a.m. - noon This natural area is nestled between tributaries Indian Creek and Smith Creek and cradled by the Northwest River. The parking area perimeter is a fieldtrip in itself as one scans the large shagbark hickories (*Carya ovata*) and hop hornbeams (*Ostrya virginiana*). Search for resurrection fern (*Polypodium polypodioides*) and learn how it got its name. Observe ditches and furrows for clues to the forest's agricultural past. Observe meadow activity and enjoy the canopies of great oaks, among them *Quercus alba, falcata, lyrata, michauxii, nigra, phellos* and *velutina*. Wetland flora are diverse and wildlife abundant, including otters, wildfowl, herons. Trip charge: n/c

7 FRANCIS LAND HISTORIC SITE AND GARDENS - Virginia Beach 1-4 p.m. Step back in time as you walk the History Park, a 3.5-acre site that encompasses wooded wetland, upland and marsh habitats with diverse native herbaceous and woody plants. Observe colonial vegetable garden with heirloom plants. Enjoy the shade of the 250-year-old spreading sycamore gracing the front drive. Trip leader will give workshop exploring colonial plant uses through dyeing and weaving demonstrations. Flax grown on site. Tour the 18th century gentry home. Trip charge: \$5

SUNDAY TRIPS

8 ___ VIRGINIA MARINE SCIENCE MUSEUM - Oceanfront 9 a.m. - noon Former SHR President Lee Moomaw, an instrumental force in the museum plantings, will lead visitors through three ecosystems: marsh planting, woodland garden and native plant meadow. Self tour of museum following plant walk. VMSM has been designated one of the top ten museums in the country with over 100 hands-on exhibits, an outdoor aviary and 10 acres of marsh habitat. It hosts two buildings with over 800,000 gallons of aquariums and live animal habitats, including coastal river room, and three touch tanks. One of only 5 IMAX 3D theaters in the U.S. Museum charge only: Special group rate of \$6.95 Sunday 9 a.m. - noon.

9 ___ WEYANOKE WILDLIFE SANCTUARY - Norfolk 9 a.m. - noon The sanctuary is a 7.5-acre tract of land given to Cape Henry Audubon Society by Norfolk & Western Railroad in the mid-1970s. It is an isle of green only blocks from pounding traffic and adjacent to railroad yards. Close by are Elizabeth River tidal marshes. At present, there are two distinct seasons for bloom: the wooded land is a treasure trove including spring beauty, dwarf trillium and about 15 species of fern (6 species of *Dryopteris*). With hot weather, the open meadow becomes a blaze of color into October. For about the last 10 years, gardening in these areas has been done by Norfolk Master Gardeners. Trip charge: n/c

10 ___ FIRST LANDING SEASHORE PARK - Virginia Beach 10 a.m. - noon Walk will begin at visitors center. Botanical tour on *Osmanthus* Trail (excellent specimens of *O. americanus*, wild olive. Focus will be on medicinal uses of identified species and views from Bald Cypress boardwalk. Trip charge: modest parking fee per car.

11 ___ NORFOLK BOTANICAL GARDEN - 9 a.m. - noon. The wilder side of life at the Garden. Explore woodland to water's edge of Lake Whitehurst. Waterfowl and other wildlife. Leader will then take you through new Bristow Butterfly Habitat, multi-acre site, installation of which is in progress. Do a butterfly count and discover host plants for other life stages. Self tour of NBG optional after walk. Trip charge: \$4 admission to NBG.

Detach here

VNPS REGISTRATION FORM

Name _____ Telephone _____
 Address _____ Chapter _____
 _____ Number of persons _____
 e-mail _____

Circle below the number of your field trip preference (See attached list). Also indicate a second choice in case your first choice is at capacity when your registration is received.

Saturday Field Trips 1 2 3 4 5 5A 5B 6 7 **Sunday Field Trips** 8 9 10 11

If you are registering for more than one person, fill in the trip preferences for the second person on a separate sheet of paper along with that person's name.

Registration Fees (Adults)

Registration fee: \$22 includes box lunch Saturday (\$20 if postmarked by Sept. 1)

Banquet fee: \$23 adult dinner; \$14 children under 12 dinner

Indicate if vegetarian box lunch or vegetarian banquet dinner is needed

_____ *number of vegetarian lunches* _____ *number of vegetarian dinners*

Number of persons registered _____ (number x \$20 or \$22) Amount _____

Number of adult banquet dinners _____ (number x \$23) Amount _____

Number of child's banquet dinners _____ (number x \$14) Amount _____

Total amount of field trip costs & entrance fees (excluding parking fees) Amount _____

TOTAL AMOUNT ENCLOSED _____

Dinner reservations accepted until September 14. No dinner cancellation refunds within 72 hours of the banquet.

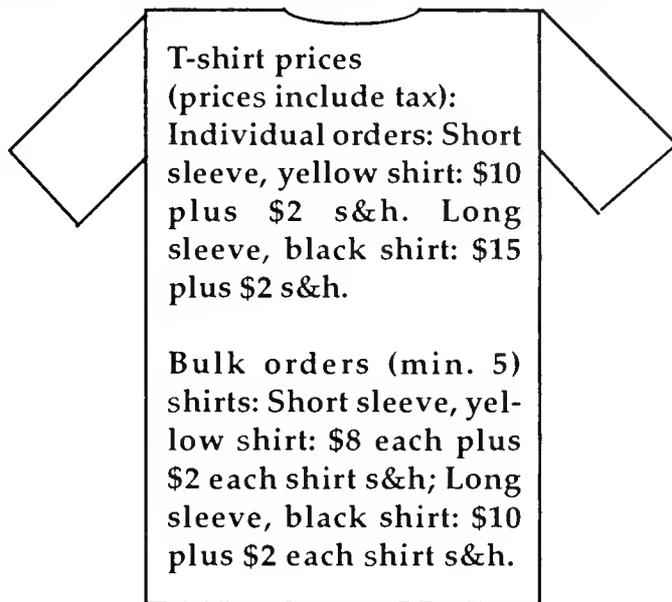
Mail this form (with payment made payable to VNPS SHR Chapter) to:

**VNPS Annual Meeting, c/o Bettie McElroy,
 4204 Battery Rd., Virginia Beach, VA 23455
 For additional info contact Holly Crusier (757)481-2285**

VNPS shirts now available for sale

If VNPS needed someone to pitch the new T-shirts, we'd need to look no farther than to Prince William Chapter member Julia Smith. Julia took samples of each of our new T-shirts to the school where she teaches and sold 28 shirts in two days.

"They sell themselves," she says. All Julia did was put samples of the shirts on a bulletin board accompanied by a poster saying "Support your Native Plant Society." The poster told how much the shirts were and told potential customers to make checks out to VNPS and leave them in an accompanying envelope. "All I had to do was go in and collect the money at the end of the day," says Julia. "People see the T-shirts and say 'I want one!'"



T-shirt prices (prices include tax):
Individual orders: Short sleeve, yellow shirt: \$10 plus \$2 s&h. Long sleeve, black shirt: \$15 plus \$2 s&h.
Bulk orders (min. 5) shirts: Short sleeve, yellow shirt: \$8 each plus \$2 each shirt s&h; Long sleeve, black shirt: \$10 plus \$2 each shirt s&h.

Julia thinks that in addition to VNPS chapters, garden clubs might want to sell VNPS T-shirts both to raise money for themselves and to support

the work of the Native Plant Society. "My mother-in-law is already planning to take some to a garden club meeting," she says.

Shirts come in two styles—a short-sleeve shirt with a yellow background and a long-sleeve shirt with a black background. Both shirts have a lovely collection of Virginia wildflowers in the front and the VNPS logo and motto on the sleeve. Chapters are encouraged to place bulk orders for shirts, which will allow them to raise money, to promote the VNPS message, and to publicize the address of our website (which is included with our logo and motto on the T-shirt sleeve). T-shirts are available in small, medium, large, and extra-large sizes.

Answers to frequently asked questions about t-shirts:

****How long after I place my order will I receive my shirts?**

Allow ten days for shipping and handling

****Can my chapter order shirts and pay for them after we've sold them?**

Yes, but there are some restrictions. Also, consignment quantities for event sales are by special arrangement with chapter representatives. Contact John Fry (540-364-3046; e-mail glkyp@citizen.infi.net) for more info.

****I need my shirts in a hurry; can I pick them up at Blandy?**

As soon as VNPS has a staff assistant working at Blandy, this will be possible. Until then, contact John Fry, who will coordinate distribution of shirts from Blandy. For more info about buying and selling shirts, contact Publicity Chairperson Nancy Hugo (804-798-6364; nancyhugo@aol.com) or VNPS Treasurer John Fry (540-364-3046; glkyp@citizen.infi.net)

See your Bulletin

photocopy this page

VNPS T-SHIRT ORDER FORM

Black, long-sleeve T-shirts @ \$15 each, individually; \$10 each for 5 or more

___# Small ___# Medium ___# Large ___# Extra large

Yellow, short-sleeve t-shirts @ \$10 each individually; \$8 each for 5 or more

___# Small ___# Medium ___# Large ___# Extra large

*** (Prices include tax. Not all sizes may be available at the time of your order. We will contact you to suggest substitutions if necessary.)*

Total amount for shirts _____

Total amount for shipping and handling (number of shirts x \$2 each) _____

TOTAL AMOUNT ENCLOSED _____

Mail shirts to:

Name _____

Chapter _____

Address _____

Phone number _____

Make checks payable to VNPS and mail to: VNPS T-shirts, Blandy Experimental Farm, 400 Blandy Farm Lane, Unit 2, Boyce, Virginia 22620, or call the VNPS office at Blandy (540-837-1600) or e-mail (vnpsocf@bellatlantic.net) to order. Mail orders preferred.

• Hickory Hollow (Continued from page 6)

The hiking trails in the hardwood and pine forest uplands are surrounded by two streams which converge on the property's western end and flow into the Carrotoman River, which in turn flows into the Rappahannock River and finally into the Chesapeake Bay. Some plants here are dog-tooth violet, spring beauties, marsh marigolds,

false hellebore, skunk cabbage, dwarf ginseng, horsetails, lousewort or wood betany, golden ragwort, hepatica, round-leaved and Canadian wild ginger, Indian cucumber root, pigmy pipes, trailing arbutus, and at least six orchid species. Among HH's unique flora are an estimated 40 mountain disjunct species in Cabin Swamp. All of these species are in danger if this delicate ecosystem is disturbed by the elimination of acres of trees and addition of

parking lots, buildings and increasing numbers of vehicles and emissions. Humidity, runoff into the lowland swamps and streams, and lower ground water levels will adversely affect Hickory Hollow's unique environment. The Friends of Hickory Hollow seek suggestions and help in their efforts to save Hickory Hollow. For more info, contact Ann Messick, 157 Otter Cove Lane, Kilmarnock, VA 22482, 804-435-6673, e-mail messick@rivnet.net.

• The Bruce

(Continued from page 1)

year--to the marl beds above wetlands with northern green orchid (*Habenaria hyperborea*) and others, then up to the huge cave and full-blooming stands of bird's-eye primrose (*Primula mistassinica*). But the fog was so thick for the return trip that the small VNPS boat with no radar had to follow in sight of a bigger, radar-equipped boat. For the rest of the week the weather was perfect, and so were the trips, ably led by the Smithsonian's Stan Shetler and his wife Elaine (who reshuffled the daily carpools with enormous good humor) and co-leader Nicky Staunton. The treks were enhanced by patriarch and trip founder Ted Scott who guided us unfailingly to all his previous favorite locations, and his delightful wife Carolyn, as well as Charlottesville's Charles "Mo" Stevens, recently dubbed "legendary Virginia botanist," who found new grasses and sedges at every turn. In fact our new list for species identified by VNPS on the Bruce is not yet completed as Mo continues to work on his discoveries. We were frequently treated to on-site spontaneous topical talks from these knowledgeable folk who added academic interest. Ted talked about ancient trees, alvars and orchid polli-

nation. Stan gave us pitcher plant morphology 101, sphagnum dynamics, arctic comparisons, and everyone argued at length about the ferns. Stan was so excited by the supposed Goldie's fern that he took a (luckily painless) tumble down the slope, while Mo was so skeptical of that fern that he stayed behind after the group had left and found to his satisfaction the real Goldie's fern, a frond of which, together with the hybrid was laid out on Stan's car for further discussion. Goldie's fern is green like most others. It was named for its discoverer, John Goldie (1793-1886).

For first timers, the sheer profusion of blooming orchids was the main delight. The grass pink (*Calopogon yuberosa*) was at its height, and Ted showed us how pollinating bees were attracted to the false stamens on the lip which bent down to brush the bees against the column and real reproductive part. The bog candles (*Habenaria dilatata*) were huge, and the showy lady-slipper (*Cypripedium reginae*) even bigger, and clumped along many roadsides. Unfortunately the latter were also favored by deer who ate our favorite clump in one night during our stay. Lunch stops at Sauble Falls were enhanced with carpets of forget-me-nots

(*Myosotis* sp.), an underwater buttercup, sweet flag, and a clump of shining ladies' tresses (*Spiranthes lucida*). It was here Ted made each one of us step down individually to admire the yellow throats. The main alvar day (see Chris Fleming's alvar article in the August 1998 *Bulletin*) was hot, but not unbearably so. The endangered lakeside daisy (*Hymenoxys herbaceae*) seemed to be on the increase. Only one stand of Robert's oak fern (*Gymnocarpium robertianum*) was found. Morning bird trips yielded black terns, herons, redstarts, loons, black-throated green and yellow warblers and bobolinks until you were almost tired of them, but not quite.

For Lorna, on her fourth trip, this was "the best one ever," but I bet she'll say this again next year as she returns from her fifth trip. Virginians clearly have more exploring to do up there. Judith waxed lyrical about everything, and Bob's one-liners kept the evening list-sessions from getting too serious. Stan's botanical expertise combined with infinite quiet patience and an irresistible twinkle charmed the whole group, and, although I didn't take a poll, I'm confident in stating that no one would deny a verdict of "what a place—what a trip."

Elizabeth Murray, Jefferson Chapter

Rock Creek Park becoming a home to native plants

(Continued from page 5)

Christmas trees, which capture silt carried in the water. The trees also trap leaves and seeds. As the Christmas trees fill with silt, they become part of the bank, and plants begin to grow. We noticed Virginia creeper and pokeweed growing in the silt in 1998.

In early 1999, we anchored nearly 600 Christmas trees donated by Christmas tree lots onto the most eroded stretch of creek bank where every rainfall washes away more of the bank. We are waiting for a storm to cover the trees with silt and rebuild the bank. We anticipate using several thousand more Christmas trees in this area over the next several years.

Soil bioengineering is a restoration technique in which dormant tree

and shrub cuttings are inserted into the soil in winter. The slippery elm (*Ulmus rubra*), red mulberry (*Morus rubra*) and box elder (*Acer negundo*) cuttings we planted in early 1998 took root. Many had three feet of new growth by fall. We planted several thousand cuttings in winter 1997, but after severe drought two summers in a row, only 15 cuttings are still alive. Although soil bioengineering did not succeed in 1997, the general area where we worked is much improved. The pedestrian traffic stopped. The dead cuttings keep the soil in place, help hold leaf litter and improve water infiltrating the soil. Native plants are beginning to inhabit that area.

We make mistakes. We believed we found a few native wild yams

(*Dioscorea villosa*) in the park. We collected seeds and planted them. In 1998 we noticed that this yam was spreading far more rapidly than we had any right to expect. After further investigation we learned the plant was Chinese yam (*D. batatas*). This summer we will remove yams.

We see slow but steady progress in the growth of native plants. When we began, there was little undergrowth. Native saplings are starting to grow. Every spring new species materialize. One year 50 May-apples (*Podophyllum peltatum*) arose on one spot on the hillside and the next year cleavers bedstraw (*Galium aparine*) arrived.

Potowmack Chapter members
Gary Sikora and Peg Shaw

• Native

(Continued from page 4)

the term "native" in an issue of *Chinquapin*, The Newsletter of the Southern Appalachian Botanical Society (vol. 2, no. 3, 1994). These thoughts, only slightly changed, follow here.

Every plant sowed or transplanted is an alien or exotic, whether or not it is a native species of the region. The very act of transplanting or sowing is an act of manipulation that in some measure, large or small, falsifies the history of plant migration and establishment in the area. In many ways, this kind of transplanting is more insidious than bringing in blatant exotics that clearly stand out. What would appear to be a "natural" dissemination is in fact an artificial one. Why, one might ask, is it more acceptable to play Johnny Appleseed with native introductions than with exotic introductions? The flip side of this is that an alien species can be more "natural" than a native one, if the native plant has been transplanted and the alien species is a long-time naturalized species that has found its way to the new location by unassisted means.

Just what is "native" or "natural," anyway? Some presumptive aliens have been part of the North

American flora for so long that there is no agreement on whether they are native or naturalized. There can be no absolute definition of "native," and no one will ever be able to create a definitive list of the "native" plants of North America. For starters, the first humans to set foot in North America and the generations of Native Americans to follow did not make lists of what they found. Even with clearly naturalized plants that have been here for many years and have long since been spreading on their own accord, it is debatable whether they should be regarded other than as a part of the contemporary "natural" vegetation.

Is a species that has been **transplanted** from the same premises, county, or state any more "native" and virtuous in the landscape than a species transplanted from another region of the continent or half-a-world away? **An introduction is an introduction is an introduction**, no matter what the source or span of transplant. Those who use native species for landscaping should always be aware that they are concocting artificial landscapes, simulating but not creating natural ones. There may be many virtues in planting truly (i.e., unarguably) native spe-

cies (e.g., preventing exotic invasions, gene pool preservation), but achieving a genuinely natural landscape is not one of them. However subtle the planting may be, the end result is the same—an introduced flora, hence a disturbed and falsified landscape. A plant, once ex situ, is introduced. Although it may be a locally native species, it no longer is a native plant in the purest sense, even if it has been moved only inches from its original location. Transplanting always falsifies history, however slightly.

Lest I be misunderstood, let me say that I am a strong supporter of preserving native plants unmolested **in their native habitats**, and this, to me, should be the primary goal of a native plant society. I do not think that such societies should get into the business of transplanting native species on a big scale to protect them ex situ. This only creates botanical gardens, not natural landscapes. Frankly, I think federal, state, and local governments often over-landscape, regardless of the species being used. Native plant societies should be champions of the cause of **letting nature be nature**.

Stanwyn Shetler, Botany Chair

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

Name(s) _____

Address _____

City _____ State _____ Zip _____

___ Individual \$15 first year (\$20 subsequent years)

___ Family \$30 ___ Student \$15

___ Patron \$50 ___ 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 exchanged with similar organizations ___ Check if you do not wish to be listed 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.

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 Boyce, VA 22620
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 vnpsoc@bellatlantic.com
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Marie F. Minor, President
 Nancy Sorrells, Editor

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 The deadline for the next issue is Oct. 1

•Communities

(Continued from page 4)

moisture levels and soil composition; varying amounts of light and proximity to other plants also play a role. Whether in an old growth situation or on the edge of a field or hillside, the possibilities of shadows and light, soil and water are innumerable, giving rise to variation in plant population and creating unique communities of plants.

Reflecting on this I began to wonder what was going on back at the plant sale? The fern garden just described owes more to the concept of an English border garden or botanical garden rather than anything found in nature. How subtle the way in which the human obsession, to acquire and control, creeps into the psyche, even among those of us who believe we are educated in ecology and are doing the right thing. I wonder how many people are going home from the plant sale laden with wildflowers to plant Jack-in-the-Pulpit, next to Rudbeckia, next to Christmas fern, next to butterfly weed, next to...I think you get the picture. At a certain point one might as well go out to the garden center buy hostas, daylilies, iris and zinnias or whatever else one fancies to plant in the yard, it would make as much sense! What might make sense, when one is going native, is to per-

haps buy a small selection of native plants after spending time analyzing your site. Touch and feel the texture of the soil, observe the way water runs through or onto the site during a rain, watch the patterns of shadow and light that form as the sun passes overhead. Prepared with this information you can begin to make an educated guess as to what might fill the environmental niche in your yard that is to become your garden.

Working with your chosen selection of plants see what actually does well in your situation and build on the success. In my case, I had another area in my yard where I tried a small variety of plants, Rudbeckia, Stokes aster and golden ragwort. The Rudbeckia didn't make it, the Stokes aster survived though not much more, but the golden ragwort absolutely thrived. Not only did the original plants survive but they multiplied. So thinking back to one of our field trips, where I had seen golden ragwort growing in the wild, I thought about the overall situation, a wet area, partially shaded, in a climax forest. What was growing with the golden ragwort? What other herbaceous plants, woody shrubs and trees were to be found?

This is going to become my guide for helping me to build a community of native plants and not just a native plant collection. In this case, I remem-

ber an understory of dogwoods and redbuds with scattered clumps of Juncus grass and meadow rue all forming a rich tapestry of color and texture more subtle and sophisticated than anything I could design. So this year, when I go to the native plant sale, you will see me buying not in ones and twos, of this or that, but in entire flats of Juncus, golden ragwort and perhaps a few meadow-rue, to build and complement what is becoming a plant community and not just a collection of native plants.

Michael Sawyer, John Clayton Chapter

•Crow's Nest

(Continued from page 3)

as scarlet tanagers, oven birds and thrushes. Coastal old growth forests are experiencing a growing concern by professional forest monitors.

The Trust for Public Land is negotiating to purchase the land with the expectation of the U. S. Fish & Wildlife Service acquiring it from them by use of the federal Land and Water Conservation Fund. Crow's Nest would be added to the Potomac River National Wildlife Refuge Complex and would be known as Accokeek National Wildlife Refuge. It is believed to be the place where Pocahontas was kidnapped in the 1600s. The name Crow's Nest comes from the early 1800s after a black three-masted schooner, called Crow, was kept there.

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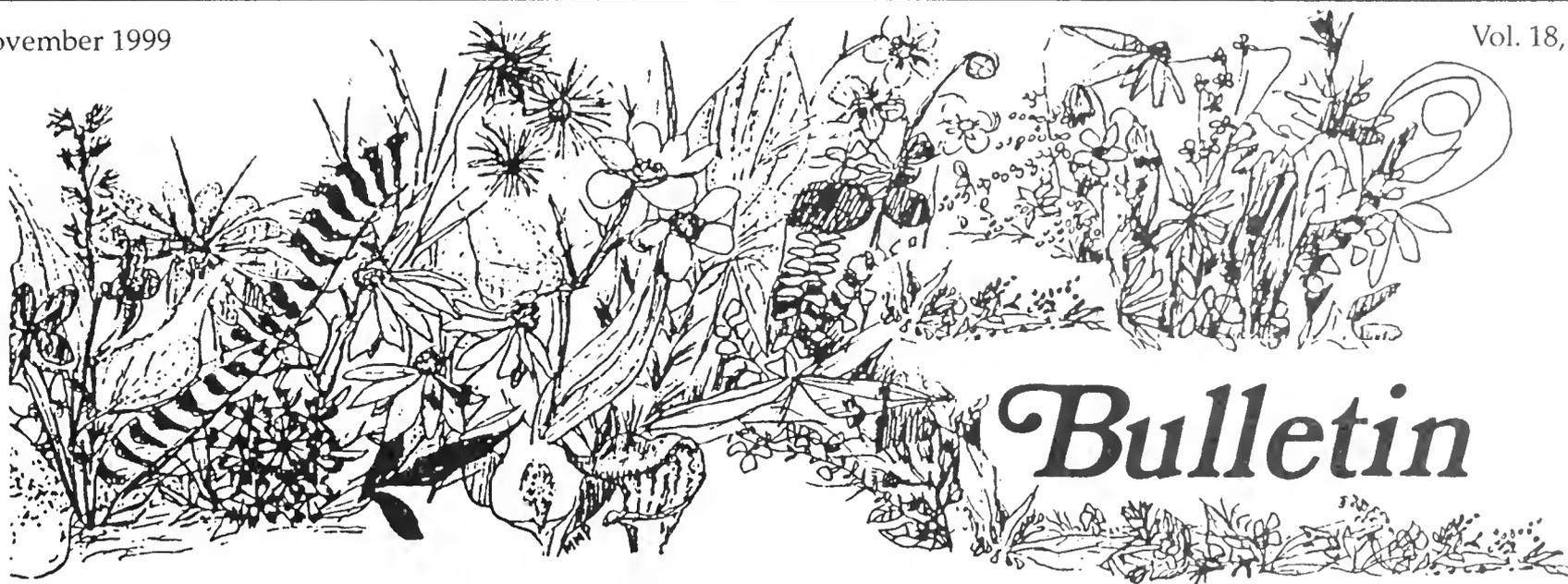


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Bulletin

A publication of the VIRGINIA NATIVE PLANT SOCIETY

Conserving wild flowers and wild places

Elvis sighted at Annual Meeting

Gathering a success despite Hurricane Floyd's havoc

If you thought Hurricane Floyd would take the wind out of the VNPS Annual Meeting in Norfolk, think again. Rescheduled because of flooding, the October 8-10 meeting had the spirit of a revival.

Imagine planning and organizing not one Annual Meeting but two, which is what the South Hampton Roads Chapter had to do when some sites and trip leaders that had been available for the first meeting date proved unavailable for the second. But no fair-weather captains were these old salts. Holly Crusier and her crew whipped together a second meeting almost as rich in field trip of-

ferings as the first would have been, and those of us in attendance went away as wowed by our resilient leaders as we were by the plant communities in Tidewater Virginia.

Highlights of the weekend included Vickie Shufer's exhibit of wild edibles and a raffle of famous tree seedlings. The latter, done up with relevant accouterments (like Moon Pies to accompany the sycamore grown from seeds once in lunar orbit), attracted much attention and raised, one hopes, lots of loot for VNPS. Surely Donna Ware and Nicky Staunton modeled proper benefit raffle behavior by buying so many chances they had (See *Annual Meeting*, page 7)



Sighted at Annual Meeting
Gentiana villosa
striped gentian
Illustration by
Nicky Staunton

2000 Annual Meeting

The Annual Meeting of 2000 will be hosted by the Blue Ridge Wildflower Society June 2-4. The date has been permanently moved from September in order to avoid hurricane season. Next year's meeting site should have spectacular blooming displays of azalea, rhododendron and mountain laurel. You won't want to miss the show. The meeting time and place meshes perfectly with the VNPS Wildflower of the Year for 2000 - flame azalea, *Rhododendron calendulaceum*.

Ted Scott honored at Cullowhee conference

The following article was taken from Mary Painter's award presentation speech in July when she presented Ted Scott with the 1999 Tom Dodd Jr. Plantsman Award at the Conference on Landscaping with Native Plants held at Western Carolina University in Cullowhee, North Carolina.

The most beloved work of the late and great playwright, Sir Robert Bolt, is his play, "A Man for all Seasons." This splendid drama brings to the stage the story of a man who remains, against all odds, true

to his conscience, to his own immutable beliefs, in all seasons.

The person we honor in this year is now in the winter of his life. While we recognize, in the context of native plant championing, what he has accomplished in his retirement years, it will at least be noted that his professional career consisted of 25 years as a research metallurgist, as well as five years of service with the Massachusetts Audubon Society as its Director of Program Operations.

(See *Award*, page 6)

From the President.....

After a couple of near misses, the Annual Meeting held on October 8-10 came off successfully. We were determined not to let Hurricane Floyd wash it away. Unfortunately, some of the registrants could not make it to the rescheduled event, and for a while we were concerned that there would not be enough participants to carry it off. However, the Annual Meeting turned out to be a blast!

*On Friday afternoon, many of us toured the Waterside Festival Marketplace, which is a large indoor mall, then ate at an outdoor seafood café overlooking the Elizabeth River. During the evening registration, VNPS tee shirts, VNPS mugs and raffle tickets were sold. The tickets were for five potted historic trees along with objects relating to each particular tree. The seeds for the trees had famous lineages, such as the tulip poplar (*Liriodendron tulipifera*) from a tree at Monticello. Then we were treated to a fine slide talk by Vickie Shufer, president of the South Hampton Roads Chapter, on native plants which thrive on the seashore.*

*On Saturday we went on our walks. Our small group enjoyed the botanical walk in the Northwest River Park located near the Dismal Swamp. Our leader "Dr. Dean" was exceptionally well-informed. I can't begin to tell you how much we learned. On the trail, we spotted a silky camellia (*Stewartia malacodendron*) and a striped gentian (*Gentiana villosa*) among a lot of other native plants. Now that I know where to find a silky camellia, I am planning to come back in the spring to photograph it in bloom. Not to be missed was the resurrection fern (*Polypodium polypodioides*) one of 16 different species of ferns found in the park. It looked like a yew trying to climb a tree. We must have walked several miles on the trail, but there were so many interesting plants to see that the walk did not seem so long, although later my legs felt the effects of the hike!*

*On Saturday evening during the business meeting, those present approved the slate of candidates. With the proxy votes the quorum was met and the candidates were voted in as officers. Before the banquet, we got to examine the potted plants brought for sale by the guest speaker Michael McConkey, owner of Edible Landscapes, at Afton, Virginia. Although they were all enticing, I was looking for a certain one, wild black currant (*Ribes odoratum*), a midwestern native with showy yellow flowers in spring followed by black fruit which one can use in scones and muffins. I found it and other native fruiting plants listed in his catalog. Also on Saturday night, Stan Shetler announced that the VNPS Wildflower of The Year 2000 will be flame azalea, *Rhododendron calendulaceum*, and presented some information on it.*

The Sheraton Waterside Norfolk Hotel presented a delicious banquet which included stuffed chicken legs. How the bone was removed while keeping the leg intact, I'll never know! During the announcements, on behalf of the VNPS, I presented a Jefferson cup and Certificate of Appreciation to Effie Fox who has been the VNPS Education Chair from 1995 to 1999. In her position, Effie had been involved in many projects such as the winter workshop. Dr. Donna Ware presented a plaque from the John Clayton Chapter to Pat and Theresa Baldwin for the many fine educational projects on native habitats which they have developed. Jennifer Ubert, the VNPS office manager in Blandy, was introduced to the membership. Jennifer is going to be a big plus in handling the administrative jobs of the society.

On Sunday there were more morning walks for members while the board of directors held its meeting. On behalf of the VNPS, I want to thank Holly Cruser, organizer, and all of the members of the South Hampton Roads Chapter who coped with anxious moments and worked hard to pull off the Annual Meeting. Holly, we had a very good time!

By the way, at the board of directors meeting, it was decided to hold next year's Annual Meeting on the first weekend of June. The Annual Meeting of 2000 will be hosted by the Blue Ridge Chapter June 2- 4. You don't want to miss this one, because the rhododendrons and mountain laurel will be in bloom along with many beautiful perennials.

Your President, Marie F. Minor

Blandy unique in Virginia horticulture

The Editor of the Bulletin has invited me to write a few words about Blandy Experimental Farm, the new home of the VNPS State Headquarters. This column is the first of a series of Blandy articles that will be appearing in the VNPS Bulletin. And, as part of the arrangement, we will be publishing VNPS articles in the arboretum newsletter, *Arbor Vitae*, published by the Foundation of the State Arboretum (FOSA). It's all part of the larger plan of identifying areas where our organizations have mutual interests, and uniting our efforts to build greater support for native plants than either VNPS or FOSA can do alone.

woody plants in the southeastern United States. Over 1,000 species and cultivated varieties of plants are distributed among 57 families and 167 genera. Plant taxa which are notably diverse include the conifers, consisting of 112 species in 18 genera, and a large proportion of the world's species of *Pinus*; 35 species of beeches and oaks; 58 species in the rose family; 20 species of maples; and 20 species of viburnums. The arbore-

Blandy is an ideal crucible for educating the public about the role of science in society — it supports both university-level research and education as well as programs for students in grades K-12. This inclusiveness makes Blandy unique among both public gardens and university research units. In 1998-1999, Blandy welcomed nearly 70,000 visitors including more than 2,600 school children.

The most basic educational activity of an arboretum or botanic garden is the display of plants, and Blandy is no exception. The existing collections serve this purpose by providing circumscribed settings for formal programming (e.g., the boxwood and herb gardens), as well as freely integrated landscapes that encourage informal exploration, meditation and observation. Early in its history, the arboretum collections were of world-class value to research and were managed primarily for that purpose. Now, as a mature and diverse collection of plants from around the world, its value has become more educational in nature, with greater emphasis on native plants, plant biology, plant diversity and how plants fit into natural and human environments.

Looking forward, the general landscape design of Blandy is evolving to combine more naturalistic displays of plants in communities along with individual specimen plantings typical of other gardens and arboreta. It is the mosaic nature of the plantings and habitats that illustrates several layers of diversity, from that of individual trees to whole ecological communities. It is my hope that with closer ties to VNPS, Blandy can tap into your expertise to achieve this goal. For more information about Blandy and the Arboretum, visit our web-site at (<http://www.virginia.edu/~blandy>).

Michael A. Bowers
Director, Blandy Experimental Farm

Blandy Connections

Let's start with the basics. Blandy Experimental Farm (BEF) is a 700-acre University of Virginia research facility located in the northern Shenandoah Valley. The farm was bequeathed to the University by Graham Blandy in 1926 and, since that time, has functioned as a field station for faculty and students. The designation as a farm is descriptive of the surrounding landscapes and its history prior to 1926, but its primary mission is education in the environmental sciences, not agriculture. Within a roughly one-square-mile area, representative habitats of the Shenandoah Valley offer outstanding research opportunities into the relationships between plants and small animals typical of the region.

At the heart of the property lies a 170-acre arboretum created by Dr. Orland E. White, the first director of Blandy Experimental Farm. Dr. White began arboretum plantings shortly after he was hired from the Brooklyn Botanic Garden in 1927, and upon his retirement in 1955 the arboretum was named the Orland E. White Arboretum. The arboretum has one of the largest collections of

tum also features one of the largest groves of ginkgo trees (*Ginkgo biloba*) outside of China, and rare plants such as the Franklin tree (*Franklinia altamaha*) and Virginia round-leaf birch (*Betula uber*). Specialty gardens include the boxwood garden, sponsored by the American Boxwood Society; the Native Plant Trail, with both herbaceous and woody specimens; the herb garden, including culinary, medicinal and ornamental herbs; a collection of daylilies; and a small collection of azaleas. I often say, and have yet to be challenged, that Blandy's one-square mile has the highest plant diversity of anywhere in the state.

In 1986, the arboretum was designated the State Arboretum of Virginia by the General Assembly, cementing the relationship with the citizens of the Commonwealth and providing momentum to Blandy Experimental Farm's growing public outreach. During the past 10 years, Blandy has assumed a leading role as a regional and national center for environmental education and research. Blandy's primary goal is to provide diverse educational opportunities for people of all ages.

BRUCE PENINSULA VNPS TRIP 2000

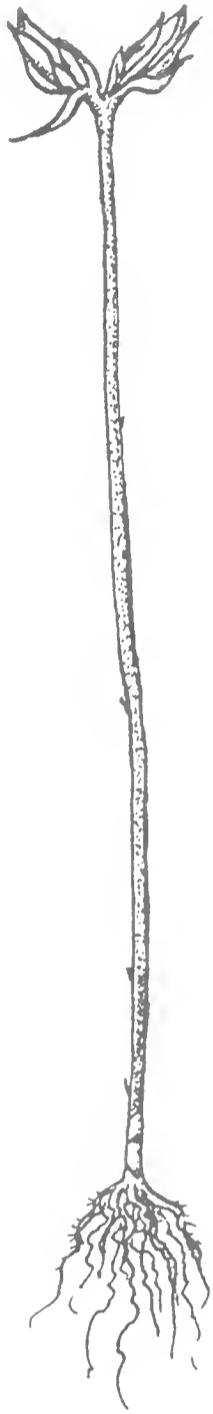
VNPS is happy to be able to offer members the opportunity to enjoy the extraordinary flora of Canada's Bruce Peninsula. Cris Fleming and Nicky Staunton will co-lead the trip. Reserve June 10-17 to join the VNPS field trip adventure. Cris, a charter member of VNPS and past education chair, was previously director of education for the Audubon Naturalist Society in Maryland. She is a professional field botanist, currently conducting flora inventories for the West Virginia Nature Conservancy. On the 1998 trip to the Bruce, Cris added over 30 new plant species to our list of flowers located there.

Canada's recent warm winter and early spring season give repeat visitors an opportunity to see the orchids and other special flora missed on previous trips when June was cooler. This year, we found many *Calopogon tuberosus* orchids in fresh bloom at Petrel Point and the *Cypripedium reginae* was in peak bloom.

If you are interested in joining the 2000 trip, please contact Nicky Staunton by early January to sign up. The cost for the trip is amazingly low. Even with a slight increase in the per person rate, we expect the cost to be no more than \$450 each person which covers cabin and all meals for the week as well as the boat trip to Flower Pot Island. Carpooling is shared by all participants for the field trips.

Wildwood Lodge will continue to offer rustic cabin accommodations, plenty of home-cooked food, and a lovely beach on Lake Huron. With the increased temperatures in June, there are more opportunities to swim there or in the pool. We will continue our field trip schedules, visiting Flower Pot Island by boat to hike the trails, and day tripping to Dorcas Bay and a few new sites added to the others which we have enjoyed over the years. (The August 1999 VNPS *Bulletin* contained a lively report of the 1999 trip written by Bess Murray, Jefferson Chapter member.) For more information or to register, e-mail or call Nicky Staunton (staunton@erols.com or 703-368-9803).

If any chapter would like a Bruce Peninsula slide presentation for a program, please contact Nicky.



Utricularia minor
lesser bladderwort
Illustration by
Margaret Reynolds



Lysimachia nummularia, moneywort
Illustration by Margaret Reynolds

A gift to VNPS before the end of 1999

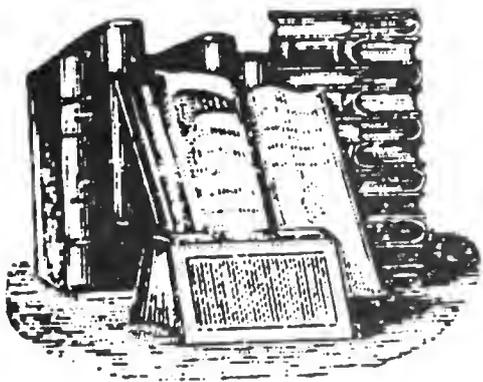


Remember, saying that you care makes twice the impact with a year-end, tax-deductible gift to the Virginia Native Plant Society dedicated in someone else's name. The contribution could be made as a holiday gift to someone who loves wildflowers, could honor a special birthday, could memorialize a loved one or friend, or could just let someone special know you are thinking of both them and native plants at the same time.

Your gift will strengthen VNPS programs and help with the new office at Blandy in the coming year 2000! Please accompany your gift with: **YOUR NAME AND ADDRESS; NAME AND ADDRESS OF PERSON(S) TO NOTIFY OF YOUR GIFT;** and **THE TYPE OF GIFT YOU ARE SENDING.**

Gifts should be sent to: VNPS, Attn.: Special gift fund, Blandy Experimental Farm, 400 Blandy Farm Lane, Unit 2 Boyce, VA 22620.

Thank you. *Your VNPS Board of Directors*



Wildflower guide a thing of beauty

Wildflowers of the Appalachian Trail, by Leonard M. Adkins, photographs by Joe and Monica Cook, Menasha Ridge Press, 1999, ISBN 0-89732-295-9, \$15.95.

Anyone who has ever tramped the Appalachian Mountains can wax eloquently of vistas and views beyond compare, but how many of those same people rave about the white Clintonia, the Joe-Pye weed, or the false hellebore that they brushed past on the trail?

Leonard Adkins, long-time traveler of mountain paths around the world, insists that the totally fulfilled hiker needs to carry a magnifying glass as well as a pair of binoculars in order to fully appreciate the flora of the mountains from Maine to Georgia. And, it wouldn't hurt to carry a copy of Adkins' newest book, *Wildflowers of the Appalachian Trail* (published by Menasha Ridge Press and endorsed by the Appalachian Trail Conference) as well.

More than another wildflower guide, Adkins has created a volume of plant biographies. Coupled with fantastic color photographs from the husband and wife outdoor photography team of Joe and Monica Cook, the book is a good read whether you leave it on your end table or stow it in your backpack. Nearly 150 flowers are highlighted in the book with each bloom receiving a page of text and a full-page photograph. Another 16 flowers get honorable mention status in the back. The biography of each plant includes botanical names, common names, and a couple of paragraphs. (See *Wildflowers*, page 10)

From the botanical bookshelf

Vine booklet gets mixed reviews

Flowering Vines: Beautiful Climbers, Karan Davis Cutler, editor, published by Brooklyn Botanical Garden, Handbook #158, 1999, 103 pp.

The early part of this book deals with the nature of vines and some of their perceived adaptive behavior followed by a section on the culture of vines; both appear to be clearly and thoroughly explained. Following that are short chapters on "Vines in the Garden," "Growing Vines Successfully," and two chapters specifically on clematis and roses. The remainder of the book is devoted to "An Encyclopedia of Flowering Vines." In general the book is well written, covers most subjects at least as well as one could expect in the limited space, and provides essential information for a gardener with limited experience plus good reference material for the more advanced gardener.

One subject is poorly covered throughout the book - that of invasive vines. There is a one-page section on "Vine Villains" which lists some vines that are clearly problems because of rampant growth. Yet there are serious omissions in this list such as *Akebia*

quinata, *Polygonum aubertii*, and several of the *Passiflora* spp., all of which tend toward excessive growth and the potential of getting out of control. It is not clear what species of honeysuckle, listed as "Lonicera species," are recommended for their fruits in the list of "Autumn Beauties" (p. 16), although the list of honeysuckles in the encyclopedia clarifies this if the reader relates the information in the two different sections. There is also a problem because some of the different authors list and recommend vines with very invasive characteristics in at least some parts of the country, such as *Akebia quinata* and *Polygonum aubertii*. On page 65 there appears to be a mistake in the choice of the photograph of American bittersweet (*Celastrus scandens*) in that the abundance of fruit is much more characteristic of the Oriental bittersweet (*C. orbiculatus*) than our native bittersweet. The book includes 145 species and numerous cultivars, especially in the clematis and rose chapters. Forty-five species are given extensive coverage in the encyclopedia section.

Ted Scott, Shenandoah Chapter

Invasive plants examined in handbook

Invasive Plants: Weeds in the Global Garden, John M. Randall and Janet Marinelli editors, published by Brooklyn Botanical Garden, Handbook #149, 1996

The early chapters cover the subjects "Redefining the Weed," "How Non-native Species Invade & Degrade Natural Areas," "Chemical-free Weed Controls" and "To Spray or Not to Spray." The remainder and main section of the book is an "Encyclopedia of Invasive Plants" divided into sections for trees, shrubs, annuals and perennials, grasses, vines, and aquatic plants. Included in the encyclopedia section are 24 trees, 29 shrubs, 20 annuals & perennials, 7 grasses, 8 vines, and one aquatic plant. Anyone at all familiar

with the problem of invasive plants immediately recognizes a problem with the book - inadequate space to cover the subject for the whole country. There is also the problem that some plants appear to be invasive in some sections of the country but not in others. This leads to the omission of seriously invasive plants such as Russian star thistle (*Salsola tragus*) and Atlantic cord grass (*Spartina alterniflora*) in the West, and such plants as mile-a-minute weed (*Polygonum perfoliatum*), and akebia or chocolate vine (*Akebia quinata*) in the East. There are numerous other species which are either very invasive currently in various sections. (See *Invasives*, page 7)

● Award

(Continued from page 1)

His love of the natural world and the web of life took root during his boyhood years of scouting in Orange. During and after World War II, and during his professional years in the cutting tool industry, he continued his extensive work with the Boy Scouts.

Over many years he has sharpened his interest and skills as a true naturalist, conservationist and horticulturist. The savvy stretches back to years of field botany spent in the company of Lawrence Newcomb during, in part, the development of the *Newcomb's Wildflower Guide*. Ted's home gardens and the grounds of the historic Montpelier, James Madison's home, reveal his fine propagation work, particularly with rhododendrons and azaleas.

In 1976, it was Virginia's good fortune that a native son returned to his boyhood home of Orange. From there he has distinguished himself through significant leadership positions within the Piedmont Environmental Council and as Conservation Chair for VNPS. He helped both develop and clearly define organizational goals and strategies. These included a strong emphasis on invasive alien plant control in order to help give our natural flora the freedom to flourish within their natural habitats.

It is to that end that our man for all seasons shines most brightly. With tact and sensitivity, he has effectively drawn together the efforts of many public agencies at every level and all related in their various concerns - educators, non-profit and

professional organizations - toward a common goal of the protection and promotion of native plants.

The tapestry of organizations woven together through his tireless networking includes: the Division of Natural Heritage, The Nature Conservancy, chapters of the Nurseryman's Association and the American Society of Landscape Architects, the National Fish and Wildlife Association and the Virginia Department of Conservation and Recreation.

His coordination efforts led to the production and on-going distribution of a composite list of "Invasive Alien Plant Species of Virginia." In 1997 "A Master List of Native Plants for Conservation, Restoration and Landscaping" was produced. It was soon followed by four related brochures specifically written for each of Virginia's physiographic provinces.

Financial aid came through various grants he garnered. He led the development of the program, then he created the funding for it. In the little spare time left, he gained further funding by leading botanizing walks in Canada's Bruce Peninsula.

He has applied many tools to realize his goals, including countless speaking engagements and illustrated lectures at the regional and national level. His meticulous photography and remarkable command of his subject of invasive aliens continue to add punch and depth to his message.

His personal perspective has been that we need to give people - property owners, businesses and agencies - reasons and incentives to

change and improve their stewardship of the landscape. More recently, he has worked to effect needed legislative changes regarding the listing of endangered and threatened native plant species, as well as the listing of noxious plant species.

This is how the concept of retirement years is further interpreted: by installing solar panels at a nursing home, by watchdogging on a board of zoning appeals, by projecting concerns about uranium mining, and by leading environmental education workshops for teachers.

The value, the worth of the life we live, the impact we have had in our time here on earth, is perhaps best measured by how we have influenced others. In the minds and hearts of the many colleagues who have supported his nomination for this award, he is our exemplary model of volunteerism from the private sector; one who continues to demonstrate how *one person* can make a positive difference, how *one citizen* can effect changes in man's relationship with and within our natural world.

Ted is a replete champion of native plants and the environment, one willing to draw on every skill necessary to see a job through. Ted has earned the plaque which reads: "Thirteenth Annual Tom Dodd, Jr. AWARD OF EXCELLENCE, presented to Theodore Gourdin Scott, Jr. for THE POWER OF ONE IN THE UNDERSTANDING AND PROTECTION OF OUR NATIVE FLORA, 1999."

Applicants sought for conservation horticulture fellowship

The Garden Club of America (GCA) and the Center for Plant Conservation (CPC) are seeking applicants for the 2000 Catherine H. Beattie Fellowship for Conservation Horticulture. The fellowship is sponsored by the GCA and administered by CPC. The Executive Committee of the GCA will award the fellowship in the spring of 2000 upon recommendation by the scholarship committee and the science advisory council of the CPC.

Each year the grant enables a graduate student in biology, horticulture, or a related field to conduct research on a rare or endangered U.S. plant. Preference is given to students focusing on the endangered flora of the Carolinas or the southeastern United States. Fellowships may vary from \$1,000 to \$4,000, and will serve as compensation for work done by a graduate student, often at a botanical garden jointly serving CPC

and that student's curricular studies.

Application Guidelines: Applications should be submitted to the CPC. They should include:

a) a 2-3 page proposal, which includes a description of the research project, and how it relates to the student's academic and professional development

b) an itemized budget for funds

c) a current resume

(See *Fellowship*, page 9)

More books for the discerning VNPS reader

• *Invasives*

(Continued from page 5)

tions of the country or which show promise of being a real problem in the future. To list and describe all such plants in all parts of the U.S., excluding Hawaii, would require a considerably more ambitious undertaking. Having pointed out this major problem, by which the editors were undoubtedly frustrated, the reviewer hastens to point out that there is much valuable information to be found on the plants that are listed as well as in the sections preceding the encyclopedic section. One might hope that the publisher will elect to publish a set of handbooks such as this to cover the whole country, perhaps by regions. The reviewer is not aware of any such material being available at this time.

Ted Scott, Shenandoah Chapter

• *Annual Meeting*

(Continued from page 1)

to drape their tickets around their arms like greenbrier.

As for field trips, all reports were glowing, but I can testify only to the quality of mine. Those of us on the First Landing/Seashore State Park trip were treated not only to a host of new sights and sounds but also to expert guidance from trip leaders who were intimately familiar with the landscape. Who but Betsy Nugent, who knew the area like the back of her hand, could have taken us directly to the two tiny treadlightly (*Cnidocolus stimulosus*) plants on the far reaches of Long Creek Trail? In addition to providing us plant lists, Nugent and fellow trip leader Byron Babcock also put our trip in historic and geographical context. Did you know, for example, that, unlike some shrinking East Coast beaches, Cape Henry is actually increasing in size, adding land area incrementally each year?

If we needed to be reminded what was best about a VNPS Annual Meeting, South Hampton Roads provided it — the opportunity to take a fresh look at an unfamiliar part of

Old-growth fir forest is a hidden jewel

The Hidden Forest, by Jon Luoma, Henry Holt & Co., 1999, 288 pp. ISBN 0805014918, \$25

Located deep within the Willamette National Forest of central Oregon lies a majestic woodland known as the Andrews Experimental Forest. It is here that the author, through multiple visits and endless interviews with the scientists working there, describes for us in fascinating detail the research conducted to date in an ongoing, long-term study of this old growth Douglas fir forest. Here, for the first time, a multidisciplinary team of botanists, soil biologists, entomologists and wildlife ecologists has spent a generation working together to discover the elements and secrets of an entire ecosystem. "In the shadows of this woods," says Jon Luoma, "in its rivulets and streams, under its soil, and high overhead, they have discovered a hidden forest." He lets us enjoy with him the excitement of scientific discovery which is "suggesting a totally new approach to forest management, as well as some startling misconceptions on which our current forestry practices are based. No such long-term study has ever been made of the ecology of an old growth Eastern hardwood forest." The author laments the limited funding made available for research leading to a fundamental understanding of the world we live in while billions are spent for space study and the investigation of other planets. He clearly questions our priorities. This book consisted of numerous complex explanations that were written so that they were easily understood and fascinating.

Ted Scott, Shenandoah Chapter

the state through the eyes of the naturalists who know it best. And finally, no account of the 1999 Annual Meeting would be complete without a description of Michael McConkey's program at the Saturday night banquet. In addition to sharing plants grown at his Afton nursery, Edible Landscapes, McConkey presented a slide show that was none-the-less informative and all the more hilarious for having a few slides upside down. Holly had warned us that Mike was a showman and that he might entertain us following his presentation, but who would have guessed McConkey would grab his guitar and break into a rockabilly rendition of "Another Saturday Night" right between his slide of hardy kiwi and his exposé on new mulberries? And was that McConkey or Elvis grinding his hips to the tune of "A Hot Limousine Night in My Chevrolet?" If laughter is the healthiest response to the human condition, McConkey left us not just wiser, but healthier, following his presentation.

All in all, it was a fine, fun weekend, made all the more enjoyable by the attention to detail provided by our hosts. From the native plant arrange-

ments on banquet tables to the "I survived Hurricane Floyd" tags hanging on our historic trees, and the volunteer drivers transporting us to field trips, our experience was enriched by the extra efforts of our friends in South Hampton Roads. Kudos to Cruiser and crew.

Nancy Hugo, Publicity Chair



Sighted at Annual Meeting
Monotropa uniflora, Indian pipe
Illustration by Nicky Staunton

Heartening news on Montebello power line management

The members of Montebello Clean Mountain Coalition (MCMC) share their good news from Central Virginia Electric Co-operative (CVEC) that CVEC agreed to provide a "right-of-refusal" regarding pesticide use on power line easements in Montebello, Virginia.

Members of the CVEC were mailed a letter from CVEC Member Services Manager, Gregory J. Kelly, on September 10. Some excerpts from the letter follow. The letter stated that CVEC would begin its work in the power line right-of-ways shortly and would be spraying "Accord" herbicide directly to the leaves of trees under the power lines. Spray would not be broadcast and rather low volumes would be directed at individual saplings.

The company enclosed a brochure to customers outlining the program. CVEC's goal is to move away

from a repetitive cycle of clearcutting and bushhogging, and toward right-of-ways that are dominated by grasses, shrubs and wildflowers. Co-op members were advised that they would be welcome to observe the process and ask questions of the Virginia State Inspector or the CVEC staff who would be present. Some CVEC members do not want "Accord" herbicide to be used on their land and CVEC agreed to accommodate that preference by offering a number of alternatives and working with members to be sure that they are satisfied with CVEC efforts.

The plans by CVEC to convert right-of-ways into areas dominated by grasses, shrubs and wildflowers is a positive step for the power line easements. The co-operative's efforts are enthusiastically applauded. VNPS hopes the grasses,

shrubs and wildflowers will be native plants, and encourages CVEC to include invasive alien plants in the herbicide program.

MCMC plans to encourage CVEC right-of-way landowners to inventory the plants on their property with guidelines provided by VNPS. The Virginia Save Our Streams has designated the Tye River Headwater System as one of 28 official stream monitoring sites in Virginia and has trained MCMC members to be monitors. Other areas of complementary data are being compiled such as validating historical and current medical information on Montebello residents. Also, the butterfly populations migrating through the mountains will be documented. MCMC will be following up notification issues with the appropriate Virginia agencies.

Nicky Staunton, Conservation Chair

VNPS perspective regarding use of herbicides/pesticides:

The article concerning CVEC in the previous *Bulletin* should have stated that the VNPS Board of Directors previously studied the issue of chemical use for control of invasive plants and concluded that there are occasions when other methods of plant control are inadequate. After assessing a problem with invasive plants and concluding that manual or mechanical removal is not practical, deliberate application of the correct chemical to specific problem plants can be made with all possible care taken to follow directions for its use.

The Virginia Native Plant Society and the Virginia Department of Conservation and Recreation-Division of Natural Heritage have produced fact sheets on invasive alien plants and their control in natural areas. The publications contain suggested methods of invasive plant control. In some situations, chemical application is suggested when appropriate as the only effective control.

Nicky Staunton, Conservation chair

Responsible chemical use can help control invasive plants

In the last edition of the *Bulletin*, an article appeared which detailed the efforts of a local environmental group to block the planned herbicidal spraying of an electric power line easement.

The Montebello Clean Mountain Coalition protested the planned use of herbicides by the Central Virginia Electric Cooperative to control vegetation on power lines near Buena Vista, Virginia.

I was not the only member of our society who read the article as a blanket condemnation of the use of chemi-

cals. Most of us are probably aware of and adamantly opposed to the indiscriminate use of chemicals. Since World War II, the widespread use of deadly chemicals throughout the world has killed and poisoned untold billions of organisms, including humans. Chemical poisoning continues to be a threat. Irresponsible and/or uninformed companies, agencies and individuals regularly misuse or over-use chemicals. Probably some of the greatest impact comes from the appli-

cation of pesticides on private lands by uninformed homeowners who think that if it is on the shelf at the hardware store than it must be safe.

While there are many examples of the dangers and misuse of chemicals, they can also have a role in positively shaping our landscapes. Another article in the August *Bulletin* titled "Ten years of work pays off in nation's capital" detailed the efforts of volunteers and paid staff to control exotic (*See Wise use, page 10*)

VNPS Chapter News

Happy Birthday!

The John Clayton Chapter recently celebrated its 15th birthday. The chapter has 179 members and stretches from Melfa on the Eastern Shore to New Kent, Smithfield, King and Queen and Northern Neck. The heaviest concentrations of members are in Williamsburg, Richmond, Mathews, York, Newport News, Hampton, Norfolk, Gloucester and Middlesex counties. Members also reside in Michigan, Vermont, Maryland, New York, North Carolina and South Carolina.

Garden garners award

The Blue Ridge Wildflower Society's Dorothy Bliss has recently been awarded the Lynchburg Civic Appreciation Award for the botanical garden at Randolph-Macon Woman's College. The garden was designed by Bliss and became a reality through the hard work and dedication of many members of the BRWS. The garden was also featured in the summer 1999 issue of *Chinquapin*, the newsletter of the Southern Appalachian Botanical Society.

PWWS member honored

Jim Waggener, of the PWWS chapter, was recently one of eight people to receive the 1999 Virginia Environmental Stewardship Award. He won the adult division for his efforts in preserving the U.S. Army Harry Diamond Laboratory Facility in Woodbridge as a natural area. This biologically rich and diverse former army facility has since been incorporated into the Occoquan Bay National Wildlife Refuge.

Successful plant sale

Members of the Prince William Wildflower Society furnished around 1,100 plants for this year's 17th annual plant sale. The efforts paid off when the chapter took in \$2,885 in sales, which included \$280 for memberships.

Plant registry being created

The Shenandoah Chapter is developing a registry of sites and blooming times of particular plant species that members find in the region. Such a collection of data may help professional botanists, ecologists and VNPS field trip planners. It will also serve as a partial historical record of native plant species.

•Fellowship

(Continued from page 6)

- d) a letter of endorsement by an academic advisor from the institution where the student is pursuing graduate studies
- e) the names of three additional persons qualified to describe the student's character and ability
- f) official undergraduate and graduate transcripts

The successful applicant should be prepared to write an article for *Plant Conservation*, the newsletter of the CPC, and submit a written report of the project results. Selection will be based on the excellence of the student's personal and academic qualifications and on the anticipated contribution of the project to the conservation of rare and endangered plants. Complete applications must be received by CPC no later than December 31, 1999. The fellowship recipient will be notified by March 31, 2000. The final report is due to CPC by March 31, 2001. Address all inquiries and applications to: Beattie Fellowship, Center for Plant Conservation, Missouri Botanical Garden, P.O.B. 299, St. Louis, MO 63166.

See the address label for your membership expiration date

VNPS Membership/Renewal Form

Name(s) _____

Address _____

City _____ State _____ Zip _____

Individual \$15 first year (\$20 subsequent years)

Family \$30 Student \$15

Patron \$50 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 exchanged with similar organizations Check if you do not wish to be listed in a chapter directory

Make check payable to VNPS and mail to:

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

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

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 The deadline for the next issue is Dec. 1

Wise use of chemicals can be good

(Continued from page 8)

invasive plants and restore native plants in Rock Creek National Park. Methods used included the direct application of a chemical called Garlon 4 to eliminate some species.

In Northern Virginia, the Fairfax County Park Authority is using the direct application of Roundup in a low concentration to limit the spread of Japanese stilt grass (*Microstegium vimineum*) at Huntley Meadows Park. Japanese stilt grass poses a great threat to forested lands in Virginia. It currently covers 800 of the 1,400 acres in Huntley Meadows Park. The decision to use Roundup is the result of several years of field and archival research, testing various methods, and receipt of a grant from the U.S. Fish and Wildlife Association. This project has been endorsed by the Potowmack Chapter of the Virginia Native Plant Society.

Other examples of the responsible application of herbicides include the endorsement by the Maryland Chapter of The Nature Conservancy of limited chemical use on power line easements in Maryland and Delaware by

by The Nature Conservancy on its own lands to control invasive species, and the use by the U.S. Fish and Wildlife Service and the National Park Service on public lands to control plants such as purple loosestrife (*Lythrum salicaria*).

In the examples given, the people using the chemicals took pains to try other methods first, select the least dangerous chemical that could do the job and limit the application to the target plants. This is not to say that we should not question the use of chemicals to control organisms in our landscapes. Indeed we need to ensure that application of chemicals is the most appropriate action and is done responsibly.

Efforts by groups such as the Montebello Clean Mountain Coalition are to be applauded. However, in a world where the ecosystems are constantly being disturbed by human activities and where invasive species prevent the formation of stable, diverse communities, limited, responsible herbicide applications should not be ruled out in areas where active management is practiced.

Charles Smith, PWWS member & Assistant Park Manager for Fairfax County Park Authority

• Wildflowers

(Continued from page 5)

graphs of "gee whiz" facts. For instance, the stems of fire pink have tiny hairs covered in a sticky substance designed to capture insects intent on the flower's nectar, while the toxins in monkshood give it the nickname "Pretty Poison." Roman soldiers used trout lily to treat blisters, and round-lobed hepatica was once used to treat liver ailments.

Adkins has arranged the book for the convenience of the plant novice. Flowers are arranged by bloom color and within each color section the order is determined by bloom season, earliest to latest.

Although the book is useful anywhere in the eastern U.S., Adkins has written this book with the AT hiker specifically in mind. To that end each flower comes with a list of places along the AT where hikers are most likely to "encounter" that particular plant. The plant's north-south range is also included.

If you are interested in getting the full impact of your forest sojourns and want to appreciate the tiny jewels of the land as well as the overwhelmingly large ones, then rush out and get Adkins' new book.

Nancy Sorrells, Bulletin editor

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