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Bulletin

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

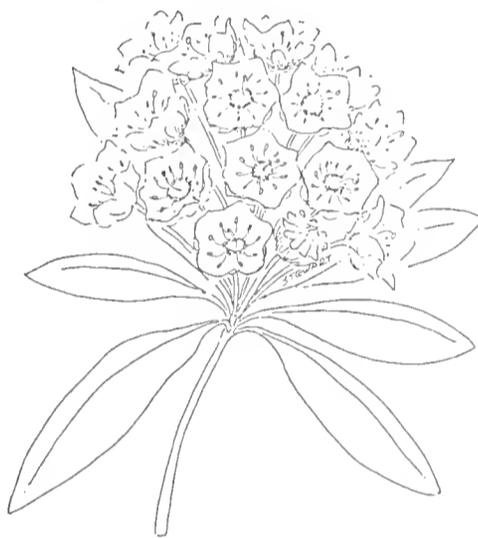
Mountain Laurel

Virginia Wildflower of the Year Attractive Any Season

"Calico bush" and "spoon-wood" are two of many local names for the mountain laurel, *Kalmia latifolia* L., chosen as Virginia's Wildflower of the Year for 1994. For the first time, a well-known shrub is the featured wildflower. With its glossy, dark leaves and variable branching patterns, mountain laurel is visually attractive year round. Nosegays of pink-tinged white, cup-shaped flowers make spectacular displays in both the wild and home gardens from the Coastal Plain to the mountains along Virginia's highways and trails. From the oak woods and sandy soils of the Coastal Plain, and the cool, well-drained slopes along Piedmont streams and rivers to the rocky outcrops at the crest of the Blue Ridge and westward, these shrubs bloom in May and early June before the canopy trees are fully leafed out.

An evergreen shrub with a dense rounded crown, mountain laurel is a member of the Heath family (*Ericaceae*). The dark brown bark tinged with red becomes flaky in long strips on the older stems, but is smooth on newer wood. New growth, both twigs and leaves, is usually fuzzy. The mature leaves are alternate (rarely in threes), leathery, oblong, about 3 to 4 inches long, with smooth margins tapering to both tip and short petiole. The upper surface is dark green and very glossy with a yellow midrib, while the lower surface is lighter yellow-green.

Flowers are borne on one-inch pedicels produced in terminal clusters or corymbs four to six inches across. Buds are conical, fluted and deeper pink. When the flowers open, the corollas appear as five-sided, white inverted parasols about an inch across with pink dots and a wavy pink line in the center. The ten



Kalmia latifolia, Mountain laurel
Illustration by Barbara Stewart

stamens in each flower have anthers buried in individual "pockets" in the corolla completing the illusion of parasols with dainty ribs.

Bees of varying sizes pollinate the flowers. Visiting insects are bombarded with pollen when their feet dislodge an anther from its pocket. The cocked filament straightens suddenly, flinging the anther against the intruder. Fruits ripen through the summer, becoming dry, globe-shaped capsules with a persistent style in September. Later, the style falls away to reveal a dimple in the top of the capsule, as if a small finger poked each one to see if it were done. Capsules persist from fall to spring and help identify mountain laurel through the winter.

Mark Gatesby discovered this plant during his travels in the Carolinas and Virginia and introduced it to Europe in 1726. But Peter Kalm, a Finnish botanist sent to the New World to collect plants for Linnaeus, was the first to study the genus. The teacher named the genus for his student, thus giving moun-

tain laurel the Latin name *Kalmia latifolia*. The specific name means "wide leaf," a character which differentiates this from five other species of *Kalmia*, all residents of the New World.

It was Kalm who discovered the poisonous properties of the foliage when some sheep belonging to the expedition in which he travelled almost died after browsing the leaves. "Lambkill" is another common name applied to this plant. Horses are also susceptible, but deer seem not to be so seriously affected. However, deer appear to browse this only when little else is available.

Usually 6 to 10 feet high, these handsome shrubs may reach 20 to 30 feet in height and form tangled patches so dense that they are difficult to walk or even crawl through. That characteristic plus the shiny smooth appearance of large laurel patches earned the name "laurel hell" and "laurel slick" from early settlers. When lumbering operations or fires remove canopy trees, the laurel often forms almost pure stands. In bloom, the "laurel slicks" of the highlands become "pink beds."

Catharine Tucker
Botany Chair

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FROM THE PRESIDENT

Restoration is Spring's Watchword

Once winter days become longer, breaking up the ice and gloom, most of us begin to think about skunk cabbage breaking through ice, about getting our native plant seeds into the starter mixture, about an assessment of our property's flora.

Those of us in the Virginia Native Plant Society have a perspective of "our" property being that which we live upon and that public property which we enjoy: wildlife management areas, state and national parks, state and national forests...all have interesting Virginia native plants which are soon going to be up for another growing season.

There are "other" plants there, also. When we return to Roosevelt Island, we will see the persistent English ivy and ailanthus seedlings also beginning another growing season, flaunting their tenacity in spite of our beginning efforts to remove them in October.

Natural areas fare poorly. Roosevelt Island's overgrowth of English ivy is the result of years of watching the plants slowly grow to the point of a population explosion, seemingly impossible to control. VNPS plans are coming together for a visit by members from around the state on April 9.

Considering the restoration of an ecosystem demands that we define the word "restore." This is an uncertain term...restore what? Where? Which period should be brought back? Surely not the corn fields which were once on Roosevelt Island. What we really want to have happen is to remove the invasive alien plants which have a negative effect upon the native seedbank so that the ecosystem will have a chance to "restore" itself. Perhaps re-naturalization is what we have in mind.

You will have details of our Friday through Sunday weekend and we hope you will join us for the Roosevelt Island trip. Activities will include some plant removal, the organization of some studies, and a tour of the island led by Marion Lobstein. On Sunday, Cris Fleming will lead us on a special tour of nearby Turkey Run. There are plans to have veteran natural area restorers share experiences and suggestions.

The skunk cabbage is pushing through icy water and little black flies are coming to feast and to pollinate the blossoms under the "hothouse" spathe! Life stirs. Enjoy your spring wildflower adventures throughout Virginia!

Nicky Staunton



Symplocarpus foetidus, Skunk cabbage
Illustration by Barbara Stewart

VIRGINIA NATIVE PLANT SOCIETY FY 1994 BUDGET

The VNPS Board of Directors has approved the following budget for fiscal year 1994. Members should remember that the proposed allocations do not wholly reflect current VNPS priorities since the Society's budget can't show volunteers' time or chapter expenditures.

INCOME

Membership dues	\$11,000
Sales, fees & investments	\$6,210
Donations & contributions	<u>\$2,450</u>

INCOME TOTAL \$19,660

EXPENDITURES

Programs (conservation, botany, etc.)	\$2,940
Outreach (education, publications, etc.)	\$8,175
Administration (membership, correspondence, insurance, annual meeting, etc.)	<u>\$9,635</u>

EXPENDITURE TOTAL \$20,750

NET INCOME -\$1,090

TOTAL ASSETS BEGINNING FY 1993
(Bank account & investments)
\$15,945

Thanks to 21 Life Members of VNPS

The Virginia Native Plant Society would like to recognize its 21 Life Members. Their commitment to conservation and confidence in the Society are greatly appreciated. As a token of gratitude, these Life Members will be the first to receive one of the new VNPS window decals.

Mr. and Mrs. Patrick Baldwin
John Clayton Chapter
Dorothy C. Bliss
Blue Ridge Wildflower Society
Richard L. Cassel
Blue Ridge Wildflower Society
Susan Christopher
Potowmack Chapter
Mrs. Lamot Du Pont Copeland
At large
Dr. Mark Head
Piedmont Chapter
Bonnie Marie Hohn
Shenandoah Chapter
Gary Knipling
Prince William Wildflower Society
Mary Lynn Kotz
Piedmont Chapter

Eleanor and Ray Longley
Jefferson Chapter
Walker P. and Dorothy Y. Newman
Potowmack Chapter
Mrs. Marguerite Potee
Potowmack Chapter
Margaret O. Pridgen
Potowmack Chapter
A. Birney W. Robert
Piedmont Chapter
John J. Rountree
Potowmack Chapter
Dr. and Mrs. Donald Schnell
Blue Ridge Wildflower Society
Charles and Sylvia Sterling
John Clayton Chapter
Donna M.E. Ware
John Clayton Chapter
Loma C. Wass
John Clayton Chapter
Margaret White
Piedmont Chapter
Mrs. Orme Wilson, Jr.
Piedmont Chapter

VIRGINIA'S RAREST PLANTS

Helonias bullata, Swamp Pink

There is a great deal of news to report about swamp pink — a rare and beautiful member of the lily family. Since it was discussed in an earlier article in the *Bulletin*, *Helonias bullata* has been listed as threatened under the Federal Endangered Species Act of 1973, as amended. A written plan has been developed under that act which outlines a series of tasks necessary to ensure the species' recovery and create a schedule for implementing those tasks. Swamp pink has also been listed as endangered under the Virginia Endangered Plant and Insect Act. In addition, 11 new populations of the species have been discovered during the last three years in Caroline County on Virginia's Coastal Plain.

Helonias bullata has an unusual global distribution. In New Jersey, Delaware, and Maryland, it is generally found on the Coastal Plain. In North Carolina, South Carolina, and Georgia, it is found in the Appalachian Mountains. In Virginia, it is found both on the Coastal Plain, in Caroline and Henrico Counties, and in the mountains, in Augusta and Nelson Counties.

Helonias bullata is a perennial herb with a rosette of long, spatula-shaped, evergreen leaves; a thick, hollow, leafless stem; and a showy terminal inflorescence densely packed with numerous small flowers. The mature anthers of this member of the lily family are a lilac color, which contrasts strikingly with the brilliant pink of the flowers.

Swamp pink is found in seepy, nutrient-poor, forested wetlands with a stable water

table at or near surface level. The species cannot tolerate either long periods of inundation or drought, therefore, is usually found along small water courses where lateral seepage is always present. The substrate is

usually rich in decayed organic matter, and sphagnum moss is frequently present.

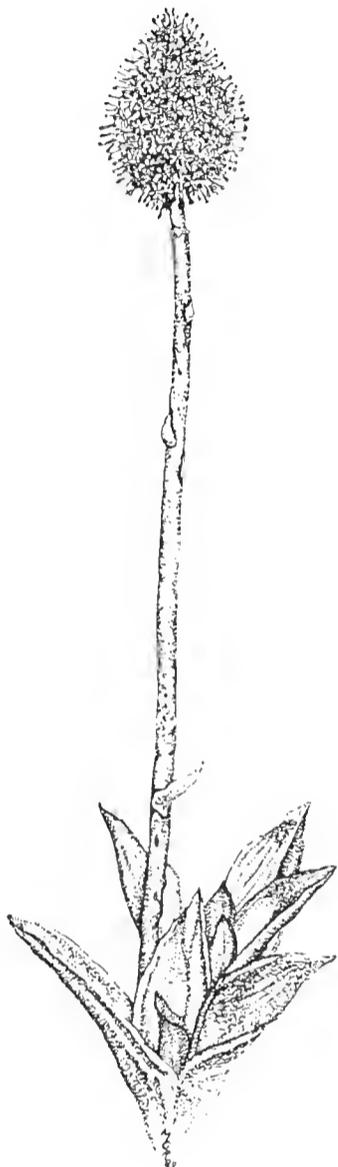
In the past, many populations of *Helonias bullata* have been lost to habitat destruction. While these losses have slowed in recent years due to stronger laws protecting wetlands and the listing of swamp pink under the Federal Endangered Species Act, other threats to the species persist. These include off-site water withdrawal, the degradation of water quality, collecting by gardeners and nurseries, trampling, browsing by deer, and habitat inundation due to beaver activity.

In Virginia, many of the mountain populations of swamp pink are on federal lands managed by the George Washington

National Forest or the Blue Ridge Parkway and are, therefore, protected under the Federal Endangered Species Act. The Virginia Department of Conservation and Recreation's Division of Natural Heritage is currently working with the U.S. Department of the Defense to protect 11 populations located at Fort A.P. Hill in Caroline County. Finally, the Henrico County population is on lands owned by the Commonwealth which have been proposed for dedication as a Natural Areas Preserve. Thus, the future for *Helonias bullata* in Virginia looks promising.

Allen Belden, Jr.

Virginia Division of Natural Heritage



Helonias bullata, Swamp pink
Illustration by Megan G. Rollins

Shenandoah Chapter to Assist Forest Service

The Shenandoah Chapter has signed a volunteer agreement with the George Washington National Forest to assist in developing its Augusta Springs Environmental Education Area in western Augusta County. Plans call for a loop interpretive trail through pines, thickets and a spring-fed wet meadow. The trail will pass the site of a resort spring and bottling plant and will lead to bird blinds overlooking a pond. Major interpretive themes will be the history of resort springs, meadow ecology and watchable wildlife.

Deerfield District Ranger David Rhodes has asked the chapter to provide a plant inventory of the area which can be developed into subsequent interpretive handouts and signage, as well as recommendations for appropriate native plants to use in landscaping parts of the area.

Augusta County currently has no developed environmental education area available for schools or the general public. Even in its undeveloped state, Augusta Springs has attracted visiting school groups. The area promises to become a significant educational and recreational resource for the county. The Shenandoah Chapter is pleased to have been asked to take part in this project and looks forward to making an important contribution to its success.

Mark Gatewood
Publications Chair

VNPS Window Decal Available

The first Virginia Native Plant Society window decal is now available. Show your pride in Society membership and help get our name and logo out in the public eye. To order, send \$2.09 per decal, plus a self-addressed, stamped envelope to: Mark Gatewood, Publications Chair, 132 Wayburn Street, Churchville, VA 24421. Make checks payable to VNPS.

Goodbyes and Hellos

Bulletin editorship changes

The editorship of the *Bulletin* changes hands with this issue. Virginia Klara Nathan, VNPS *Bulletin* editor of four years, has served VNPS well. Her editorial and layout skills have been used effectively for Virginia's native plants, making the *Bulletin*, our representative in people's homes and offices, a polished publication. The Board accepts her resignation with regret.

Virginia's patience and sense of humor are two qualities for which I am personally appreciative. Her perseverance of high standards assisted all of us who contributed articles. We will miss working with her and wish her good fortune on all of her future endeavors. Thank you, Virginia.

Nicky Staunton and the VNPS Board

Shenandoah Chapter member Nancy Sorrells has accepted the position of editor of the *Bulletin*. Nancy is the research historian at the Museum of American Frontier Culture in Staunton. She and her husband, Randy, live in Greenville, Virginia.

Nancy's background in writing includes five years as assistant sports editor and writer for the Staunton *Daily News Leader* where she designed the paper's first outdoor page for outdoor sports and conservation articles. Her work at the *Daily News Leader* won her a Virginia Press Association Award for outdoor writing and she was a finalist for the 1988 national Women's Sports Journalism Award.

Most recently, Nancy coauthored *A Cyclist's Guide to the Shenandoah Valley*. The 266-page book is a guide to scenic, historic and natural features along selected bicycle routes in the Valley. With Nancy's skilled guidance, we can look forward to continued growth in the scope and quality of our *Bulletin*.

Mark Gatewood
Publications Chair

Please Add Tax

In the last *Bulletin*, VNPS books and gifts were listed with basic prices and did not include tax and shipping. If you order any of the items, please remember to add 4.5 percent for Virginia's sales tax. Also include \$2 for each book ordered and 52 cents for each booklet or reprint ordered to cover shipping costs.

Perusing Plant Catalogs Part of Spring

January and February's dreary cold days are brightened by the arrival of catalogs from native plant nurseries. This spring my "want list" includes some plants that are new this year as well as old standbys that I haven't gotten around to trying.

VNPS's Wildflower of the Year for 1993, *Monarda fistulosa*, is offered by Niche Gardens (1111 Dawson Road, Chapel Hill, NC 27516, \$2 for catalog) in a selection from Mississippi with the pretty name 'Claire Grace.' It is described as being "a rich dark purple flower" with mildew-resistant foliage.

WE-DU Nurseries (Rt. 5, Box 724, Marion, NC 28752, \$2 for catalog) always offers natives not found elsewhere. Their 1994 introduction, *Phlox stolonifera* 'Margie,' is described as a very vigorous ground cover with pale pink purple-eyed flowers. The variety was discovered in some woods near the nursery. Also available from WE-DU is speckled wood lily, *Clintonia umbellulata*. This plant has been on my want list for years, ever since my attendance at a native plant symposium where Bill Brumback of the New England Wild Flower Society included *Clintonia umbellulata* in a list of his top native perennials and said it was much easier to grow than *C. borealis*.

My usual long list of shrubs I'd like to order from Woodlanders (1128 Colleton Ave., Aiken, SC 29801, \$2 for catalog) includes

Callicarpa americana var. *lactea*, a rare white-berried form of the normally purple-berried native beautyberry, and *Calycanthus floridus* 'Athens,' an especially fragrant yellow-flowered form of sweetshrub. To be considered for its name alone, 'Creel's Calico Clethra' with white flowers is certainly tempting, and the catalog's warning that its northern hardiness is unknown may or may not stop me. And I'm only through the "C's"!

Allen Bush's Holbrook Farm & Nursery Catalog (P.O. Box 368, Fletcher, N. 28732-0368, free catalog), is always fun to read because he writes interesting descriptions and histories of the plants he offers. He is also very creative when it comes to naming plants. This spring's catalog lists Phlox 'Speed Limit 45' with the explanation that it appeared beside a speed limit sign close to the nursery. Nice "cotton candy" pink blossoms and no evidence of powdery mildew on the foliage prompted its inclusion in the catalog.

In addition to being a source of common and uncommon native plants for our gardens, nursery catalogs offer a wealth of cultivation information. If your chapter doesn't have copies of VNPS's list of mail order nurseries, write to me at P.O. Box 462, Manassas, VA 22110 for a copy.

Nancy Arrington
Horticulture Chair

Wild Bergamot: A Final Look at VNPS's 1993 Wildflower

Sipping warm herb tea and savoring the fragrance as you warm chilled hands on the cup is one of the pleasant experiences of these beautiful cool weather days. Lavender wild bergamot may be used as a "restorative" in this way. Bergamot tea is said to have a mild tranquilizing effect and quiets an unsettled stomach.

Pour a cup of boiling water over a handful of leaves (use more green leaves than dry), let steep a few minutes and strain into a teacup. Add a little lemon juice and honey. Fresh leaves minced and tossed with yogurt and fresh fruit make a refreshing treat. Sprigs can provide garnish for fruit or iced tea. Also, fresh leaves and stems in a hot bath soothe and refresh tired and aching muscles.

There are many more uses recorded for this strongly flavored mint in pioneer and Native American lore. Colonists found wild bergamot a substitute for mints they had known in England and Europe, and adopted it for both flavoring, food and medicinal use. Native Americans used wild bergamot for tea, hence the common name "Oswego tea." They

also used it to make such diverse items as pomade for hair and poultices for blemishes.

When bergamot plants are in bloom they should be cut several times for bouquets and will thus continue to bloom until frost browns the tops. Without frost, the corollas shrivel and drop, the heads turn brown and dry. The fruiting heads consist of numerous tightly arranged, tubular calyces, each containing 1-4 seeds. These turn dark brown as they mature, one to three weeks after flowering. Once seeds are removed from the dry heads, store them in a sealed container in the refrigerator. Propagation methods from seeds and cuttings are well described in *Harry Phillips' Growing and Propagating Wildflowers*.

Dry seed heads may be added to potpourri or dry arrangements, steeped to provide tea and added to spice bags when roasting meats. There seems to be no end to the possibilities for enjoyment of this native wildflower.

Catharine Tucker
Botany Chair

Invasive Plant Species of Virginia

Common Reed (*Phragmites australis* (Cav.) Trin. ex Steud.)

Description

Common reed is a tall perennial wetland grass ranging in height from three to 13 feet. Strong, leathery horizontal shoots growing on or beneath the ground surface (rhizomes) give rise to roots and tough vertical stalks. These stalks support broad sheath-type leaves that are one-half to two inches wide near the base, tapering to a point at the ends. The foliage is gray-green during the growing season, with purple-brown plumes appearing by late June. The plant turns tan in the fall and most leaves drop off, leaving only the plume-topped shoot. Big cordgrass (*Spartina cynosuroides*), a non-invasive species, is sometimes confused with common reed. It can be distinguished from common reed by its sparser flowering structure and longer, narrower leaves.

Habitat

Common reed thrives in sunny wetland habitats. It grows along drier borders and elevated areas of brackish and freshwater marshes and along riverbanks and lakeshores. The species is particularly prevalent in disturbed or polluted soils found along roadsides, ditches and dredged areas.

Distribution

Found throughout the temperate regions of North America, common reed is widespread in eastern Virginia and also can be found in some western areas of the state. It is strongly suspected that a non-native, aggressive strain of the species was carried to North America in the early 20th century.

Life History

Common reed spreads to a new area by sprouting from a rhizome fragment or from seed. New upright stems grow from the rhizome each spring. Rhizomes spread horizontally in all directions during the growing season. Flowering begins in late June, and seeds are formed by August. In early autumn, food reserves move from leaves and stems to the rhizome system. The leaves die and fall off, with only the dead brown

vertical shoots remaining. The accumulation of dead leaves and stems, as well as the pervasive rhizome system, prohibits the growth of desirable plant species.

Threats

Common reed has become a destructive weed in Virginia, quickly displacing desirable plant species such as wild rice, cattails and native wetland orchids. Invasive stands of common reed eliminate diverse wetland plant communities, and provide little food or shelter value for wildlife.

Prevention

Minimizing land disturbances and water pollution helps deter this invasive species. Land management practices that guard against erosion, sedimentation, fluctuating water levels and nutrient loading in wetlands are the best long-term protection.

Control

Once established, common reed is very difficult to completely eradicate. However, careful planning and long-term management can yield varying levels of control. Herbicide use in combination with



Common Reed (*Phragmites australis*)

Illustration courtesy Wetland Program,
Virginia Institute of Marine Science
Artist: Rita Llanso

burning has generally proven to be the most effective means of control, and results in minimal disturbance to wetlands. Only a special, bio-degradable herbicide which is non-toxic to animals and licensed for use in wetlands can be used. Because a healthy wetland ecosystem is generally resistant to invasive species, long-term control of common reed depends upon restoration of the health of the ecosystem.

For more information about common reed, contact the Department of Conservation and Recreation at 804/786-7951, the U.S. Fish & Wildlife Service at 804/721-2412 or the Virginia Native Plant Society.



Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL AND RECREATIONAL RESOURCES

Division of Natural Heritage
1500 East Main Street • Suite 312
Richmond, VA 23219



Virginia Native Plant Society
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Annandale, VA 22003

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Virginia Wildflower Celebration 1994

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. Propagated plants will be available at chapter plant sales.

Virginia Wildflower of the Year 1994, mountain laurel, blooms in late May or early June, and will therefore add its white and pink parasols of color to events across the state.

Calendar of Events

March 20, Sunday. 10 a.m. - noon. **Great Falls Park.** Marion Lobstein (Prince William) 703-536-7150.

April 2, Saturday. 8:30 a.m.-3:30 p.m. **Snow Trillium Walk.** Franklin, WV Jacob Kagey (Shenandoah) 703-828-3297.

April 10, Sunday. **Roosevelt Island Wildflower Walk.** Dan Sealy, Natural Resource Manager, U.S. Park Service will lead walk. Nancy Luria (Potowmack) 703-528-3612.

April 10, Sunday. 8 a.m.-5:30 p.m. **Canoeing the Dragon Run in King and Queen County.** See plants and animals in a pristine wetland. Sponsored by Chesterfield County. Mark Battista 804-745-8360.

April 16, Saturday. 3-4:30 p.m. **Riverbend Park.** Marion Lobstein (Prince William) 703-536-7150.

April 16, Saturday. 11 a.m.-4 p.m. **Earth Day Celebration.** Worldgate in Herndon. Nancy Herwig (Prince William) 703-435-6518.

April 16, Saturday. 8:30 a.m. **Wildflower Walk Broadway and Tide Springs.** Jacob Kagey (Shenandoah) 703-828-3297.

April 17, Sunday. 2 p.m. **Annual Bluebell Walk, Bull Run Regional Park,** Centreville. (Prince William) For more information call 703-631-0550.

April 17, Sunday. 10 a.m. - noon. **Wildflower Walk at Great Falls Park.** Marion Lobstein (Prince William) 703-536-7150.

April 17, Sunday. 2:30-4:30 p.m. **Wildflower Walk at Balls Bluff.** Marion Lobstein (Prince William) 703-536-7150

April 23, Saturday. 2-4:30 p.m. **Scott's Run Nature Preserve.** Cris Fleming (Potowmack) 301-657-9289.

April 23 & 24. **Leesburg Flower & Garden Festival.** Saturday, 10 a.m.-6 p.m.; Sunday 10 a.m.-4 p.m. Sponsored by the Leesburg Parks and Recreation Department. For more information call 703-777-1262.

April 24, Sunday. 1:30-5 p.m. **Hone Quarry and Shenandoah Mountain.** Jacob Kagey (Shenandoah) 703-828-3297.

April 28, Thursday. 9 a.m. **Annual Trillium Walk at G. Richard Thompson Tract.** Anne Crocker (Potowmack) 703-437-0355.

April 30 & May 1. **Prince William Wildflower Society annual Garden Tours.** Nancy Vehrs (Prince William) 703-368-2898.

May 5, Thursday. 7-9 p.m. **Wildflower Slide Show. Reston Nature Center.** (Prince William) 703-435-6510.

May 6, Friday. 10 a.m.-12:30 p.m. **G. Richard Thompson Wildlife Management Area** (Linden). Marion Lobstein (Prince William) 703-536-7150.

May 7, 8 & 14 **Native Plant Sale.** Jointly sponsored by the John Clayton Chapter and the Virginia Living Museum. Held at the Virginia Living Museum in Newport News. Jane Showacre (John Clayton) 804-435-3912.

May 14, Saturday. 10 a.m.-3 p.m. **Potowmack Chapter Plant Sale.** Green Spring Gardens Park. Nancy Luria (Potowmack) 703-528-3612.

May 15, Sunday. 3 p.m. **Fieldtrip to Weyanoke Sanctuary, Norfolk.** (South Hampton Roads Chapter) Lee Moomaw 804-422-6470.

May 15, Sunday. 10 a.m. - noon. **Great Falls Park.** Marion Lobstein (Prince William) 703-536-7150.

May 26, Thursday. 7 p.m. **Lecture "Ferns You Should be Frond Of,"** by Peter Mazzeo, U.S. National Arboretum herbarium director. General membership meeting of Potowmack Chapter. Nancy Luria 703-528-3612.

Plant selection guidelines

Spring is the time when many gardeners add to their native plants by making purchases at nurseries. Unfortunately, some of the plants being sold have been collected from the wild. Nina T. Marshall, author of *The Gardener's Guide to Plant Conservation*, offers the following guidelines which can help spring shoppers determine if the plants being sold have been collected in the wild.

1. Check labels. Are they in accordance with agreements now statutory under Dutch law? Are they labeled at all?
2. Look for disclaimers and information about plant origins in catalogs.
3. Critically evaluate information about plant origins. Watch for ambiguous phrases like "nursery grown." Question propagation methods.
4. Use price as an indicator. Propagated plants take more time and care and, therefore, cost more. They are also usually healthier.
5. Question the vendor about sources. If they do not know, buy elsewhere.
6. Consider growing plants from seed.
7. Express your concerns to people selling wild-collected plants or plants of unknown origins.

Events of Interest -- Spring/Summer 1994

Wildflower Week Scheduled

In 1992 the United States Forest Service launched a wildflower week, "Celebrating Wildflowers," with the idea that it would become an annual event emphasizing the importance of plant resources and serving as a platform for year-round programs to feature the important roles that national forests and grasslands play in providing diverse habitats for much of America's flora.

This year's events will be celebrated May 23-29. To learn what you and your VNPS chapter can do to participate this year, write Elizabeth Lye, National Endangered Plants Program, U.S. Forest Service, P.O. Box 96090, Washington, D.C., 20090 or call 202-205-0850.



Claytonia virginica, Spring Beauty
Illustration by Barbara Stewart

Audubon Programs

VNPS member Cris Fleming will be offering the following programs and classes through the Audubon Naturalist Society:

April 2, Saturday, 9 a.m.-3 p.m. Early Bloomers at Turkey Run Park and Riverbend Park.

April 30, Saturday, 9 a.m.-4 p.m. Late April Bloomers at Balls Bluff and Red Rock Wilderness Overlook Park.

May 14, Saturday, 10 a.m.-3 p.m. Mid-May Floral Display at Thompson Wildlife Management Area.

June 11, Saturday, 9 a.m.-12:30 p.m. Exploring a Coastal Plain Magnolia Bog at Suitland Bog.

For more information or reservations, call Fleming at 301-657-9289.

Wintergreen Wildflower Symposium

The Wintergreen Wildflower Symposium will be held the weekend of May 13-15 with a focus on the study and appreciation of wildflowers in the woods. Over 70 different programs presented by nationally known experts will offer everything from plant identification to sketching and photography. Conference cost is \$70. For registration and more information on the conference and lodging, call 804-325-2200, Lorie Kines at ext. 992.

RAP Tours

VNPS member Marion Lobstein will be conducting the following Smithsonian Resident Associate Program (RAP) tours:

March 26, Saturday. Theodore Roosevelt Island.

May 1, Sunday. National Arboretum.

May 7, Saturday. Thompson Wildlife Management Area and Blandy Experimental Farm.

June 18, Saturday. Shenandoah National Park.

VNPS member Cris Fleming will be leading the following RAP tours:

April 9, Sunday. 9:30 a.m.-noon and 1-3:30 p.m. Wildflowers Along the C&O Canal

May 1, Sunday. 9:30 a.m.-noon and 1-3:30 p.m. Wildflowers Along the C&O Canal. For more information on all of these RAP tours, call 202-357-3030.

Plant Identification Courses

VNPS member Marion Lobstein will be offering a number of plant identification classes. The following courses will be taught at the Manassas Campus of NVCC. For more information call 703-257-6643.

April 4-16, BIO 295-71M Topics in Spring Wildflowers (1 credit).

July 18-31, BIO 295-03M Special Topics in Wetland Plants (2 credits).

Aug. 2-5, BIO 295-02M Special Topics in Summer Wildflowers (2 credits).

The following course and workshop will be taught at the Blandy Experimental Farm. For more information call 703-837-1758.

March 19, Saturday, 10 a.m.-3 p.m. Introduction to Plant Identification.

June 28-July 15, EVEC 493/793 Field Botany.

VNPS member Cris Fleming will conduct the following course sponsored by the USDA Graduate School:

April 13-June 8, Spring Wildflower Identification Course. Tuesday evenings with three Saturday field trips. Call 202-690-4280.

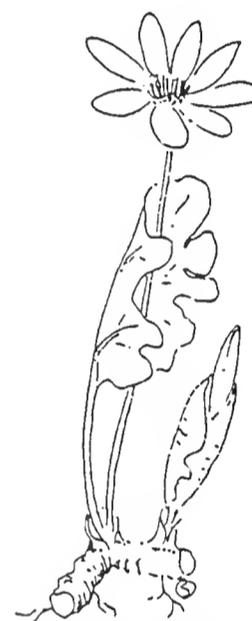
Spring Arboretum Tour

The James Madison University Arboretum Advisory Council is offering a spring arboretum tour to Chapel Hill, Durham and Raleigh, North Carolina.

The April 15-17 trip is an organized tour with travel by tour bus and lodging at the Hampton Inn in Chapel Hill.

The cost of the trip is \$200, and the trip is limited to 40 adults. Reservations will be made on a first deposit received, first served basis.

For more information, call JMU, College of Letters and Sciences, 703-568-6261.



Sanguinaria canadensis, Bloodroot
Illustration by Barbara Stewart

Colorado Wildflower Trip

Wildflower enthusiasts interested in discovering the flora of the northern Rocky Mountains in Colorado may be interested in signing up for a trip, sponsored by the Audubon Naturalist Society and led by VNPS member Cris Fleming.

The July 2-9 trip will focus on flowers found in the Rockies' high alpine tundra, mountain meadows and forests. The \$859 cost includes local transportation, accommodations and leaders. For more information, call 301-657-9289 or 301-652-9188, ext. 3006.

Gardening & Landscaping Course

This year VNPS will again cooperate with the Lewis Ginter Botanical Garden to sponsor a March 19 Gardening for Wildlife Workshop at the University of Richmond. Topics will deal with creating natural landscapes, wildlife in formal gardens, habitat restoration, and wetland gardening. For more information, call 804-262-9887 between 8:30 a.m. and 1:30 p.m.

Landscaping for Wildlife: The Basic Concept

Editor's note: This is the first in a series of articles written by Marlene Condon, a wildlife landscape enthusiast who lives in Crozet. Condon will explore the different ways property owners can garden for wildlife. Her articles were first published in the Monticello Bird Club newsletter.

Anyone who has ever walked through a variety of natural habitats and paid heed to the activities of the animals in each area, will realize that the most vibrant tracts are open fields bounded by wooded areas. In this weedy region, meaning an uncultivated area of wild grasses and wildflowers, full sunlight allows a great variety of plants to grow, most of which provide food for various animals. Young grasses and newly emergent wildflower stems are readily eaten by mammals and insects, such as woodchucks and grasshoppers by day, and mice and crickets by night. Those plants which reach maturity have flowers which attract birds and insects to their nectar and pollen.

The abundance of sucrose-loving insects attracts predators which feed upon them and other predators which feed upon these predators. Parasitic organisms are also attracted to all the activity here. The soil has its own life forms, among them earthworms, which feed at night upon nearly anything that lies in their paths, and various insect larvae which feed upon plant roots and other animals. In an area covered with detritus, isopods like pillbugs, wood lice and sow bugs, and millipedes share the bounty of live and dead plants as well as dead animals. It's a busy - and dangerous - world where life abounds.

The herbaceous plants of the field provide nesting materials and concealment of

nests on and below the ground. Tall plants also help vertebrate animals remain somewhat hidden while they eat, which gives them a measure of protection from predators in the air and on the ground. After the blooms have been pollinated, seeds or fruits form which provide sustenance for birds and mammals through the colder season of the year.

Along the edges of fields tend to be shrubby areas composed of bushes and tangles of vines. Usually these plants do not require full sun to grow, and that is why they can survive being slightly shaded by the forest beyond. This boundary area provides escape from some predators; nesting accommodations for birds and food for browsers such as deer. So a hedgerow, too, is a very busy place as young are nurtured, adults take cover, and predators such as snakes search for a live meal.

The forest has its own life, but it is less frenetic and not as easily observed by humans. Because a wooded area allows little sunlight to penetrate, there are fewer plants growing on the forest floor than in the field.

Thus animals of the forest are dependent mostly upon the flowers or fruits of trees, or they venture out into the field nearby for sustenance but raise their young or seek shelter in trees.

The basic concept behind creating a wildlife haven in your yard is to copy nature's own design and provide three levels of foliage. This is not difficult. Minimize lawn area by making lots of flower beds close to your house (I keep just enough lawn to allow me to walk easily among my plantings). A clipped lawn, composed solely of grass, does not

provide much food or cover for wildlife. Beyond the flowers (in the direction away from your house), cultivate a wall of trees which never grow very tall (dogwood, sourwood) and/or bushes and vines. If you already are surrounded by forest beyond your yard, you can let the forest regenerate itself for a few years along the edge. Young trees, thick with branches and leaves, will come up close together and thus provide shrubby growth. However, you must cut down these trees before they are too large to fell safely near your house and flower gardens. This will sustain the brush piles which you should keep around your property. Don't allow the shrubby area to become forest. New seedlings will come up each year so you will have a continuous supply of trees. It is actually a constant struggle to keep the forest from taking over your yard. If you are not surrounded by woods, you should plant tall-growing deciduous and evergreen trees beyond the shrubby area. In this manner you will have recreated the most bountiful of natural habitats. If you do not have a sunny yard, there are shade-loving plants which can attract wildlife, but sunny areas really are much more productive.

You will now be able to not only invite many kinds of animals to dinner, but also beckon them to stay put and raise a family in as much safety as can reasonably be given. You will have put out the "welcome mat." And when you discover you have many companions dwelling on your property, you will know you have done everything right. That's a wonderfully satisfying feeling.

For Your Library

The History and Folklore of North American Wildflowers by Timothy Coffey (New York: Facts on File, Inc., 1993), 356 pages, \$45. This is a thoroughly researched book for readers interested in wildflowers, herbs, and their historical uses; there is a wealth of information here, too, for students of language. Included are approximately 700 native and naturalized exotic flowering plants commonly found within the continental United States and Canada. Nineteenth and 20th century engravings that show the flower, leaves and fruit of about one-third of the

plants assist in identification. In his descriptions, the author quotes lengthy passages from works as diverse as the Scandinavian Edda, Shakespeare, and Thoreau, as well as from journals and letters of colonists and explorers, many of whom describe uses by our Native Americans. All make for delightful reading while instructing in an important part of our folk history. (Excerpted from a review by Marikou Vivanco in winter 1993 *Arbor Vitae*).

Notes from The Virginia Gardener, Vols. I and II and ***The Virginia Gardener Handbook*** are available from Virginia Tech. The "Notes"

volumes are excerpts from *The Virginia Gardener Newsletter* published by the Department of Horticulture at Virginia Tech. These volumes are available for \$7 each (postpaid). The 500-page "Handbook" offers in-depth gardening information and is used to instruct Master Gardeners in several states and is the text for college-level, home horticulture classes at Virginia Tech. The cost is \$40 (pp). To order any of these publications, send a written request along with your check (payable to Virginia Tech Treasurer) to The Virginia Gardener, Department of Horticulture, Virginia Tech, Blacksburg, VA 24061-0327.

A Ray of Sunshine

Nursery Drops Purple Loosestrife

The matter of trying to persuade a nurseryman that he should not be selling a particular plant, especially when it is a good seller, can be a very discouraging experience. But when January brought its annual crop of garden catalogs, there it was - a true beam of sunshine - in the form of an announcement. White Flower Farm will no longer offer cultivars of Purple Loosestrife (*Lythrum*) after 1994.

Readers of the *Bulletin* know of the efforts in the Virginia Native Plant Society to eliminate this plant from nursery sales because of the damage it does in wetlands (see *Virginia Wildlife*, July 1993). Now a large, well-known nursery is voluntarily dropping a popular border plant from its catalog. The announcement in the nursery's new 1994 catalog read:

"This spring is the last season in which we will offer *Lythrum* (Purple Loosestrife) for sale. Despite its astonishing beauty and value in the garden, it has become a major pest along the edge of waterways throughout America, crowding out native plants that don't share its vigor. Because marshy areas in the Northeast have been filled with *Lythrum* for as long as we can remember, we were slower than we should have been in taking the problem to heart."

This IS news of the best kind for us and a measure of reward after so many discouraging responses from other nurserymen.

HATS OFF TO WHITE FLOWER FARM!

Many nurseries have been selling horticultural cultivars of Purple Loosestrife for years saying they could not spread because they were sterile. Now we know that they were mistaken. Research by Dr. Neil O. Anderson and Dr. Peter D. Ascher at the University of Minnesota has proven that the horticultural cultivars of *Lythrum* are both male and female fertile and can therefore hybridize with each other as well as with the species. (See *Journal American Society of Horticultural Science* 118(6): 851-858, 1993).

Ted Scott
Conservation Chair

Virginia Endangered Species Program May Be Cut

The Virginia Endangered Plant and Insect Species Program, administered by the Virginia Department of Agriculture and Consumer Services (VDACS) is proposed to be eliminated, effective July 1 due to mandated budget cuts. VNPS members may contact their elected representatives to help insure that this successful program is not eliminated and that threatened plant and insect species will continue to be protected in Virginia.

The Endangered Plant and Insect Species Act was enacted by the Virginia General Assembly in 1979 as part of Virginia's commitment to prevent the extinction of its rare plant and insect species. Under the law, the Virginia Department of Agriculture and Consumer Services was mandated with the responsibility for identifying and listing plant and insect species that are in danger of extinction, and then for taking steps to insure the species survival.

Since 1979, the VDACS has developed a program which not only lists plants and insects, but carries out conservation programs and all necessary regulatory functions needed in an endangered species program. Formal agreements have been established with other researchers in state and private institutions who carry out conservation and recovery programs on listed species. VDACS also has formal agreements with the U.S. Fish and Wildlife Service to develop and

implement protection and conservation programs on listed, threatened and endangered plant and insect species.

The program has recorded a number of important successes including the following three examples: The Virginia Round-leaf birch, which at one time numbered less than 25 individuals now has over 2,000 individuals in conservation plantings and is proposed to be downlisted to threatened. Peter's Mountain Mallow consisted of only three plants in the wild in 1992. The number of plants increased significantly in 1993 as the result of a controlled burn suggested from research of the species. The small whorled pogonia is proposed for federal downlisting, from endangered to threatened, because state and federal conservation surveys have located additional populations and many of these populations are now protected.

If you think that such a successful program for recovering threatened and endangered species and protecting numerous other species should not be abolished, but instead expanded, contact your representative in the Virginia General Assembly and voice your support for the continuation, and if possible, expansion, of the Virginia Endangered Plant and Insect Species Act with the Virginia Department of Agriculture and Consumer Services.

Tax checkoff helps Virginia's Open Spaces

Virginia taxpayers are invited to help preserve the state's threatened natural heritage and expand their opportunities to enjoy outdoor recreation by designating all or a portion of their state income tax return to the Open Space Recreation and Conservation Fund. This tax-deductible contribution will be used to purchase and manage land for endangered plants and animals, develop public access to these natural area preserves, and create local parks and recreation facilities.

The fund is managed by Virginia's Department of Conservation and Recreation (DCR) and is divided equally between two goals. Half is used for acquisition of and public access development to the rarest and most threatened natural areas DCR has identified as needing protection. The other half is distributed through the Virginia Outdoors Fund as grants to localities for open space protection and regional parks.

A contribution to the Open Space and

Recreation Fund can be entered on line 15F on the short tax form and line 27 F on the longer version. A donation may be listed as an itemized deduction on next year's federal and state income tax returns. Direct donations can be made to the Open Space Recreation and Conservation Fund, Department of Conservation and Recreation, P.O. Box 721, Richmond, VA 23206-0721.

For more information, contact Virginia's Department of Conservation and Recreation at 804-786-1712.

Gift Memberships

You can provide a gift to a friend and the Society whenever you give a gift membership to VNPS. An individual membership costs only \$15, but the benefits come for a whole year. To bestow this special present, send the membership form on page 9 along with a check to VNPS Membership Chair Phoebe White, Rt. 1, Box 381, Delaplane, VA 22025.

FROM NEAR AND FAR

West Virginia Wildflowers

After a long hiatus, the West Virginia Native Plant Society is once again an active organization. Early in 1993, over 20 old members and newly interested folks met and started the reorganization and revitalization process. The WVNPS was founded to promote the preservation and conservation of the native plants and vegetation of West Virginia and to further the education of the general public on the values of native plants and vegetation. Already several meetings and field trips (to Fernow Experimental Forest, Greenbottom Marsh, and Greenland Gap) were held and three issues of the newsletter, *Native Notes*, have been published. The Kanawha Valley Chapter has already been formed and groups are being formed in Huntington and Elkins. For more information on membership and society activities, write: WVNPS, Corresponding Secretary, P.O. Box 2755, Elkins, WV 26241.

Wildflower Stamps

Many of you may have noticed the series of wildflower stamps being sold by the U.S. Postal Service. There are 50 different wildflowers depicted on each panel, one for each state.

In many areas the stamps are so attractive that they have sold out. Only a certain number of stamps are allotted to each post

office, and when they are sold -- that's it.

The only solution would be another printing which might occur if there are enough requests. If everyone went to his local post office and filled out a customer service card, their voices on this matter might be heard.

Native Azalea Repository

The National Native Azalea Repository, housed at the North Carolina Arboretum in the Pisgah National Forest near Asheville, is projected to be "the most complete collection of azalea germplasm for those species native to the United States." Dozens of species and cultivars will be planted "in the near future" at a site in the Arboretum's Scientific and Botanical Plant Collections Area which has native stands of *Rhododendron arborescens* and *R. calendulaceum*. Hybrids of native species will be on display, including both natural and man-made crosses.

To learn more about the NNAR, contact Rich Owings, North Carolina Arboretum, P.O. Box 6617, Asheville, N. 28816-6617 or call 704-665-2492.

New Gardening Magazine

The American Cottage Gardener began publication this January. The quarterly magazine hopes to "explore the cottage garden style from a distinctively American perspective." For more information, write: 131 E. Michigan St., Marquette, MI 49855.

Transplanted Wildflower Meadow

A recent report written by Robert E. Lyons of Virginia Tech's Department of Horticulture describes a new approach to planting a wildflower meadow. "The Virginia Tech Transplanted Meadow: An Alternative to Direct-Seeded Meadow Cultivation" details a process where carpets of annuals can be established with minimal weed competition. Equal quantities of seeds of 8-12 species are planted in 4"x4" flats in a greenhouse at the beginning of May. About a month later, the flats are fertilized with a solution containing 475 parts per million of nitrogen and are transplanted on a one-foot spacing to a rototilled site. The transplants are mulched and watered as needed for up to a month. No more fertilizer is applied. The process can be repeated in subsequent years.

Coal mine, Zoo Get Flowers

The Garden Club of Indiana is in the process of reclaiming a coal mine near Montgomery, Indiana by planting it with wildflowers. The funds for the memorial garden were donated by a member in honor of her late husband.

The Rhode Island Federation of Garden Clubs sponsored and contributed \$1,600 last year for a wildflower garden at the Roger Williams Park Zoo. Research for the project was done by a graduate student at the University of Rhode Island.

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, Route 1 Box 381, Delaplane, VA 22025

The *Bulletin*

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Virginia Native Plant Society

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Nicky Staunton, President
Nancy Sorrells, Editor
Barbara Stewart, Artist

Original material contained in the *Bulletin* may be reprinted, provided credit is given to the author, if named. Readers are invited to send letters, news items, or original articles for the editor's consideration. They should be typed (double-spaced, please) or sent as a Macintosh text file to the Editor at Rt. 2, Box 726, Greenville, VA 24440.

The deadline for the next issue is April 10

Chapter News

Potowmack Chapter to Monitor Study Plots in Park

Beginning this spring and continuing for the next two to three years, several members of the Potowmack Chapter will be monitoring study plots in an Arlington park. Dr. Chris Sacchi, curator of the State Arboretum at Blandy, has designed a project to evaluate what effect removal of invasive plant species has on the native population. Botanists do not know enough about how quickly and to what degree indigenous plants reestablish after dominant aliens are eliminated. Our goal is to produce data that will be useful to resource managers in determining realistic approaches to maintaining naturally diverse ecosystems.

Plant slides needed

Pat Baldwin of the John Clayton Chapter is looking for slides of native plants from across the Old Dominion. The slides will be incorporated into the chapter's slide library collection. If you have some slides that you would like to donate, write Pat Baldwin, 430 Yale Drive, Hampton, VA 23666 or call 804-838-2064.

Botany Award Given

James V. Morgan of Gloucester received the John Clayton Botany Award for 1993. A lifelong resident of Gloucester, Morgan is a staunch supporter of environmental causes. Since the 1950s, the local pharmacist has helped preserve Dragon Run, a large prime cypress swamp at the headwaters of the Piankatank River.

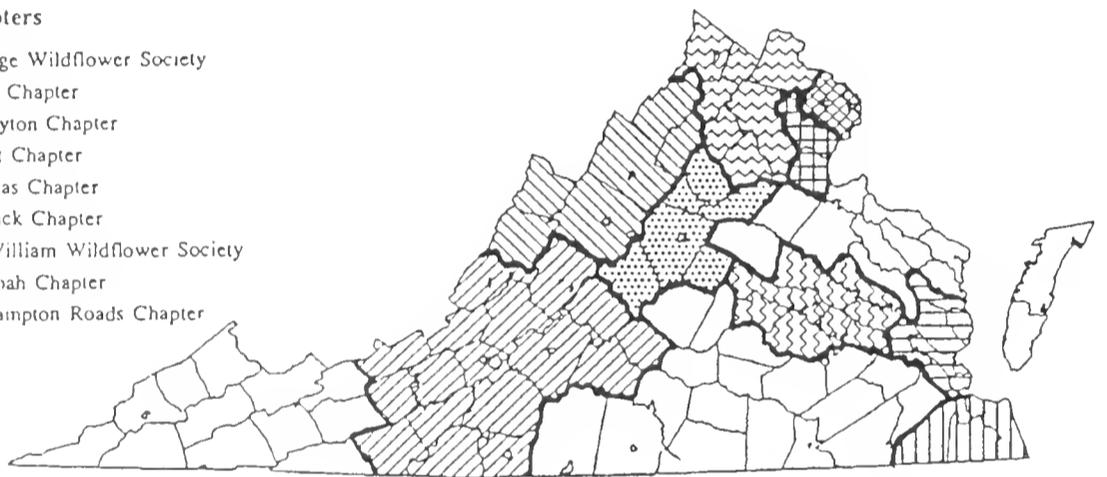
This award was established four years ago to recognize people who have made an exceptional impact on the community and epitomize the aims of the Virginia Native Plant Society in conserving wild plants and wild places.

Chapter Hotline

The John Clayton Chapter has established a last-minute events hotline. If you wish to know of upcoming events sponsored by the chapter, call Sylvia Sterling (Gloucester) 804-693-2953, Pat Baldwin (Peninsula) 804-838-2064, Gale Roberts (Williamsburg) 804-229-7231 or Jane Showacre (Northern Neck) 804-435-3912. A list of interested individuals will be compiled so that calls can be made if something comes up on short notice.

VNPS Chapters

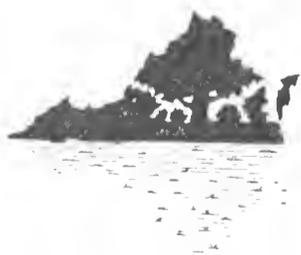
- Blue Ridge Wildflower Society
- Jefferson Chapter
- John Clayton Chapter
- Piedmont Chapter
- Pocahontas Chapter
- Potowmack Chapter
- Prince William Wildflower Society
- Shenandoah Chapter
- South Hampton Roads Chapter



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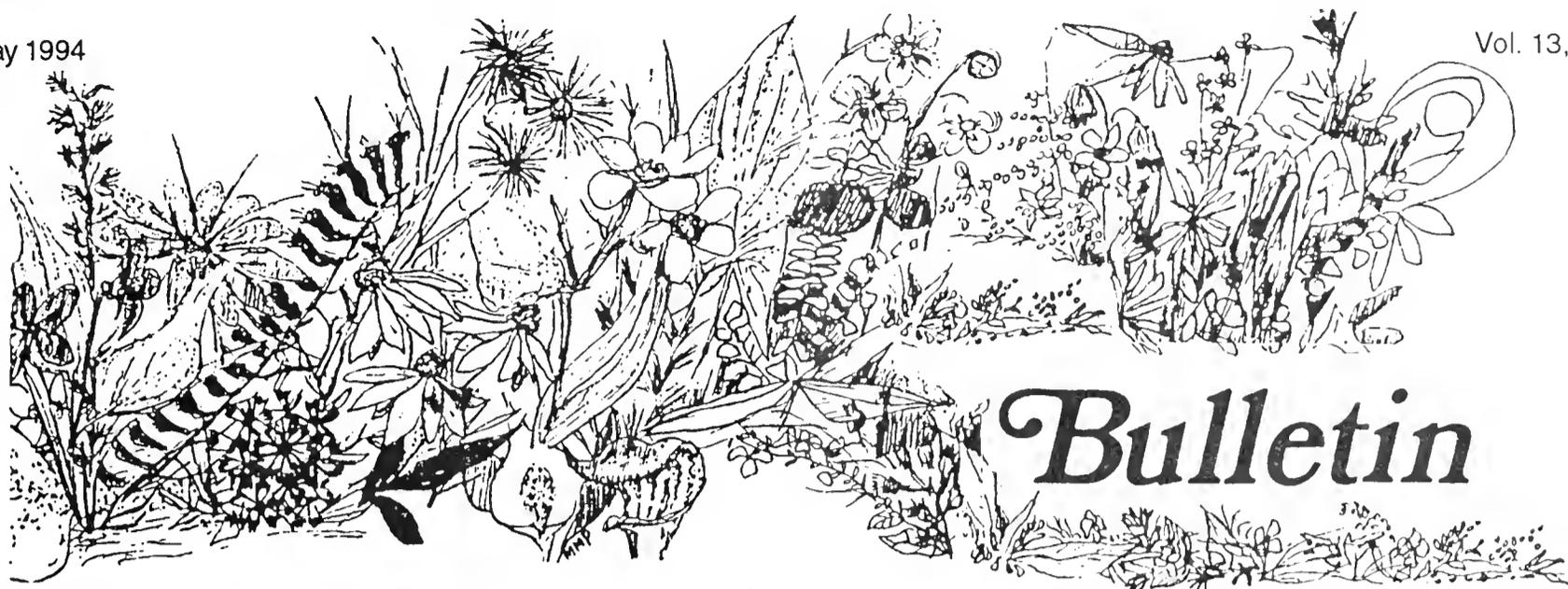
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May 1994

Vol. 13, No. 2



Bulletin

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

VNPS Meeting to be in Jefferson Country

The Jefferson Chapter of the Virginia Native Plant Society invites members across the state to join them in Thomas Jefferson's country to explore the area's native flora and sites of historical interest during the VNPS Annual Meeting Weekend September 23-25 in Charlottesville.

The weekend will begin on Friday night at Piedmont Virginia Community College with a lecture and slide presentation given by Tim Williams, VNPS Educational Chair, on one of Virginia's most unique habitats — shale barrens. The evening will be a great chance to renew friendships, meet some new folks, enjoy Jefferson country hospitality and plan for Saturday's activities.

Charlottesville and surrounding Albemarle County offer an unlimited variety of opportunities for botanical pursuit and the schedule of events for Saturday will include visits to historic gardens, including Monticello and the University of Virginia, as well as hikes in the scenic Blue Ridge Mountains.

Plans for Saturday evening include a lively social hour, business meeting, buffet dinner, a guest speaker and our second annual live auction.

A perfect fit for a weekend in Jefferson's country will be guest speaker Lucia Stanton, the Director of Research at Monticello. She will talk about Thomas Jefferson and his connection to early botanists.

The Jefferson Chapter members look forward to welcoming you to our area for a memorable weekend.

Progress made at Roosevelt Island

The Virginia Native Plant Society's spring visit to the Roosevelt Island National Park in the Potomac River was long anticipated. Curiosity needed to be satisfied as to the effect of our October workday on the native wildflowers which we anticipated finding after removing *Hedera helix*: English ivy, the non-indigenous invasive scourge of the urban island.

The organizers of the expeditions, Mary Ann Gibbons, Nancy Luria and Dan Sealy, spent many hours setting the course for this second workday. The major emphasis for this spring trip was collection of data on species identification and density. Teams of two, using a wooden frame with string grids, completed counts of ivy and native plants. Also scheduled was the identification of new removal sites; identifying *Ailanthus* trees to be removed in proper season by injection of glyphosate; and, finally, a simple, small test of cutting ivy stems and applying glyphosate to the cut with a sponge. Glyphosate application was aided by Carol Disalvo, who is certified in integrated pest management. Members of the Potomac, Piedmont, Prince William, Jefferson and Blue Ridge chapters were present for the weekend adventure.

Photo documentation of the project for the National Park Service and for a slide show to be presented at VNPS chapter levels was also continued.

Upon our arrival on the island via footbridge, it was easy to assess the difference between the untouched control area to the left and the site cleared of ivy on the right. Six months after "weed-whacking" the ivy, we are encouraged by the effective-

ness of the removal. After a survey of condition in the fall when the ephemerals are dormant, another assault on the ivy by mechanical removal is planned.

Our work last October was accomplished without chemicals, and it is tempting to say that more hands could accomplish our goal of controlling the English ivy without the use of Round-up or Rodeo. Professional advice from all directions has suggested that chemical control would be necessary to effectively remove and control the island's ivy. Currently we are hoping to produce our desired goal with more volunteers and more manual labor with only the use of glyphosate injections on *Ailanthus*.

This spring's workday also attracted allies from other organizations in the Potomac area including representatives from The Nature Conservancy, the National Park Service, the Potomac Conservancy and the Fairfax Audubon Society.

Marion Lobstein led an afternoon tour of the island. We were fortunate to see favorite spring ephemerals, a naturalized *Vinca rosea*, and, in the swamp area, bluebells near lesser celandine, poppies, horsetail sprouts and arum shoots.

Inside This Issue

Small's Stonecrop & Native Camellias...

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Insert...

Invasive Alien Plants of Virginia

FROM THE PRESIDENT

"WHEREAS, the delicate beauty of spring wildflowers, spreading across Virginia's countryside as winter yields to the new season, brings special refreshment of spirit to our people,...."

(Certificate of Recognition from Gov. George Allen, 1994)

We winter-weary wildflower Virginians are truly ready for a "special refreshment of spirit" from our native plants!

The vista of Virginia Bluebells rising above acres of spring beauties at Bull Run Regional Park in Fairfax did refresh my spirit! Three visits in one week! Visits to the Stone Bridge were the "second leg," where along the Run there appeared to be an increased colony of trout lilies, Dutchmen's breeches and bluebells. Two old tree friends had been uprooted by winter's attacks. On balance, the old dead oak at the Farm Trail still stood and our sighting of a barred owl watching us from a nearby pine tree whipping in the wind was thrilling. Our owl friend was last seen entering the old tree.

These visits followed the VNPS weekend at Roosevelt Island and Turkey Run, both of which were more exciting than we dared hope. Our work at Roosevelt Island in October rewarded us with a welcome by toothwort and both Dutchmen's breeches and squirrel corn...as well as English ivy every other place except where we had been pulling it. Over the hillside beyond the statue of Teddy Roosevelt and before the swamp, the most glorious swarm of oversize trout lilies opened their golden faces to us above multitudes of claytonia. The wild ginger was free of English ivy in the little patch where hand pulling had taken place. We were encouraged!

Between the rains on Sunday, Turkey Run revealed harbinger of spring, white trout lilies, leatherwood in bloom, a profusion of ramp leaves, and amidst many bluebells, a solitary pure white form of *Mertensia virginica*.

You note that "we" experienced all of these Virginia flora joys. VNPS is a "we" group. We work together, search together, and share skills and flora finds. So, throughout Virginia, there isn't one location, one time, one flower or one person to enjoy Virginia Wildflower Celebration 1994. It is all of us -- from "Beach to Blue Ridge" and from urban Northern Virginia to agricultural mid-southern Virginia and even in the "high lands" near West Virginia and Tennessee -- who are reveling in the pure joy of spring's arrival in our home state.

This is just the beginning! From now through October and November, seasonal pilgrimages will cross Virginia. Native plant pilgrims revel in the beauty unfolding, take only pictures and memories home. And, leave no trace (except of course where you remove invasive alien plants!) where you have been...that's our way in VNPS.

Nicky Staunton



Erythronium americana, Trout lily
Illustration by Nicky Staunton

Live Auction a Success

The first live auction at last year's annual meeting was such a success that we are doing it again! The second annual Live Auction scheduled for Saturday, September 24 in Charlottesville needs donations. If you have nature related treasures, plants or anything else that can be auctioned to support the VNPS and its education and conservation programs please get in touch with Pat Willis, the auction chair. Check in your own garden or contact local gardeners and local businesses (nurseries, garden centers, bookstores, local artists and craftsmen) for possible auction donations.

Remember that contributions are tax deductible. Your generous contributions and participation will make this a successful auction. If you have donations or questions, contact Pat Willis, auction chair, at (703) 967-1776.

Thanks for Responding

To all of our friends who responded so readily to our request for gifts needed to widen our efforts against invasive non-indigenous plants and air pollution, and continue the registry ...THANKS. To date we have received a little over \$1,200. We now have the ability to enrich our autumn invasive alien plant seminar as well as several other programs.

CERTIFICATE of RECOGNITION

By virtue of the authority vested by the Constitution in the Governor of the Commonwealth of Virginia, there is hereby officially recognized:

VIRGINIA WILDFLOWER CELEBRATION

WHEREAS, through its many statewide chapters, the Virginia Native Plant Society encourages Virginians to cherish Virginia's diverse natural beauty in every part of our Commonwealth and in every season; and

WHEREAS, the delicate beauty of spring wildflowers, spreading across Virginia's countryside as winter yields to the new season, brings special refreshment of spirit to our people; and

WHEREAS, during April and May 1994, the Virginia Native Plant Society and its local chapters will be conducting a variety of events inviting the public to enjoy and learn about Virginia's natural habitats and wild plants;

NOW, THEREFORE, I, George Allen, Governor, do hereby recognize the months of April and May, 1994, as VIRGINIA WILDFLOWER CELEBRATION, in the COMMONWEALTH OF VIRGINIA, and I call this observance to the attention of all our citizens.



George Allen
Governor

Betsy Davis Beaman
Secretary of the Commonwealth

Warm Spring Days Bring Beauty to Mountain Laurel

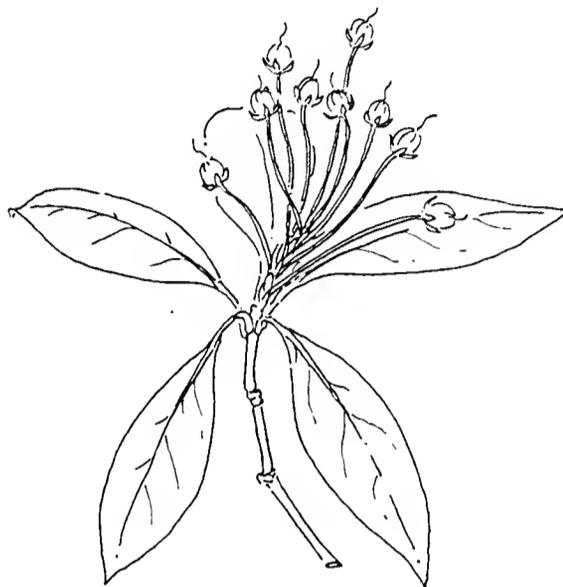
With the first warm days of spring, the flower buds formed on the mountain laurel last summer begin to grow. Flowers are borne terminally on last year's growth in clusters or corymbs four to six inches across. There may be 50 to 300 flowers in a cluster. The buds are conical, fluted and deeper pink, and open at different times. The mixture of small pink buds and white or pale pink blossoms suggests the calico pattern that led people to call this shrub "calico bush."

These flowers are remarkable not only for their beauty, but also for their ingenious pollination mechanism. Open flowers appear as five-sided, white cups an inch across with pink dots and a wavy pink line in the center. The 10 stamens in each flower have anthers buried in individual "pockets." In bud, the stamens are erect, but as the corolla expands, the filaments are bent and under tension.

Bumblebees and honey bees visit the flowers in search of nectar. As they land and probe the base of the flower, bees touch one or more of the cocked filaments. These straighten suddenly, flinging the anther against the insect. Demonstrate this yourself using a pencil or similar probe to touch the filaments. Anthers are cup-shaped and open by terminal pores so that an impact dusts the visitor with pollen. The grains of pollen have

sticky filaments ensuring that they are carried to the next flower. There they can be brushed off into the stigma projecting out of every flower's center.

Recent research in Virginia has



Fruit pods of *Kalmia latifolia*
Illustration by Barbara Stewart

demonstrated that individual shrubs vary significantly in overall rates of nectar production by individual flowers. Nectar production may be affected by moisture availability and nutrition factors in a particular site. Those shrubs which produce nectar at the highest rates were shown to receive the highest rates of pollinator visitation per flower.

Plants that received high visitation rates also showed the greatest pollination success per flower as judged by the fruit set.

Transfer of pollen from flowers on one plant to those of another accomplishes cross-pollination. Research at two sites in Virginia has revealed that not all mountain laurel plants are cross-pollinated in the wild, as was previously believed. The anthers will release without a bee's assistance at the end of the flower's life, making self-pollination possible. However, fruit set is significantly reduced from that observed with either hand-pollinated or naturally pollinated plants.

Fruits ripen through the summer, becoming dry, globe-shaped capsules about 3/16ths of an inch in diameter with a persistent style that later falls away. Capsules, which burst into five parts to release the seeds, persist from fall to spring. Break one open and the "dust" you see is hundreds of tiny, wind-dispersed seeds.

Look for mountain laurel in bloom under hardwoods in the Coastal Plain beginning in mid-May, along the Blue Ridge and westward about two weeks later. It's the earliest bloomer among our showy members of the Heath family or Ericaceae.

Catharine Tucker
Botany Chair

Tropical Treasures Protected at Belize Ranch

Editor's note: Shenandoah Chapter member Doris Baker recently returned from a February visit to Belize where her sister lives. "It is a fabulous place to visit, and there is so much emphasis on conservation," Baker notes in sharing part of her experiences with Bulletin readers.

Save the tropical rainforests! That is the plea of our generation, and it has become a mantra for organizations interested in conservation, for those industries aware of ecological realities, and for school children concerned with the health of the planet they will inherit. Many echo this cry, but few actually make significant contributions to the effort.

One person who is doing something is Dr. Rosita Arvigo, founder of Ix Chel Farm and of the Ix Chel Tropical Research Foundation, Ltd., which is headquartered in the Central American country of Belize. Originally from Chicago, Dr. Arvigo and her

husband, Greg Shropshire, both of whom are homeopathic physicians, settled near San Ignacio in western Belize in 1983.

They named their property Ix Chel for the ancient Mayan goddess of healing, and they began to identify and use native plants of their locality. In the decade since their settlement there, the farm has become a mecca for ecologists and ethnobotanists from far and wide.

Dr. Arvigo credits much of what she learned about the local natural medicinal wealth to Don Eligio Panti, an Indian healer of widespread reputation in that area. The healer, now reputed to be 105 years old, accumulated his knowledge through a long life of observation and attention to the oral instruction of his elders.

Basic to the Ix Chel philosophy is education and one evidence of this goal is the Panti Trail, which is located in a forested

section of the farm and contains a wide variety of medicinal trees and plants which are useful for leaves, bark and roots. A 70-page guide is furnished for those walking the trail and many take the opportunity to do so.

Educational outreach is also conducted in the form of programs in the schools of Belize and in public educational seminars both within the country and abroad. Inreach is also promoted through gatherings of traditional healers of the country, so that "granny doctors" and herbalists can share secrets and can contribute to a computerized data base which is then incorporated into the knowledge base and work at Ix Chel.

Through this work, Dr. Arvigo has founded the Society of Traditional Healers of Belize, which is now part of an international organization of traditional healers. The international organization held a conference (See **Rain Forest**, page 7)

Events of Interest

Smithsonian Biology Classes

The Conservation and Research Center of the National Zoological Park, Smithsonian Institution will be offering the following intensive training courses in conservation biology:

Vegetation Monitoring, June 11-15. Participants will learn how to use the establishment of permanent sampling points in order to record the composition and changes in vegetation, and ground-truthing aerial imagery in ecosystem monitoring. This course will focus on forested ecosystems and deal with all aspects of a monitoring program from site establishment, plant identification, inventory, to mapping and analysis. The instructors are Cris Fleming, Rose Meier and Bill McShea.

Remote Sensing/GIS, September 26-30. Participants will learn to use technologies which provide rapid, relatively inexpensive ways to obtain and analyze biophysical parameters that are critical for site establishment and monitoring. Instruction using ARC-INFO software will be included. Instructors are Doug Muchoney and Rose Meier.

The classes, which are limited to 15 students, are \$750 each. Cost includes instruction, food and lodging. For more information, contact Dr. Bill McShea at (703) 635-6563 or fax (703) 635-6551. Applications are due a month in advance of the course

opening date and should be sent to: Intensive Training, Conservation and Research Center, 1500 Remount Road, Front Royal, VA 22630.

Environmental Education 2000

Communications for the future will be the focus of the Alliance for Environmental Education's Environmental Education 2000 class being held June 20-22 in Tysons Corner. Ways of establishing linkages between educators, new program developments, successful outreach efforts and partnerships with the government and corporate sectors will be items on the agenda. The cost of the class is \$145-250 for members and \$200-300 for non-members depending on the number of days included in the registration. For more information, write Alliance for Environmental Education, 51 Main Street, P.O. Box 368, The Plains, VA 22171, call (703) 253-5812 or fax (703) 253-5811.

Nature Camp for Educators

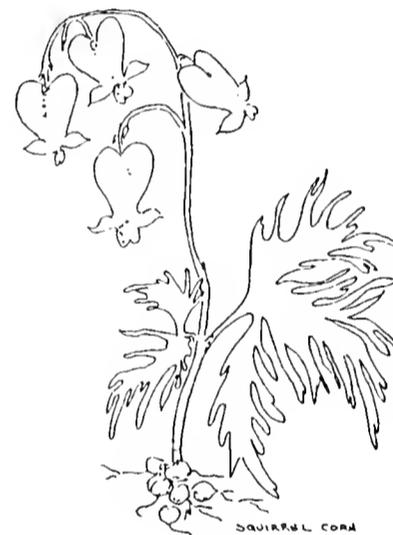
A mountain ecology workshop, "Back to Basics" will be offered for environmental educators August 19-23 at the Nature Camp in Vesuvius. The cost is \$150 per person and includes all meals, lodging and instruction. Classroom work, hikes, fieldtrips and crafts will be part of the session's activities. For more information, write Nature Camp Foundation, Inc., Rt. 1, Box 181, Vesuvius, VA 24483, or call (919) 929-8587 after 6 p.m.

VNPS Events

May 14, Saturday and May 15, Sunday. Native Plant Sale. Virginia Living Museum. Newport News. Jane Showacre (John Clayton) 804-435-3912.

Camellia Outings - The John Clayton Chapter has scheduled two outings this spring to see Virginia's native camellias. **June 4, Saturday, 10 a.m.** Meet at the Chesapeake Center for Science & Technology to see *Stewartia malacodendron* in the city of Chesapeake.

June 18, Saturday, 9 a.m. Meet in the parking lot beside Food Lion in Monticello Shopping Center on Richmond Road in Williamsburg to see *Stewartia ovata* at a site near Williamsburg. George McLellan (John Clayton) 804-693-4253.



Piedmont Chapter Produces Flyer to Celebrate "Year of the Hedgerow"

Piedmont Chapter's 1993 theme, "The Year of the Hedgerow," has culminated in a flyer. The illustrated folder encourages preservation of the native plant diversity that typically occurs along fencelines, property lines, or in other patches of land fortunate enough to escape mowers, weed eaters, drain tiles and livestock.

Piedmont hopes for wider awareness that changing land use has destroyed natural tangles once so rich in native plants and wildlife, while new houses tend to feature ever larger expanses of sterile green lawns.

Using the concept of the English

hedgerow, where wildlife and diverse plant life have historically thrived, Piedmont has featured the all-American hedgerow habitat. The chapter's newly completed brochure stresses the role of hedgerows as wildlife supermarkets, shelter, nesting places, corridors and travel routes, and seed dispersal areas.

Valuable and typical shrubs, trees and herbaceous plants of the hedgerow environment are listed in the flyer. The brochure, illustrated by artist Merri Nelson, is available from Piedmont Chapter, P.O. Box 336, The Plains, VA 22171. Enclose a SASE.

Bruce Peninsula Trip

In a little more than six weeks, 16 of us will be on our way to the Canadian Bruce Peninsula to search for and enjoy a rich variety of unusual flora. With no space left on this year's trip, we have started a list for the 1995 trip. If you want to be assured of space in 1995, please call Doug Coleman, 804-325-2200, or drop a note to the VNPS address.

More VNPS Trips?

The Virginia Native Plant Society's Board of Directors is considering widening the scope of trips taken in and out of Virginia. If you have ideas to share, please let Nicky Staunton or other board members know. Some suggestions have been: Dismal Swamp, Mt. Rogers, Chincoteague, Mt. Cuba and, even, Roosevelt Island. Please let us know of your interest in such trips or of others which you would recommend.

For Your Library

Book Offers New Concept of Germination

As a young boy I learned to plant seed by watching my father plant our vegetables every spring. It was a process easily understood by a 5-year-old. Dad did point out that peas had to be planted deeper than spinach and the ground had to be carefully prepared for lettuce. Other than those simple rules and a few others of a similar ilk, it was a pretty simple process. With a little rain they all came up.

Then I grew up and started growing flowers, many of them wild flowers. Some came up from seed and as many did not. Finally I learned about stratification and its role in "breaking dormancy." My success grew—somewhat; but there were still seeds that did not germinate. It was discouraging, almost enough to make one give up. I blamed a lot of it on seeds not being viable, and trillium totally frustrated me.

Two years ago the great revelation occurred in the form of a home published book entitled Seed Germination Theory and Practice by Norman C. Deno, a retired professor of organic chemistry and inveterate rock garden buff. Using his research experience and knowledge of designing experiments, Deno has removed the veil from the mysteries of seed germination and revealed mechanisms that guarantee success for seeds dispersed naturally in the wild. Who would have dreamed of

the combinations of storage conditions, moisture, temperature and time that spell success?

Based on his experiments, Professor Deno has announced certain principles. The first of these is: "Every species of plant has one or more mechanisms for delaying germination until the seed is dispersed." Seeds do not fail to germinate due to dormancy; they fail to germinate until the delay mechanism is destroyed. For the most part these concepts replace much of our old "knowledge" about seeds and introduce us to new concepts that are fascinating to the point that I believe that someone who never cared if a seed sprouted would become a convert if he dared read Deno's book. Here is just a sampling:

"About 50 percent of temperate zone plants use a delay mechanism that is destroyed by drying."

"Most species have at least two delay mechanisms, one being in the nature of a chemical time clock."

"It is common for the delay mechanism to be destroyed at one temperature followed by germination at another temperature."

"Some species have several delay mechanisms that must be destroyed under different conditions of temperature and time and in sequence."

This is a sample of the various mechanisms required to germinate seeds of some species. Deno starts his seeds in moist paper towels placed

in Baggies®. The book describes the specific combination of conditions required to germinate seeds of almost 2,500 species of plants. And having germinated them, you are not left to wonder how best to proceed from there. He suggests media for potting up the seedlings and the cultural steps that will ensure healthy plants.

The writing is clear and easily understood by anyone exposed to gardening. Some effort is required to learn the author's short hand system for noting the routines through which the seeds must pass in order to germinate. It is, however, well worth the little effort required.

I hope I have persuaded you by now that there is a wealth of information in this book as well as an entirely new understanding of the process of germination. Anyone raising a variety of plants from seed will certainly benefit from studying Deno's work. The book is available for \$20 (mailing included) only from Norman C. Deno, 139 Lenore Drive, State College, PA 16801.

Oh yes, I have some new trillium plants, the first from seed in 11 years of trying. The seed I've gotten from seed exchanges were what Deno calls "D.O.D." - dead on delivery, because this is one of the seeds that cannot be dried if germination is to be successful.

Ted Scott
Conservation Chair

Wildlife Gardening Featured

Nearly one hundred gardeners attended the Winter Workshop, "Gardening for Wildlife" jointly sponsored by VNPS, Lewis Ginter Botanical Garden of Richmond and the University of Richmond, and held at Gottwald Auditorium on the UR campus.

In the program, Craig Tufts described the National Wildlife Federation's Backyard Habitat Program which currently has 13,000 participants. Chris Sacchi, curator at the State Arboretum at Blandy, emphasized the importance of food, water and cover when gardening for wildlife.

Jeff Curtis, of the Department of Game and Inland Fisheries, urged wildlife gardeners to contact his staff for landowner assistance, and Michael Hollins of Envirens, Inc. shared wetland information.

Booklet is Naturalist's Guide to the Chesapeake

A Naturalist's Guide to the Chesapeake Country (on Maryland's Upper Eastern Shore) by Wilbur H. Rittenhouse. This attractive 32-page booklet introduces visitors to the Chesapeake counties of Kent, Queen Anne, Caroline and Talbot.

Sections on the natural habitats of this region, site descriptions, resources for naturalists and nature programs open to the public make this an excellent guide to the area for visitors who want to under-

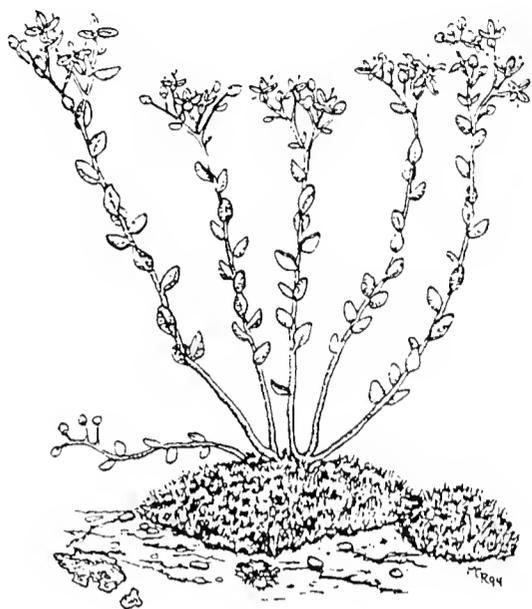
stand more about the forests, cripplands and marshes which play an integral part in the ecology of the area. The booklet is attractively illustrated and contains a map of the region. Sources of information and a checklist of common plants and animals complete the work.

Those wishing to acquire this pocket volume should contact the Chesapeake Tourism Council, 102 E. Main St., Suite 103A, Stevensville, MD 21666 or call 410-643-8908.

Rare Small's Stonecrop Adapts to Beat the Heat

As the long hot days of summer approach and we prepare to find ways to "beat the heat" and minimize the other discomforts, a look at a member of the stonecrop family, *Diamorpha smallii* (Small's stonecrop), illustrates some of the ways in which one of Virginia's rare plant species is adapted to a habitat of "environmental stress."

Diamorpha smallii, a succulent herb



Diamorpha smallii, Small's stonecrop
Illustration by Megan G. Rollins

extremely rare in Virginia, is in the same family (Crassulaceae) as *Sedum purpureum*, (cultivated live-forever), and its native relatives *Sedum telephioides* (wild live-forever) and *Sedum tematum* (wild stonecrop). It has been placed in its own genus due to differences in fruit structure that result in differing methods of seed release.

Small's stonecrop is largely restricted to granite outcrops in the piedmont of Alabama, Georgia, Tennessee, South Carolina, North Carolina and Virginia. Known as granite flatrocks, these granitic rock exposures typically consist of expanses of bare rock pitted with shallow depressions containing a

species. *Diamorpha smallii*, however, is adapted to avoiding these environmental extremes. A winter annual typically 'no more than four inches tall, *Diamorpha smallii* completes most of its life cycle from fall to spring when temperatures and moisture conditions are more favorable for survival. Germination and seedling establishment occur in the fall and the plants overwinter in a rosette-like form. At this time they develop a characteristic red pigmentation in the leaves and stem which protects the plants from intense sunlight.

Growth resumes in late winter, and the inflorescences, consisting of small, four-pet-

thin layer of mineral soil and also areas of deeper soil. On the granite flatrocks, stands of *Diamorpha smallii*, often dense, are found in the shallow depressions, in sandy soil on the margins of vegetation mats, and in moss mats.

Plants living in the flatrock habitat are subject to high temperatures and desiccation, unfavorable conditions for most

aled, white flowers in arrangements called compound cymes, appear in late March and peak in late April. By mid-May, before the high temperatures and drought of summer occur, the plants have died. Dates by which most seeds are released vary, but can be from summer through fall. Germination of most seeds, however, is delayed by an enforced dormancy or after-ripening period of two months, carrying most seeds through the summer drought and ensuring greater survival of seedlings when germination does occur in the wetter, cooler fall.

Diamorpha smallii is known only from one granite outcrop in Brunswick County in the southern piedmont, and the likelihood of additional populations of this plant being found is low, as granite flatrocks have been well surveyed in Virginia. Threatened in the past by dumping, quarrying, and roadbuilding, the Brunswick County site is now owned by The Nature Conservancy. The flatrock site is managed for the protection of *Diamorpha smallii* and two other globally rare plants, *Cyperus granitophilus* (granite-loving flatsedge), and *Portulaca smallii* (Small's portulaca), as well as the globally rare vegetation community.

Recent management concerns include protecting *Diamorpha smallii* from foot traffic and off-road vehicles. The status of this hardy species in Virginia may be given legal recognition in the future as it is currently a candidate for state listing as endangered.

Nancy E. VanAlstine
Natural Heritage Botanist
Virginia Department of Conservation

For Wildflower Gardeners

Stewartias: Our Native Camellias Offer Unforgettable Experience

Few people realize that Southeast Virginia is home to two of our most beautiful and rarest native shrubs. They are the silky camellia, *Stewartia malacodendron* and the mountain camellia, *Stewartia ovata*. To see these plants blooming in the wild is a rare privilege and something a plant person will never forget. My first glimpse was on a hot humid day in late June, seeing what appeared to be a native dogwood in full bloom. Closer inspection showed it to have an even more beautiful flower. It was the mountain camellia, *Stewartia ovata*. Now I understand what Richard Bir meant when he wrote: "When horticulturists are lucky enough to see this rare plant flowering in the wild, foot steps and conversation cease. We involuntarily smile and inhale to catch our breath."

Stewartias are members of the Tea family, *Theaceae*, a group of plants containing 16 genera, a number of which are of great ornamental and commercial value; among them are *Camellia*, *Cleyera*, *Franklinia*, *Gordonia*, *Stewartia*, *Ternstroemia*, and *Thea*. The genus *Stewartia* is about eight species of deciduous trees and shrubs from Eastern North America and East Asia. Two *Stewartias* are American and, while the Asian members are excellent ornamentals, I think our natives outshine them, especially in bloom.

Stewartia malacodendron is usually a large shrub seldom exceeding 12 feet with alternate simple elliptic and elliptic-oblong leaves, 2 to 4 inches long which are a glossy dark green and have impressed veins that give them a quilted

appearance. But it is its striking 2 1/2 to 4 inch white flowers that get your attention because, against the white background, is a center of bright purple filaments tipped by pale blue anthers surrounding a prominent pale green conical pistil. The silky camellia is a native of the Coastal Plain from Virginia to Florida and along the Gulf Coast to Louisiana. It is listed as appearing in eight Virginia counties or cities which are Accomack, New Kent, Sussex, South Hampton, Isle of Wight, Suffolk, Chesapeake and Virginia Beach. In Virginia it will probably be found blooming in late May through mid-June.

Stewartia ovata is a large shrub to small tree of about 15 feet. The leaves are alternate, simple, (See *Stewartias*, page 8)

FROM NEAR AND FAR

Prescribed Burns Enhance Virginia's WMA Habitats

A program of prescribed burns will continue in three wildlife management areas in Virginia according to Virginia Wildlife Supervisor Jay Jeffreys. The habitat enhancement creates what is called early seral state or early stages of plant succession.

Early seral stage is a stage consisting of herbaceous, broadleaf forbs, as well as young woody sprouts of shrubs and trees, sometimes referred to as pioneer plants. "These plants of early succession provide food and cover for numerous species of wildlife," Jeffreys said.

"When an area is burned off, it's almost like fertilizing the ground, which produces a highly nutritious forage base for game and nongame animals alike," he added.

About 400 acres of the White Oak Mountain WMA, 50 acres of the James WMA, and a 50-acre woodland area on the Fairy Stone WMA will be burned.

Coastal Wetlands Project

The United States Fish and Wildlife Service is providing \$7.6 million to coastal wetlands conservation projects in 10 states and one U.S. territory this year. This year's projects involve the acquisition or restoration of about 19,000 acres of coastal wetlands.

In Virginia, the Virginia Department of Conservation and Recreation Preserve will

acquire the 215-acre Hughlett Point area in Northumberland County on the north side of the mouth of Dividing Creek. This area on the Chesapeake Bay will be included in the Virginia Natural Area Preserve System.

The area includes habitat of endangered species such as the bald eagle and the least tern. It also supports osprey, wintering waterfowl such as black ducks, neotropical birds and striped bass.

The project has been a cooperative effort among the Dividing Creek Association, the Nature Conservancy and the National Audubon Society.

• Rain Forest

(Continued from Page 3)

in Mexico last year that attracted participants from most Latin American countries, several European nations, but none from the United States.

Such coordinated activity, however, has not gone unnoticed by U.S. organizations. The National Cancer Institute is funding an IxChel project which is looking for substances which could be of value in treating cancer and AIDS. The World Health Organization has expressed interest in applying Ix Chel research to its programs as well. And the Curator of Economic Botany of the New York Botanical Garden (Bronx, NY 10458), spearheads a fund-raising effort for the work

State Fossil and Fish

Two new state symbols were adopted by the 1993 Virginia General Assembly. A fossilized scallop named for Thomas Jefferson, *Chesapecten jeffersonius* is now Virginia's state fossil and the brook trout (*Salvelinus fontinalis*) has been named the official state fish.

Wildflower Walks Featured

A new regional magazine, "Outdoor Traveler Mid Atlantic" featured eight beautiful wildflower hikes in the Mid-Atlantic in its Spring 1994 issue. Copies of the spring magazine can be obtained by sending \$3 to Outdoor Traveler Mid Atlantic, P.O. Box 1788, Charlottesville, VA 22902.

of Ix Chel and for a project on which he is organizing there which he calls the Belize Ethnobotany Project.

Funding for the continued work at the farm also comes from the sale of tinctures and ointments produced at the farm and distributed throughout the country. There are also benefits from visitor fees and donations.

A trip to Ix Chel is a reassuring reminder that herbal healing is alive and well. It is taking a respected place in the treatment of the illnesses which afflict mankind.

Doris K. Baker
Shenandoah Chapter

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

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I wish to make an additional contribution to _____ VNPS _____ Chapter
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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, Route 1 Box 381, Delaplane, VA 22025

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Barbara Stewart, Artist

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The deadline for the next issue is July 10.

Chapter News

South Hampton Roads Garden

The South Hampton Roads Chapter is planning a native plant bed to be developed and maintained by chapter members. The plants will provide an educational display and serve as a source of cuttings and seeds for propagation for local plant sales. Dr. Pete Schultz has given the chapter the go-ahead for the project. Interested volunteers can contact George Balzer 804-463-1763.

Wildflower Gardens Established

Sam and Dora Lee Ellington, members of the Blue Ridge Wildflower Society, have been making their mark in the plant world. The pair assisted the Moneta Garden Club with a wildflower garden project at Smith Mountain Lake State Park. They provided plants as well as plant source and propagation information. In appreciation, the Moneta Garden Club made a financial contribution to the Blue Ridge Wildflower Society.

Also during the past year, the Ellingtons helped students at Fishburne Park Elementary School establish wildflower gardens as part of an extensive school-wide ecology program which received state recognition.

Shenandoah hears VNPS founder

The Shenandoah Chapter combined its March meeting with the Mary Emily Humphreys Lecture and Symposium held at Mary Baldwin College. The day-long event included a botanical drawing workshop by Barbara Stewart; a dried flower workshop, and a lunch seminar on natural arrange-

ments. The evening's keynote speaker was Mary Mumin Painter who spoke on "The Use of Native Plants in Our Landscapes."

Scholarships and Seeds

The Blue Ridge Wildflower Society continues to fund two \$100 scholarships for students as part of its ongoing projects. Another chapter-sponsored program continues to provide wildflower seeds for experimentation at Virginia Tech.

Stewartias

(Continued from page 6)

ovate or elliptic from 2 to 5 inches long, dark green with impressed veins and a rubbery texture. The white flowers, composed of five frilly petals are 2 1/2 to 3 inches and sometimes 4 inches wide. The plants listed as *Stewartia ovata grandiflora* have purple stamens surrounding a five-part pistil. The typical form has yellow-orange stamens. The wild stand I saw in northern Georgia had both types of plants mixed together growing on a steep hillside. It was a truly marvelous sight. The mountain camellia is native to the mountains except for a small area in Virginia and is found in the Blue Ridge and Appalachian Plateau from Virginia to Kentucky, to north Georgia and northeast Mississippi. Six Virginia counties are listed as hosting: Pittsylvania, Henry and Patrick in the west and Lancaster, York and James City in the east. It will be found blooming from mid-June to very early July.

Both the silky and mountain camellias make excellent plants for the garden and should be given a prominent place to display their sensational flowers. Few shrubs are more desirable or harder to find, but recently I have found a mail order nursery (Arrow Head Nursery, 5030 Watia Road, Bryson City,

PWWS Garden Tour

The Prince William Wildflower Society held its annual garden tour Saturday, April 30 and Sunday, May 1. The tour, which featured three area gardens, was organized by Marie Davis. The annual event serves as an educational project for the chapter and gives visitors a preview of plants offered at the group's plant sale.

NC 28713) offering both varieties. You may also propagate your own plants as the nurseries do, by planting seed in the fall and waiting until the second spring, when germination will take place. This is best done in a clay pot sunk in the ground. Perhaps it is this two-year wait which makes this plant hard to find in the nursery trade, or it might be as some say, this plants needs a more descriptive name. Maybe we should use the translation of the Japanese vernacular name - "Snowcups."

The John Clayton Chapter is considering starting a Stewartia Project with these objects in mind: 1. Location of local populations; 2. Determination of their health; 3. Propagation of the rare germplasm by seed; 4. Preservation of the germplasm at appropriate repositories; 5. Where possible, protection of the natural stands.

If any VNPS member is interested in helping, please contact George McLellan, Rt. 3, Box 702, Gloucester, VA 23061. Any John Clayton board member can also be contacted.

This article, which was supplied by Horticulture Coordinator Nancy Arrington, was written by George McLellan and appeared in John Clayton's Winter 1994 newsletter.



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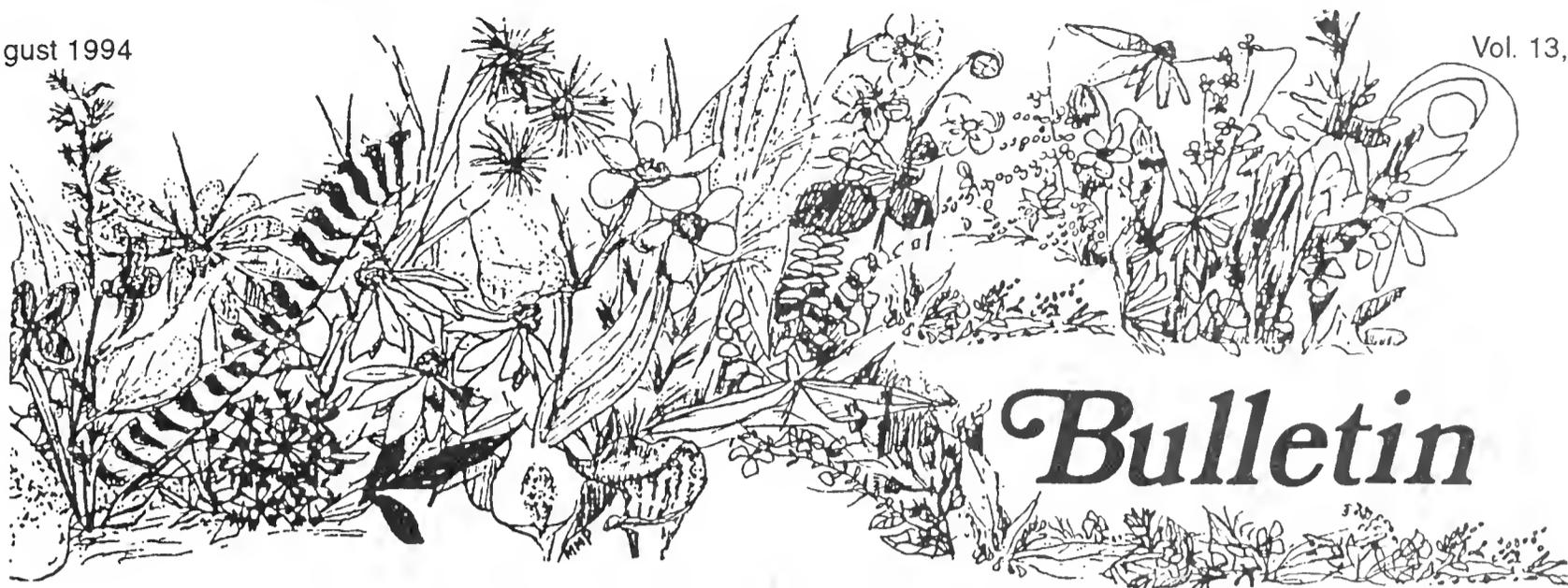
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August 1994

Vol. 13, No. 3



Bulletin

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

Jefferson had Keen Interest in Natural History

Editor's note: Lucia Stanton, the Director of Research at the Thomas Jefferson Memorial Foundation, Monticello, will be delivering the keynote address at this year's VNPS annual meeting. Stanton, who is also a member of the Jefferson Chapter, is delighted to be able to combine her two interests: Jefferson and native flora. In this article, she offers VNPS members just a glimpse into the subject she will be speaking about in September.

In May of 1792, at a meeting of the American Philosophical Society, Benjamin Smith Barton bestowed the generic name *Jeffersonia* on the spring-blooming twinleaf. Barton did not wish to honor Thomas Jefferson, then Secretary of State, for either his political character or his reputation as a man of general science and literature. He referred instead to Jefferson's knowledge of natural history. In that science, "especially in botany and in zoology," said Barton, "the information of this gentleman is equalled by that of few persons in the United-States."

Had Jefferson been present, he would have been quick to demur. His letters are full of self-deprecatory remarks about his botanical knowledge, and he often lamented that his constant public duties caused what knowledge, he did have to "escape" from his mind. In his twenties he knew Virginia bluebells only as the "bluish colored, funnel-formed flower" he saw on the banks of the Rivanna River. He apparently was not familiar with the post oak. And,

in his seventies, he found wholly new information on the trees in his own backyard by reading F.A. Michaux's *North American Sylva*.

Yet his friends described him as "passionately fond of botany." On a tour of upstate New York, Jefferson's journal entries were primarily about plants--he marveled at a new azalea (*Rhododendron prinophyllum*), the "richest shrub" he had ever seen. Searching for the "Winter haw" (probably *Ilex verticillata*) for a friend, he waded through Washington's swamps as well as visited nurseries.

Although Jefferson's eye in the field was drawn primarily to trees and shrubs, he was unrelenting in his efforts to encourage the discovery and description of the entire North American flora, herbaceous species included. He met and corresponded with William Bartram, Constantine Samuel Rafinesque, and both Michaux, father and son. Other European botanists like John Bradbury

and the Portuguese Abbé Correa made pilgrimages to Monticello and botanized in its neighborhood. Jefferson was particularly anxious that Americans win the race to describe new species. "Where is your book on botany?" he continually reminded Benjamin Smith Barton--to no avail--and he tried to hasten publication of the discoveries of the Lewis and Clark expedition.

At the end of his life, Jefferson wished to pass his enthusiasm for natural history on to a younger generation. Two months before his death, he wrote a long letter on the subject of a school of botany and a botanical garden for the new University of Virginia. Botany, which he ranked "with the most valuable sciences," provided the ideal combination of beauty and utility, enchantment and information. None, according to Jefferson, should be without "what amuses every step he takes into his fields."

Inside this issue

Annual Meeting in Charlottesville

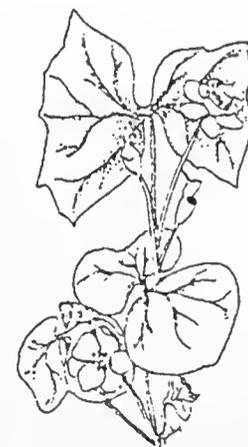
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VNPS FISCAL YEAR 1993
INCOME STATEMENT

INCOME	
DUES MEMBERSHIP	\$10,768
DONATIONS	\$1,437
SALES, GIFTS & BOOKS	\$224
SPECIAL FUNDRAISING	0
AUCTION SALES	\$1,244
FEES, ANNUAL MEETING	\$2,555
INTEREST INCOME	\$479
OTHER INCOME	\$11
TOTAL INCOME	\$16,719

EXPENSES	
ADMINISTRATION, SOCIETY	\$1,851
INSURANCE	\$1,447
MEMBERSHIP	\$1,366
TREASURER	\$316
PUBLICATIONS, PUBLICITY	\$6,070
FUNDRAISING	0
COSTS, GIFTS & BOOK SALES	\$6
GIFTS & MEMBERSHIPS	\$260
NOMINATING COMMITTEE	\$66
EDUCATION	\$84
CONSERVATION	\$1,210
HORTICULTURE	0
BOTANY	0
ANNUAL MEETING	\$2,373
REGISTRY PROGRAM	\$196
WILDFLOWER OF THE YEAR	\$993
SEMINARS & WORKSHOPS	\$60
TOTAL EXPENSES	\$16,297

NET INCOME \$422

SUMMARY BALANCE

TOTAL ASSETS \$15,945

LIABILITIES

CURRENT LIABILITIES	\$7
LONG -TERM LIABILITIES	\$3,500
UNCLASSIFIED LIABILITIES	\$833
TOTAL LIABILITIES	\$4,340

NET WORTH

TOTAL NET WORTH	\$11,605
TOTAL LIABILITIES	
AND NET WORTH	\$15,945

To The Board of Directors of the Virginia Native Plant Society:
I have audited the accompanying fund balance of the Virginia Native Plant Society as of October 31, 1993, and the related statement of income for the year then ended. These financial statements are the responsibility of the organization's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with generally accepted auditing standards. In my opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Virginia Native Plant Society as of October 31, 1993, and the result of its operations for the year then ended in conformity with generally accepted accounting principles.

Robert K. Hersh, C.P.A.
3213 N. John Marshall Drive
Arlington, VA 22207
July 8, 1994

FROM THE PRESIDENT

COME! September 24, 25 and 26th, come to Jefferson's country. Please accept my personal invitation to attend VNPS's 12th annual meeting. Do accept the invitation to attend which is also extended to you from Jefferson Chapter President Gay Bailey. Surely you marked the date of your VNPS meeting on your calendar when it was announced last year? Now it is time to make your reservations.

There are two persuasive reasons (selected from many) to attend. First, come to the annual meeting to enjoy your fellow wildflower friends and to enjoy special wildflowers in the wild and in cultivation around Charlottesville, Virginia.

Second, come to vote. We need your vote to elect our new president and supporting officers. The VNPS Nominating Committee has presented the slate of candidates in this newsletter. Much thought and effort has produced this list of nominees. Ann Regn and her committee members deserve our appreciation.

Your personal support through your vote and attendance at this required annual meeting of your society is what will energize the new officers of the VNPS.

In return, you will not only have exercised your vote, but you will be pleased and pleased by plans made by members of the Jefferson Chapter.

Nicky Staunton

P.S. The VNPS special fund request resulted in nearly \$2,000 being given by many of you who are especially concerned about protecting the natural habitats of our native flora from invasive plants which are not indigenous to Virginia. Several more gifts just arrived.

Each gift enables us to present educational material through our fact sheets prepared with the Natural Heritage staff of the Virginia Department of Conservation and Recreation and to present a strong seminar in October 1994 on the subject of invasive alien plants. Several gifts were received specifically for the Virginia Native Plant Registry Program and for the Roosevelt Island project.

I want to thank you for your generous responses to my letter. We will keep you informed on the progress of these programs.

Canada's Bruce Peninsula Enjoyed by VNPS Members

Orchids, ferns and wonderful times were among the memories brought back by the 16 Virginia Native Plant Society members who journeyed to Canada's Bruce Peninsula for a crowded week of activities. Doug Coleman, assisted by co-leader Nicky Staunton, led the group.

Our birding expert, Dr. Buck Edwards, headed up a bird walk early one morning that happened upon a chance encounter with a gaggle of Canada geese and goslings promenading along the road on their way for a day's outing. Two "guard" geese dropped back to control the car tires by hissing and posturing as they ran along the extremely slow-moving car. The car stopped. The gaggle of geese completed its route and the two "guards" tried to lead us down a different road along which we found freshly opened Canada anemones.

The Canadian sunsets from Lake Huron's shore, our Cypress Lake rock scramble on the Georgian Bay, the

Zodiak ride to Flower Pot Island, geologic explanations by Doug and geologist Mark Symborski, some special wildflower sites shared by Washington photographer Jessie Harris, scrumptious meals at Wildwood (our departure breakfast included baked whitefish to be remembered a lifetime)...all of these delights were surpassed only by the flowers of the Bruce! The list produced from our daily trips is in the hundreds.

Several special species for us: *Habenaria hookeri*, *H. dilatata*, *H. viridis*; *Listera cordata*; *Liparis loeselii*; *Calypso bulbosa*; *Corallorhiza trifida*, *C. striata*; *Cypripedium arietinum*; *C. reginae*, *C. Calceolus*; *Anemone multifida*; *Lobelia kalmii*; *Linnaea borealis*; *Hedyotis canadensis*, *Smilacina racemosa*, and *Sisyrinchium mucronatum* blended by the roadsides.

You'll have a chance to enjoy the 1995 Bruce Peninsula VNPS trip, led by Ted Scott. His formal announcement will be in our next *Bulletin*.

Invasive Alien Control Methods Create Balancing Act

Dr. Edward O. Wilson's recent best-selling book *The Diversity of Life*, makes a powerful case for the importance of protecting the biodiversity of the world. Rain forests are not the only besieged ecosystem; biodiversity is under threat in Virginia as well.

One of the threats which is just beginning to receive attention is the damage caused by invasive alien or non-indigenous plant species. Throughout the country, invasive alien plants threaten to dominate all types of ecosystems--displacing native plants and, even, in some cases, threatening species with extinction. Small-anthered bittercress (*Cardamine micranthera*), listed under the U.S. Endangered Species Act as endangered, is found in nine sites along small streams in Patrick County, Virginia and adjacent North Carolina. Invasion of its habitat by Japanese honeysuckle (*Lonicera japonica*) is one of the threats to the species. One population of Kankakee mallow (*Iliamna remota*), another rare native plant under consideration for federal listing, is found in a floodplain meadow along the James River. This is being taken over by Johnson grass (*Sorghum halapense*) and purple loosestrife (*Lythrum salicaria*).

Changes in plant communities as a result of alien invasion can also eliminate habitat for native wildlife. Purple loosestrife displaces cattails (*Typha* spp.) and other wetland plants, thereby destroying important food sources for wetland mammals and birds, especially waterfowl.

The Virginia Native Plant Society and the Division of Natural Heritage of the Department of Conservation and Recreation have jointly published a list of about 100 non-indigenous plants that are troublesome in Virginia. Included are introduced vines, shrubs, herbaceous plants, and even trees. The most troublesome in woodlands include kudzu (*Pueraria lobata*), mile-a-minute (*Polygonum perfoliatum*), porcelain berry vine (*Ampelopsis brevipedunculata*), Japanese honeysuckle, and autumn olive (*Elaeagnus umbellata*). Stink tree or tree of heaven (*Ailanthus altissima*) can prevent regeneration of native tree species. And the flowers which carpet our woodlands in the spring are being overwhelmed by garlic mustard (*Alliaria petiolata*). Our precious wetlands and streams are being invaded by purple loosestrife, *Hydrilla verticillata*, and the reed *Phragmites australis*. VNPS and VDNH are also issuing fact sheets on many of these species.

Important as it is, public education about these problems is not sufficient. Alien species have been called "biological pollution" because, like poisonous chemicals, these invaders can

damage ecosystems beyond recognition. However, unlike chemicals, biological pollutants can grow and reproduce. As a result, the environmental threat literally grows larger each year if no action is taken. To protect our plant communities and ecosystems, we must control these invaders. For this reason, VNPS has become engaged in several volunteer projects to assist staff of parks and other protected areas in controlling alien plants invading those natural areas. The Society is also asked for its views, both by individuals seeking guidance and in the policy context. In both cases, the question arises as to *how* we should control alien species.

The choice of control methods--even the decision to attempt control at all--involves a balancing act. One must weigh the ecological consequences of allowing the invasion to proceed versus the cost of active management--including any deleterious consequences of the method employed for control. To rid a habitat of an invasive alien, some action is necessary because no action means no control. However, whatever course of action is taken, there will be some risk involved.

Control of invading alien plants involves a variety of techniques which must be tailored to the species of concern and the site in which it is growing. Sometimes physical removal by pulling or digging is successful and does not cause too much damage to remaining native plants or soil stability. At other times, these methods are ineffective or too costly, so herbicides are used.

Use of any herbicide or other chemical is controversial for many people because of the documented damage some chemicals have done to the environment. However, in considering this issue one should look at the specific chemicals to be used, the method of application, the environmental conditions, and the policies of the agency managing the land where the invasive alien plants are established.

One of the chemicals often used to control invasive plants is glyphosate, which is sold as Roundup®, Rodeo®, Kleenup® and Accord®. The toxicity of Roundup for humans and pets is very low, ranging from less than one twentieth to one third that of popular insect repellents depending on the percentage of active ingredients present in the particular formulation of the repellent.¹ It is considered safe to users as long as application instructions are followed. Also, it can be used to control most plants. Finally, glyphosate binds tightly to soil particles, so it does not tend to migrate to other locations. Usually within 45 to 60 days, glyphosate breaks down into carbon dioxide, water, a

phosphate, and nitrate or nitrogen.²

Tests have shown that glyphosate is not carcinogenic and does not cause mutations.³ Glyphosate is "no more than slightly toxic to birds and is practically non-toxic to fish, aquatic invertebrates and honeybees."⁴

At this time, the Environmental Protection Agency (EPA) is considering whether to "re-register" glyphosate for continued use. All of the data required for this study have been submitted. However, the data base for EPA registration does not require information on neurotoxicity or immunotoxicity, nor does it require testing on earthworms, various beneficial insects, amphibians, or reptiles. We do not know glyphosate's effect on these non-target species with respect to acute or long-term toxicity.⁵ When considering toxicity of a pesticide, users should keep in mind that there may be direct, indirect, and/or long-term effects, some of which are not able to be tested.

Roundup, according to the instructions, should not be used where it will get into streams or bodies of water or when rain is imminent. Of the glyphosate herbicides, Rodeo is the proper choice to control plants growing in water and in wetland habitats. The difference between these herbicides is that Roundup and Accord have a surfactant in their formulation which is poisonous to aquatic animals and Rodeo does not have the surfactant.⁶ (A surfactant is an additive used to enhance adherence to the foliage of the targeted plants).

Some scientists think that the surfactant used in Roundup (polyoxy-ethyleneamine) may pose greater hazards to wildlife and human health than the active ingredient, glyphosate.⁷ Unfortunately, most testing has been done on glyphosate alone, not on the chemical formulations as used in field applications.⁸ Since surfactants are not identified on labels of herbicides, users should be aware that we do not know the effect of these unlisted or inert ingredients with respect to the long-term toxicity of commercial formulations of glyphosate.

Roundup and Rodeo can be used in fighting extensive colonies of invasive alien plants which pose such a serious threat to our native plants. Because glyphosate is a non-selective herbicide, spraying the formulations does present some risk to non-target species from drift, wind dispersal, and run-off. Direct applications, such as painting the herbicide onto leaves, roots, or the cut trunks of wood plants, is less likely to damage other plants.

Standard good practice and the law require closely following instructions on the label and good common sense when working (See **Herbicides**, page 8)

Aeschynomene virginica

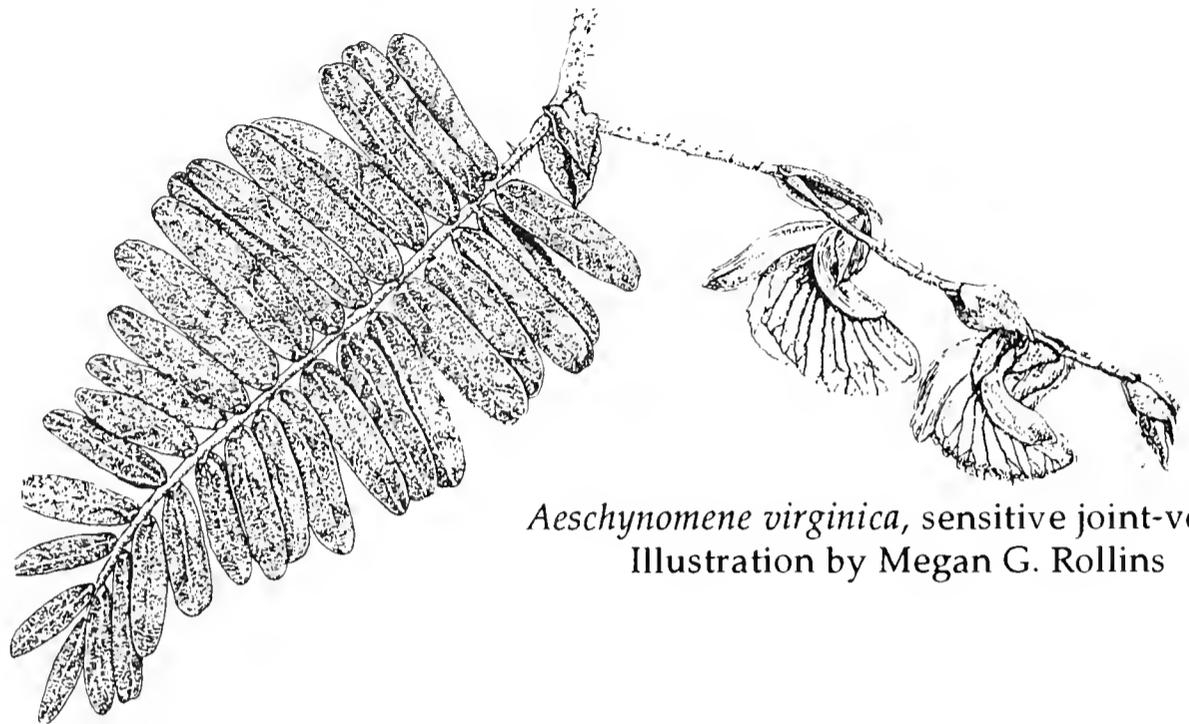
Virginia's Globally Rare Legume Hard to Protect

Sensitive joint-vetch is one of 14 plant species known from Virginia which is listed as threatened or endangered under the Federal Endangered Species Act of 1973. This robust legume may also be one of the most difficult of Virginia's globally rare plants to protect on a long-term basis.

Aeschynomene virginica is an annual herb which grows up to eight feet high in a single growing season. It is a wetland species found in brackish tidal marshes along large Coastal Plain rivers and their tributary creeks. Sensitive joint-vetch appears to be restricted to short segments of these rivers due to the narrow range of salinities which it can tolerate.

Virginia is the global stronghold for *Aeschynomene virginica* where it is found along stretches of the Potomac, Rappahannock, Mattaponi, Pamunkey, Chickahominy and James Rivers. The species is also currently known from two river systems in New Jersey and one in Maryland, but has been extirpated from Pennsylvania and Delaware. In North Carolina, the species has been found in disturbed habitats, but many of the occurrences there have not persisted.

Sensitive joint-vetch is a late-season species, flowering from mid-July into October. Flowers are in the shape characteristic of the pea family -- irregular with one upper petal (the standard), two lateral petals (wings), and two united lower petals (the keel). The flowers are yellow with



Aeschynomene virginica, sensitive joint-vetch
Illustration by Megan G. Rollins

striking red venation.

Aeschynomene virginica faces numerous threats, many of which are associated with increased population growth along and near the river systems where the species occurs. Threats include direct destruction through activities such as dredging, bulkheading, riprapping, and building piers; changes in river salinity levels due to freshwater withdrawal for human use; deterioration of water quality due to excessive sediment loading, pesticide runoff, eutrophication, and chemical spills; erosion of habitat from motorboat wakes; and competition from invasive plant species. The species may be impacted by human activities which occur a considerable distance away from the populations themselves.

Some help, however, is on the

way. The species was listed as threatened pursuant to the Federal Endangered Species Act on May 20, 1992. Although a recovery plan for the species has not yet been prepared by the U.S. Fish and Wildlife Service, some preliminary work is being done. Garrie D. Rouse of Schnabel Environmental Services is conducting life history and habitat research on the species, and the Virginia Department of Conservation's Division of Natural Heritage is preparing a detailed assessment of threats to the species. In addition, The Nature Conservancy has purchased marshes along the Pamunkey River which contain an exemplary population of this globally-rare legume.

Allen Belden Jr.
Virginia Department of
Conservation and Recreation
Division of Natural Heritage

Cultivating Kalmia: Not All Mountain Laurels Are Alike

Before I read *Kalmia: The Laurel Book II* by Richard Jaynes, I thought all mountain laurels were pretty much like the ones I see at the edges of woods and along roadsides in my neighborhood: 6 to 8 feet tall, shiny leaves, and flower color ranging from white to shades of pink. Though there are many variations that are considered within the normal range, Jaynes lists five "...true genetic variants that are distinguished by one or several linked characteristics from the normal population and are designated botanical forms."

They are: 1. Willow-leaved mountain

laurel, form *angustata* with leaves only 1/2 an inch wide. 2. Miniature mountain laurel, form *myrtifolia*, also called dwarf mountain laurel, is miniature in all respects. It is rarely taller than 3 feet, leaves are only 1 1/2 inches long and flowers are 1/3 to 1/2 normal size. 3. Hedge mountain laurel, form *obtusa* has oval leaves that are 1 to 2 1/2 inches long and up to 1 1/2 inches wide. This form is rare, slow growing and compact. 4. Banded mountain laurel, form *fuscata*, also called crowned mountain laurel, has white to pink flowers with a darker band on the inside of the corolla. 5. Feather petal mountain laurel,

form *polypetala*, its flowers have extremely narrow, thread-like petals.

Selections and controlled crosses of these variants and the "normal" species have produced around 50 named cultivars that are being propagated today. Jaynes is responsible for about half of these.

The oldest cultivar, *Splendens*, was described in 1896 in England, and several cultivars were introduced by American nurserymen beginning in the 1940s. (In the next issue, learn how to cultivate mountain laurel in your yard.)

Nancy Arrington
Horticulture Chair

Native Flora in Jefferson's Country

Virginia Native Plant Society Annual Meeting Weekend

September 23-25, 1994

A warm welcome awaits you in Charlottesville for the 1994 VNPS Annual Meeting. Come and enjoy a variety of field trips which have been organized especially for you to view our native flora throughout the Piedmont, the Blue Ridge and historic garden locations. The weekend will also feature excellent speakers, a Saturday night banquet, the second annual Live Auction and the opportunity to enjoy old friends and meet new ones!

Field trips are planned on Saturday to cover the full breadth of the Piedmont and Blue Ridge floristic regions including sink holes and bogs, moist mountain coves, the Appalachian Trail, a 209-acre nature preserve, historic formal gardens, an old growth forest along with a variable collection of evergreen plantings.

Excursions to the more sensitive areas will be limited in the number of participants. Keeping this in mind, you are encouraged to register early for the Annual Meeting. Please indicate your field trip preferences on the registration form. Early registration will also offer a savings on your registration fee (your registration must be postmarked by September 7 for the savings). Banquet reservations must be received by September 16.

Holiday Inn-Monticello will hold a limited number of rooms at a discount rate for VNPS members until September 7. Contact them at 804-977-5100 or 1-800-HOLIDAY. Make sure you mention your VNPS affiliation for discount.

Weekend Schedule of Events

Friday, September 23

7 p.m.-10 p.m. **Registration, Welcome, Social Gathering and Slide Lecture** at Piedmont Virginia Community College - Campus location, Route 20 South, Charlottesville, I-64 Exit 121. A premier presentation by Tim Williams, VNPS Education Chairman, entitled *Virginia's Unique Shale Barrens* will reflect Tim's study of shale barrens over the last 20 years and will illustrate the unique plants that inhabit these hostile environments. The slide collection Tim has gathered for the presentation will then be made available to VNPS membership through the Society's lending library.

Saturday, September 24

8 a.m. - 4 p.m. **Trips, Tours and Hikes.** (See trip descriptions, page 7) Meet guides at Holiday Inn

4:30 p.m. **Social Hour and Auction Preview.** Evening's activities at Holiday Inn

5:30 p.m. **Annual Business Meeting and Election of Officers**

6 -7 p.m. **Buffet Banquet**

7 p.m. **Live Auction**

8:30 p.m. Keynote speaker Lucia Stanton, Director of Research, Thomas Jefferson Memorial Foundation, Monticello.

Sunday, September 25

9 a.m.-2 p.m. **Board Meeting** at Crestar Bank, Corner Park and High Streets, Charlottesville

All society members are invited to attend

9:30 a.m. - **Noon Field Trips and Garden Tours** (See trip descriptions, page 7)

VNPS ANNUAL MEETING REGISTRATION FORM

Number of adults attending activities _____ X Registration fee of \$10 each = \$ _____
 (If postmarked by September 7, cost is only \$7.50 per adult. Registration fee includes Saturday box lunch)
 Number of adults attending dinner _____ X Dinner cost of \$18 each = \$ _____
 Number of children attending dinner _____ X Dinner cost of \$9 each = \$ _____
 (ages 3-12, under 3 is free)
 Vegetarian? Please note number of vegetarian dinners needed _____
 TOTAL ENCLOSED \$ _____

Please note the number attending each field trip:

#1 Saturday all day _____	#5 Saturday morning _____	#9 Saturday afternoon _____
#2 Saturday morning _____	#6 Saturday morning _____	#10 Saturday afternoon _____
#3 Saturday morning _____	#7 Saturday afternoon _____	#11 Sunday morning _____
#4 Saturday morning _____	#8 Saturday afternoon _____	

NAME _____ PHONE NUMBER _____
 ADDRESS _____

Make checks payable to VNPS.

Dinner Reservations must be received by Sept. 16

NO RESERVATIONS WILL BE HELD WITHOUT PAYMENT

Send to: VNPS Annual Meeting

Jefferson Chapter

P.O. Box 6281

Charlottesville, VA 22906

Hotel and Registration Information for VNPS Meeting September 23, 24 & 25, 1994

LODGING & MEETING ACCOMMODATIONS

Holiday Inn/Monticello, Exit 120, I-64, 1200 5th St., SW, Charlottesville is headquarters for the 1994 VNPS Annual Meeting. Accommodations will be offered to VNPS members for the reduced rate of \$51 per night per room for up to four persons per room.

Please call the Holiday Inn directly at 804-977-5100 or 1-800-HOLIDAY to secure reservations. Remember to mention you are a VNPS member to receive the reduced rate. **A limited number of rooms will be held until September 7.** After that date, the hotel cannot guarantee the special rate or the availability of the rooms. Register early -- you'll be glad you did!

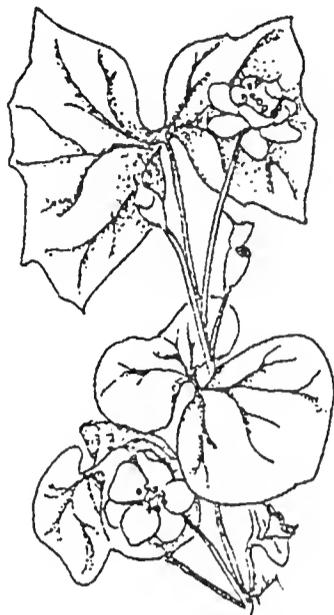
REGISTRATION INFORMATION

The Registration Form provided on page 5 should be used to inform the Jefferson Chapter of your attendance at this year's meeting. The registration fee is \$10 per adult which includes admittance to the Friday evening lecture, the field trips and tours, and a box lunch on Saturday. **Members who register by September 7 will be entitled to a 25 percent reduction in the registration fee (resulting cost is \$7.50).** All registrants will receive confirmation by mail along with appropriate maps of the area and further details.

Saturday night's banquet reservations should also be noted on the registration form. Please add the banquet cost to your registration payment. The Jefferson Chapter must receive banquet reservations by Sept. 16.

Walk-in Registration for the 1994 annual meeting's activities (excluding the banquet) will be accepted at our gathering Friday evening at Piedmont Community College and again on Saturday morning at the Holiday Inn/Monticello. On-site registration fee is \$10.

Please make reservations for the meeting as soon as possible by returning the form on page 5. If additional information is needed, call Gay Bailey at 804-293-8997 or Tim Williams at 804-977-8580.



Jeffersonia diphylla, twinleaf
Illustration by Nicky Staunton

Items Needed for Auction

You will have the opportunity to participate in an exciting fun-filled evening on Saturday September 24 at the VNPS Second Annual Live Auction. It will give you a rare chance to purchase that special gift for yourself, your family or your friends for Christmas, birthdays or any occasion.

Your help is needed on two levels; one to participate in the bidding (the fun part) and two to contribute your unique and wonderful items to be auctioned. What can you contribute? Anything that has to do with nature. This could include such diverse items as writing paper, t-shirts, garden produce, jams and jellies, crafts, books, camping equipment, hats, etc. Only your lack of imagination will limit you. Also, don't forget to ask for contributions from your local nurseries, book stores and garden centers. Most commercial establishments are eager to support VNPS.

Donations will be accepted at the Holiday Inn Friday, September 24 between the hours of 5 and 10 p.m. and Saturday from 8:30 a.m. to 2 p.m. Please have a brief description of the item and an approximate value. Those of you who are unable to attend the annual meeting can send auction items with someone attending or mail them to: Pat Willis, Rt. 3, Box 295, Trevilians, VA 23093. If you have any questions, call 703-967-1776.

We need your help to make this major fund-raising event a success.

The annual meeting of the membership of the Virginia Native Plant Society will be held on Saturday, September 24 at Holiday Inn/Monticello, in Charlottesville, Virginia, to receive reports and to elect certain officers, directors, and members of the Nominating Committee. Those persons who have paid dues for the 1993-1994 fiscal year may vote on the business conducted. Members in good standing who are not able to attend the meeting may vote in absentia by sending the proxy on this page to Elaine Smith, Corresponding Secretary, VNPS, P.O. Box 844, Annandale, VA 22003. Proxies must be received by September 21, 1994. Each family membership is entitled to two votes; individual memberships to one vote.

Elaine Smith, Corresponding Secretary

PROXY, 1994 VNPS ANNUAL MEETING

I hereby authorize the Corresponding Secretary to cast my vote for the slate of candidates proposed by the Nominating Committee.

Signed _____
Address _____

Return by September 21 to:
Corresponding Secretary, VNPS
P.O. Box 844
Annandale, VA 22003

PROXY, 1994 VNPS ANNUAL MEETING

I hereby authorize the Corresponding Secretary to cast my vote for the slate of candidates proposed by the Nominating Committee.

Signed _____
Address _____

Return by September 21 to:
Corresponding Secretary, VNPS
P.O. Box 844
Annandale, VA 22003

Native Flora in Jefferson's Country: Trips, Tours and Hikes

VNPS Annual Meeting Weekend, September 23, 24 & 25

SATURDAY - FULL DAY

#1 Blue Ridge Parkway - Big Levels Area - An all-day adventure within the Big Levels Area near Sherando Lake to investigate limestone sinkholes, bogs and the resulting flora of this unique habitat. Orchids, cranberries, pitcher plants and a number of globally rare species such as swamp pinks and Virginia sneezeweed may be seen here. Due to the sensitive nature of this area, this trip is limited to 15.

SATURDAY - HALF DAY, MORNING

#2 Ivy Creek Natural Area - This 209-acre nature preserve is located in Albemarle County near the Rivanna reservoir. The property was originally owned by Hugh Carr, a freed slave, and was rescued from development in 1977 by The Nature Conservancy. Today the property is managed jointly by the City of Charlottesville and Albemarle County through the Ivy Creek Foundation, a nonprofit, volunteer organization dedicating its efforts to the study of natural history. This trip will be repeated in the afternoon.

#3 Gardens at Monticello - An excellent opportunity to see first hand the spectacular restoration of the gardens at Thomas Jefferson's mountaintop home. (Nominal fee will be charged for this trip). Repeated in the afternoon.

#4 University of Virginia Lawn and Grounds - A unique opportunity to explore the gardens and grounds around Thomas Jefferson's "Academical Village." The Pavilion Gardens and historic tree population will be viewed. Repeated in afternoon.

#5 Tree Walk at Montpelier, President Madison's Home in Orange County - Walk through a National Landmark Woods rated as one of the five best examples of a tulip tree dominated mature forest (never been timbered) in the Eastern Piedmont. The walk will be followed by a visit to the formal garden and a visit to one of the finest collections of mature specimen evergreen trees in the Eastern United States. This is a 2-hour walk and is limited to 24.

#6 Appalachian Trail/Humpback Rocks Area - An easy walk along a portion of the Appalachian Trail through a moist, high Appalachian cove forest. Those who are interested can take a steep, 500-foot extension to a rock face overlooking Rockfish Valley.

SATURDAY - HALF DAY, AFTERNOON

#7 Green Springs in Louisa County - Green Springs comprises an area of 14,000 acres of gently rolling farmland in Louisa County. Designated a National Historic Landmark District in 1973, Green Springs Historic District is an unique assemblage of rural architecture. For almost two centuries, the landscape, the rural mode of life and the blend of buildings in their settings have remained substantially undisturbed. Fence lines and unpaved country lands follow their original course in an area formed by volcanic activity which deposited some of the most fertile and mineral-rich soil in the region and now encourages a wide variety of native plants. The Green Springs National Historic Landmark District contains some 250 original 18th and 19th century properties, 35 of which are individually listed on the National Register of Historic Places. The tour will be led by a National Park Service Representative and will include visits to active farms, private gardens, interiors of buildings, and vistas and views.

#8 Ivy Creek Natural Area - See description under morning trips.

#9 Gardens at Monticello - See description under morning trips.

#10 University of Virginia Lawn and Grounds - See description under morning trips.

#11 Big Meadows/Shenandoah National Park - Visit high elevation open meadows originally created by Native Americans and now maintained by the National Park Service. The site is noted for goldenrods, asters, lady's tresses and gentians.

SELF-GUIDED TOURS

(Additional information is available on Monticello, Ash Lawn, Montpelier and other local attractions)

Greenbelt Park - The Greenbelt Park extends along the banks of the Rivanna River for a mile-and-a-half from Chesapeake Street to the old circus grounds at Free Bridge. The easy, flat, graveled path runs through open flood plain where horsetails grow and beavers live, then curves around a steep hill and to the back of an 18th century cemetery that is carpeted with spring beauties, trout lilies, saxifrage, bluets, pussy toes, and fire pinks in the spring. The path then comes out again in an open flood plain covered with phlox, asters, sunflowers and goldenrods. The trail is suitable for children and for those who want an easy walk.

Ivy Creek Natural Area - See description under guided tours.

Gardeners Have Many Options Instead of Pesticide Use

Editor's note: Marlene Condon is a landscape enthusiast and VNPS member who lives in Crozet. Her articles were first published in the Monticello Bird Club newsletter.

During the fall in the area where I live, flies appear inside houses. Often by the middle of winter, their numbers have increased to the point where the windows which receive sunshine will have over a dozen flies in each of them. One day a neighbor told me about the flypaper she puts up to catch flies, and then hastened to add that she didn't know what I thought about that. She knew I cared about wildlife and surmised I probably did not use pesticides or condone their use by others. My neighbor was partly right...and partly wrong.

Because I care about wildlife, I garden totally without pesticides. Avid gardeners often scoff when I say I use no pesticides in my gardening pursuits. Why? Because anyone who gardens will experience insect and/or disease infestations, and the natural inclination is to do anything to save the plants, even if this means using pesticides. Gardeners expend a lot of energy nurturing their plants, and to lose one (or more) is to lose something dear. But I really do not use pesticides of any sort, and I still get out of my garden enough fruits and vegetables to eat daily throughout their season and to freeze for use throughout the rest of the year. In addition, my house is literally surrounded by flowering plants. There are so many types that I recently could not list them all on a drawing to Virginia's Department of Game and In-

land Fisheries for their wildlife program.

I am successful partly because of my philosophy, which is that I prefer to go without rather than introduce poisons into my environment. It is inevitable that some plants will eventually become infested with insects; broccoli is a good example. But by the time this happens, the plants are normally beyond their prime and I feel that I have already gotten enough produce from them. Therefore, instead of spraying the insects and trying to keep the plants going, I destroy the broccoli (and insects) and start a different crop in its place.

Some plants can be protected by the use of row covers which allow light and moisture in but keep insects out. However, these plants need to be pollinated once the flowers have opened, so unless you want to take the time to hand-pollinate, you must remove the covers, and thus the protection. At this point, you can inspect the plants daily for newly laid insect eggs, newly hatched larvae, and adults, and destroy any that you find. This does work if your garden is small enough for you to accomplish this in a reasonable amount of time. But even before this, you can do something which helps immensely: Experiment each year with the planting schedule of crops which seem particularly pest-prone. Various insects become active at various times in the year, and it is possible to avoid their most active periods by delayed planting.

Other plants can have insect problems which are controlled by birds

if you've encouraged them to nest on your property. I have watched indigo bunting parents pick tomato hornworms off my tomato plants and bring them to their nestlings on the other side of my house. I have seen a Carolina chickadee eating gypsy moth caterpillars on my apple tree and blue-gray gnatcatchers hunting daily in my garden. American goldfinches eat the aphids off my perennial pea (*Lathyrus latifolius*) plants which are attacked by these insects during dry spells. A yard teeming with predators and prey can function very well without human interference.

To avoid the use of fungicides, I make sure that all plants are adapted to my yard. I don't grow exotics unless they can survive on their own without special help (such as frequent watering). Before digging a hole for a new plant, you should be certain that the site you've chosen will supply the right amount of sunlight or shade, the proper pH and tilth, and that the average rainfall in your area is appropriate. The usual reason for problems with fungal diseases (and insect infestations) is an unhealthy plant growing under incorrect or stressful environmental conditions.

Thus there are many ways to deal with pest problems in the garden so as not to use pesticides, but in or very near the house is a different story when injury is threatened or a severe nuisance is created. As much as I hate the use of poisons in the yard where other creatures might be exposed to them, I realize that yellowjackets, for instance, are too much of a danger to people to leave them be.

Getting back to the flies so common in our area homes in the fall and winter, I think flypaper is an excellent way to catch flies, if you can bear to look at it. When it comes to pesticides, I pretty much have what I want with extremely limited pesticide usage. I personally do not wish to have skin contact with these poisons, or to breathe their fumes, so it is as much for my own safety as for the animals sharing my property that I try very hard to avoid using pesticides. I have found alternatives that work, and although they would not always be considered successful by other people's standards or expectations, they are a sound trade-off as far as I am concerned. Pesticides do have their place in modern society, but it should be kept in mind that they can be poisonous to *other* animals and plants than the ones you are trying to kill.

In the end, it's up to individuals to decide how much they want pesticides in their environment. They must consider their options, weigh the outcomes, and determine priorities. *Must* more produce be coaxed from infested plants? Does each flower *have* to be unblemished? My hope is that they would decide that *less* is really *more*.

•Herbicides

(Continued from page 3)

with these herbicides. This includes protecting one's skin and eyes, avoiding breathing fumes or mist, and careful disposal of any remaining solution and wash water in accordance with the specific instructions.

Users should be sure to wear gloves and long sleeves. To protect non-target plants, they should be especially careful not to spill any of the herbicide. To avoid contaminating the water supply, they should never let any of the herbicide go down the drain of a sink, a toilet, or storm drain, or otherwise allow the herbicide to reach a stream or groundwater.

The Board of Directors of VNPS continues to study how to balance the environmental damage caused by invasive alien species against the potential damage caused by control methods, particularly herbicides. This article reflects what we have learned so far about two of the most commonly used herbicides, Roundup and Rodeo.

Ted Scott, Conservation Chair
Cris Fleming, Director at Large
Faith Campbell, Director at Large

ENDNOTES

¹ 1993 Pest Management Guide for Horticulture and Forest Crops, Virginia Cooperative Extension Service Publication, 456-017. To obtain a copy, send \$12 payable to Treasurer Virginia Tech, Virginia Cooperative Extension Distribution Center, 112 Landsdowne St., Blacksburg, VA 24061-0512.

² Personal communication from Dr. Richard D. Voth to Faith Campbell; and personal communication from Dr. Jeffrey Derr to Ted Scott.

³ EPAR.E.D. FACTS, glyphosate, EPA-738-F-93-011, September 1993.

⁴ Briggs, Shirley A., Basic Guide to Pesticides: Their Characteristics and Hazards. Rachel Carson Council, 1992, p. 154.

⁵ Personal communication Dr. Diana Post, Executive Director, Rachel Carson Council, to Cris Fleming

⁶ According to Dr. Richard D. Voth of Monsanto (personal communication to Faith Campbell), Accord is registered for use on utility right-of-ways and commercial forestry operations; Kleenup is registered for use by homeowners in their yards.

⁷ Briggs, op. cit.; also Dr. David H. Monroe, Ecological and Public Health Implications Associated with the Use of Glyphosate Herbicides, Oct. 1, 1988. For a copy, contact the Rachel Carson Council at 8940 Jones Mill Road, Chevy Chase, MD 301-652-1877

⁸ Briggs, 154.

Events

Invasive Alien Plant Seminar

The Virginia Native Plant Society and the Virginia Department of Conservation and Recreation will present a one-day seminar on Invasive Alien Plants at Piedmont Community College, Charlottesville, Friday, October 28. Eight speakers will review the problems some of the plants create as well as provide detailed information on four of the more troublesome species. This seminar should be of interest to landscape architects and designers, nurserymen, groundskeepers, resource managers and garden writers. Attendance is limited to 120. Registration will be on a first-come, first-served basis. For more information and a brochure, contact Ted Scott, 12493 Spicewood Road, Orange, VA 22960 or call 703-672-3814.

Natural History Retreat

A weekend retreat highlighting Virginia's fascinating natural history will be presented by Wintergreen Resort and the Virginia Museum of Natural History September 16-18 at Wintergreen. Designed for nature enthusiasts of all levels, the weekend will offer the opportunity to learn about some of the latest discoveries in the state's natural history as well as a chance to meet some of the region's finest field scientists as they share their most recent findings.

Field trips and exploratories as well as slide shows and lectures fill the slate of events. Fourteen well-known instructors from a variety of backgrounds will be on hand throughout the weekend. They include renowned wildflower photographer Dr. Hal Horwitz, Dr. Joe Mitchell, herpetologist and author of *The Reptiles of Virginia*, Dr. Nick Fraser, paleontologist at the Virginia Museum of Natural History and Debra Duffy, geologist at Tidewater Community College.

The cost for the weekend is \$60; group rates are available upon request. Wintergreen is also offering a special lodging rate for guests attending the weekend retreat. For more information, contact Wintergreen Resort, Attention Lorrie Knies, P.O. Box 706, Wintergreen, VA 22958 or call Knies at (804) 325-2200, ext. 992.

Native Plant Seminar

The Irvine Natural Science Center in Stevenson, Md., is sponsoring a native plant seminar Saturday, August 27 from 8 a.m. to 1 p.m. Tony Avent, Charles Cresson and Carole Ottsen will discuss the use of native plants in various situations in home gardens. The fee is \$35 for full-time students and members of Irvine and \$45 for others. For more information, call 410-484-2413.

Fall Wildflower Class

Marion Lobstein will be offering a one-credit fall wildflower class (BIO 295-73M) at the Manassas Campus of NVCC. Lectures will be from 4:30-6:45 p.m. on Wednesdays starting September 17 and running to October 5. Field trips will be from 9 a.m. to 1:45 p.m. on Saturdays from September 17 to October 8.

Estuaries Day '94

Estuaries Day in Tidewater kicks off CoastWeek, a three-week celebration of our nation's coastal resources. It is co-sponsored by York River State Park and Chesapeake Bay National Estuarine Research Reserve in Virginia. The celebration is Saturday, September 17 from 9:30 a.m. to 5 p.m. at the York River State Park in Croaker. There will be a number of estuarine-related activities for children and adults. The cost is \$2 per car. For more information, call 804-566-3036.

Birding Festival

The second annual Eastern Shore Birding Festival will be held October 8-9 at Sunset Beach Inn, located at the southern tip of Virginia's Eastern Shore. The area serves as a critical corridor for migrating songbirds. For more information, write: Eastern Shore of Virginia Chamber of Commerce, P.O. Drawer R, Melfa, VA 23410 or call 804-787-2460.

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

VNPS Membership/Renewal Form

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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, Route 1 Box 381, Delaplane, VA 22025

The *Bulletin*

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Nicky Staunton, President
Nancy Sorrells, Editor
Barbara Stewart, Artist
Original material contained in the Bulletin may be reprinted, provided credit is given to the author, if named. Readers are invited to send letters, news items, or original articles for the editor's consideration. They should be typed (double-spaced, please) or sent as a Macintosh text file to the Editor at Rt. 2, Box 726, Greenville, VA 24440.

The deadline for the next issue is
October 10

Virginia Native Plant Society Slate of Candidates

The following slate of candidates is proposed by the 1994 VNPS Nominating Committee to replace officers, standing committee chairs, directors-at-large, and members-at-large of the Nominating Committee whose terms expire on October 31, 1994, and to fill existing vacancies in other classes.

Class of 1995

FIRST VICE PRESIDENT - Vacant. Search continues for this office.

Class of 1996

SECOND VICE PRESIDENT - **Nicky Staunton**, Prince William Wildflower Society. Nicky, a charter member of VNPS, has served as president for the past six years. She has been active in her chapter, serving on its board in a number of positions. Her interests include conservation, education, natural history, field botany, photography and illustration. She has represented the society at various meetings and public events and serves on the advisory board for the Department of Game and Inland Fisheries.

FUNDRAISING CHAIR - **Bud Gregory**, Potowmack Chapter. Bud is a toxicologist with an interest in soil sciences. He has had grant writing experience while working at the University of California as a professor of physiology and at the Amand Space Craft Center in Houston. He is interested in integrating native plants into the landscape and is building a greenhouse for his home in Luray.

Class of 1997

PRESIDENT - **Frank Coffey**, Blue Ridge Chapter. Frank is President of the Blue Ridge Wildflower Society and has served on the state board as first vice president. Frank is a native Virginian whose interest in natural history stems from camping and exploring as a young boy. He credits his interest in wildflowers to his family who gave him books on the subject one Christmas. This led to an interest in photography, birdwatching and native plants.

CORRESPONDING SECRETARY - **Elaine Smith**, Shenandoah Chapter. Elaine has served in this position for the past year. She is a native of Harrisonburg and works at James Madison University in the Admissions and Orientation offices. Elaine is a hiking and cross country skiing enthusiast with a strong interest in natural history.

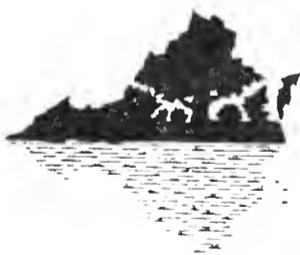
DIRECTOR-AT-LARGE - **Reba Greer**, Prince William Wildflower Society. Reba is a curriculum specialist for Prince William County School division and a doctoral student at George Mason University. She has extensive experience in staff development and educational administration. Reba and her husband own 6 acres and have planted several perennial gardens for hummingbirds, butterflies and songbirds. She is interested in historical landscapes and is working to enhance the wetlands on her property.

DIRECTOR-AT-LARGE - **Pat Baldwin**, John Clayton Chapter. Pat has served on the state Board recently as a director at-large and previous to that as fundraising chair for several years. He has served for 6 years as the chapter's Education Chair. His interests include wildflower photography and the identification of new locations of populations of plant species for the *Atlas of Virginia*. Pat does numerous slide programs for garden clubs, schools and other groups.

BOTANY CHAIR - **Chris Sacchi**, Piedmont Chapter. Chris is the Curator of the Orland E. White Arboretum (State Arboretum of Virginia). He has just served a term on the state Board as a Director-At-Large. Chris' training is in ecology, including plant ecology and he is a member of the faculty of the Department of Environmental Sciences at the University of Virginia. He is also an instructor at the Wintergreen Wildflower Symposium.

1995 NOMINATING COMMITTEE (One year term) - **Ann Regn**, Jefferson Chapter. Ann works as the Environmental Education Coordinator for the Virginia Department of Environmental Quality. She has served as First Vice President and chapter President, and is proud of having reclaimed 3 acres of tall fescue to a more "natural" meadow.

1994 Nominating Committee: Ann Regn, Jefferson Chapter; Frank Coffey, Blue Ridge Wildflower Society; Bruce Boteler, Blue Ridge Wildflower Society; Ann Haynes, Potowmack Chapter; Fan Williams, John Clayton Chapter.



Virginia Native Plant Society

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November 1994

Vol. 13, No. 4



Bulletin

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

Five new registry sites added

This has been a banner year for the Virginia Native Plant Society Site Registry Program with the addition of five new sites that bring the total number of registries to 11. The program began in 1990 with the registry by the Piedmont Chapter of the Trillium Slopes in the G. Richard Thompson Wildlife Management Area in Fauquier County. This was followed by the Shenandoah Chapter's registry in Augusta County of the Mueller Marsh in 1991. Then in the fall of 1992, the Blue Ridge Wildflower Society registered the Cahas Mountain Property of Paul James in Franklin County and the Buffalo Creek Nature Trail in Campbell and Bedford Counties. Later in the same year, the Piedmont Chapter registered the Carters Run Wetland in Fauquier County. In 1993 Prince William Wildflower Society added our sixth site, James Long Park in Prince William County.

The Rosebay Rhododendron Site, registered by the Blue Ridge Wildflower Society, in Campbell County, was the first site to be registered in 1994. This rhododendron community occupies a ravine that extends along a creek for more than an eighth of a mile and here the microclimate bordering the stream supports several rare and interesting plants that generally occur outside the area. Here the rosebay rhododendron, *Rhododendron maximum*, is at its eastern-most distribution as it is normally a plant of the Blue Ridge Mountains. Among the plants of interest are a population of featherbells, *Stenanthium gramineum*; the chain fern, *Lorinseria areolata*; the goldenrod, *Solidago patula*; and the gentian, *Gentiana saponaria*. All of these are seldom found on the Piedmont and by occurring here are disjunct from their usual geographical range. A plaque honoring Mr. and Mrs. Frank Knight, owners of this unique community, was presented in a brief ceremony on the lawn in front of their home May 24, 1994.

At the annual VNPS meeting in September, it was announced that three sites in Fairfax County and one in Prince William County had been approved by the Site Registry Committee. The three sites in Fairfax County (Potowmack Chapter) are: Huntley Meadows Park, Riverbend Park and Scotts Run Nature Preserve, all under Fairfax County Park Authority jurisdiction. The registry in Prince William County (Prince William Wildflower Society) includes several designated areas within the Manassas National Battlefield Park.

Among the rare plants that have been documented for Huntley Meadows Parks are showy tick-trefoil, *Desmodium canadense*; spotted Joe Pyeweed, *Eupatorium maculatum*; and blue flag, *Iris versicolor*. Several others are under consideration.

(See Registries, page 9)

Ironweed chosen as 1995 Wildflower

Deep purple flower heads atop sturdy burgundy tinged stalks are the mark of ironweed, *Vernonia novaboracensis*, the 1995 VNPS Wildflower of the Year. The plant is found in Virginia's low meadows and woodlands, along creek bottoms and wet roadsides. From mid-August until a hard frost turns them brown, these rich colors belong to ironweed.

A member of the Composite or Aster family, ironweed's purple is a spectacular contrast to the golden shades of other fall-blooming composites. Adaptable to many soils, it makes a striking addition to an open perennial border or in a shaded, naturally wet area of yard or garden.

Chapters of VNPS comprised the selection committee. Thanks go to all participants in choosing the seventh Wildflower of the Year. In coming issues of the *Bulletin*, we will feature more about the habitat, life history, and horticultural potential of ironweed.

Inside This Issue...

Two members honored
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Page 4

FROM YOUR PRESIDENTS

Hellos and Goodbyes...

Welcome Frank Coffey

It is indeed an honor and a privilege to have the opportunity to serve as your VNPS President. Thank you for your support and confidence. I also want to thank all of the members who will be serving with me as VNPS officers or board members. Together we can work toward increasing everyone's awareness of wildflowers and conserving Virginia's abundant native flora.

Each of our nine chapters is unique. I hope that this year each VNPS member will seize the opportunity to participate in at least one activity of a neighboring chapter and maybe each chapter can co-sponsor one event with another chapter. The Virginia Native Plant Society is "us" and we need to pool our talents and share our resources in order to enable our society to continue to develop and grow.

Frank Coffey

Thanks Nicky Staunton

1988 sounds like a long time ago, but these past six years have been full of wildflowers, wildflower people and wildflower places. Time has flown!

My feelings of appreciation are overwhelming. Appreciation for opportunities to lead our society; to learn some botany; and to meet political environmental challenges. The beauty of our native plants and their habitats gives nourishment, spiritually and aesthetically. Members of VNPS are a wonderful group of people who are ever ready to work for the society and native plants. All of your help and responses these past years are appreciated.

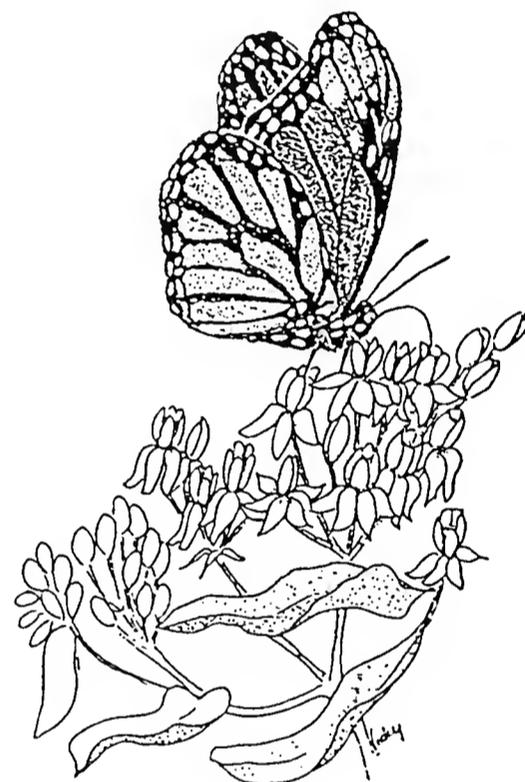
VNPS has enriched my life through these six years and now, you have gone even further honoring me with an abundance of gifts...a Quercus bicolor, Swamp Oak, at Virginia's State Arboretum; a beautiful 3-dimensional stained glass creation by Trish Hendershot of a ruby throated hummingbird sipping from a Cardinal Flower - a jewel in the sun's light; the certificate from my favorite camera shop, Vienna Camera. I am deeply moved by your generosity and thank you!

You are the real source of strength and energy in Virginia Native Plant Society. You have had the dreams and missions...the registry program, invasive alien plant initiatives, our publications, the Bulletin's editor, new chapter formation, a workshop with the Ginter; and cooperative work with our national forests and parks. There remain challenges for us to protect Virginia's natural areas in every region. You will hear about a proposal to have Rt. 58 pass through Mt. Rogers; about issues relating to "takings;" about proposals by the Governor's Blue Ribbon Strike Force which would adversely affect DGIF land such as the G. Richard Thompson WMA, our first registry site; about clean tributaries to the Potomac; and there are many more issues. Be ready to learn and respond to the issues and to help your VNPS Board members speak for you and our native plants. We must be vigilant and persevere to preserve our wild places.

My enthusiasm for Virginia Native Plant Society is still rising. Frank Coffey is a president capable of leading VNPS to new goals and growth. Our support and willingness to share the work to be done will be needed.

I am enthused! I hope that you are also.

Nicky Staunton



**Palamedes Swallowtail
on partridgeberry in flower
Illustration by Nicky Staunton**

Two recognized for conservation efforts

During 1994 two persons have been recognized by the Virginia Native Plant Society as having contributed to conserving wild flowers and wild places.

MARY ANN GIBBONS (Piedmont Chapter) is responsible for the entire VNPS effort to rescue native plant habitat on the Theodore Roosevelt Island National Park from the invasive alien, *Hedera helix*,

Mary Ann Gibbons Piedmont Chapter

Mary Ann is responsible for the entire VNPS effort to rescue the native plant habitat on Theodore Roosevelt Island National Park from invasive alien plants.

English ivy, as well as other invasive alien plants including ailanthus, porcelain berry and garlic mustard. Following the workdays this spring, we found abundant trout lilies, toothworts, spring beauties and many other early blooming native wildflowers under spicebushes. It was elating.

This statewide chapter program could easily have been carried by the three northern Virginia chapters, Potowmack, Piedmont and Prince William because of their accessibility; however, members from Blue Ridge Wildflower Society, John Clayton and Jefferson Chapters have joined the battle. As part of the Department of Interior, the Theodore Roosevelt Island National Park project gives VNPS designation as a co-operator.

As time passes the project will need more co-operators and VNPS will work to include other area conservation organizations to accomplish the goal of control of the

invasives. Some suggestions for restoration of the native wildflowers have been received. It remains to be decided if that will be part of our goal.

Mary Ann Gibbons' recognition of the invasive alien plant problems on the island was the first step and her strong, focused leadership in attacking the problem has brought VNPS into national focus on a widespread problem in land management. We are proud of her determination and effectiveness and feel she deserves recognition for leading us to tackle the problems on Roosevelt Island.

JAMES WAGGENER (Prince William Wildflower Society) is the pivotal person responsible for designation of the Harry Diamond Laboratory (U. S. Army Woodbridge Research Center) as part of the U. S. Department of Interior Refuge System, managed as part of the Mason Neck Refuge. As a "birder" Jim has identified over 200 species at the Diamond since the late 1980s.

When word came of the plans to close the base, threats formed for this 40-year-old natural area surrounding the laboratory buildings. The United States Fish and Wildlife Service received the wetlands on the base, but the upland meadows were coveted as a site upon which to build by both federal and county government agencies.

Jim sounded the alarm and brought together a coalition of organizations and individuals, as well as Senators Charles Robb and John Warner and Representative Leslie Bryne. The entire base was saved by being placed in the United States Refuge system as part of Mason Neck Refuge which is across the Potomac River.

The Fairfax Audubon Society, Audubon Naturalist Society, National Wildlife Federation, and VNPS joined in efforts to protect the tract. VNPS was invited to conduct a plant inventory on the base which began in July 1993 during 100-degree

mornings and has continued on a regular basis in 1994. The result has been the identification of over 300 species, several of which are records for Prince William County and some of which occur on Virginia's list of threatened and endangered plants.

The Harry Diamond is also important for the migratory birds and local wildlife and it is a true refuge for native plants which offer

James Waggener Prince William Wildflower Society

Jim sounded the alarm and organized a coalition to protect the Harry Diamond Laboratory and place it within the jurisdiction of the Mason Neck Refuge.

bed and board to the birds and wildlife. The diversity of habitats is unusual in urban northern Virginia and the management by the U. S. Army has resulted in natural meadows and wetlands of the sort strived for by land managers.

Despite obstacles and many reversals, Jim Waggener's faith in the value of the Harry Diamond site to birds and flora fed his tenacity to answer every challenge. This is a true example of one person's effectiveness in conserving a precious natural area. Thanks to Jim Waggener's efforts, we "plant people" will be able to visit, study and learn about such natives as meadow beauty, *Rhexia virginica*; blue lobelia, *Lobelia siphilitica*; *Heteranthera reniformis*; rattlesnake master, *Eryngium aquaticum*; a rare Ludwigia; gamma grass, *Tripsacum dactyloides*, and a variety of grasses, rushes and sedges yet to be identified. He deserves great praise and recognition!

The Society Giftshop

Books, booklets, pamphlets & notecards

Send orders to John and Phoebe White, 3924 Cobbler Mt. Road, Delaplane, VA 22025 (Prices include tax, shipping and handling)

1. *Habitat Considerations and a Habitat Key for Landscaping with Selected Wildflowers of the Southeastern United States*. Four page reprint from VWPS Bulletin, Fall 1984. Key to assist selection of native species most naturally suited to particular sites, and guidelines for effective cooperation with highway departments in roadside plantings. \$1.55
2. *Wildflowers Recommended for Cultivation in Virginia*. Six page annotated list of 35 flowering plants and five ferns native to Virginia and recommended for Virginia's home gardens and public landscapes. For each species, the list gives preferred exposure, soil and moisture as well as flowering time, color and height. \$2.07
3. *Mowing Cycles and Native Roadside Plants*. Twenty-four page paper prepared by Kim D. Herman, a botanist for the Michigan Department of Transportation. \$4.51
4. *Trees, Shrubs and Woody Vines of Virginia: A checklist*. Compiled by Dorothy Bliss, VNPS Botany Chair. A



VNPS decal, patch

The first Virginia Native Plant Society window decal is available. Show your pride in Society membership and help get our name and logo out in the public eye. To order, send \$2.09 per decal, plus a SASE to: Mark Gatewood, Publications Chair, 132 Wayburn Street, Churchville, VA 24421. Make checks payable to VNPS.

The VNPS patch embroidered with the Society logo is available from Pat Baldwin, 430 Yale Drive, Hampton, VA 23666. Checks for \$4.25 should be made to VNPS.

useful checklist for woody species in Virginia. \$1.50

5. *Ferns and Fern Relatives of Virginia: A checklist*. Compiled by Bliss, a helpful guide in your quest for ferns throughout the Old Dominion. \$1.50
6. *Fall Wildflowers of the Blue Ridge and Smoky Mountains*. This comprehensive and versatile hardcover guidebook by Oscar W. Gupton and Fred C. Swope identifies 100 species of trees, shrubs, vines and herbs. \$15.53
7. *Wild Orchids of the Middle Atlantic States*. This hardcover guide by Gupton and Swope describes 52 species of the rarest wildflowers in 8 states with color photographs. \$15.06
8. *Growing and Propagating Wildflowers*. This 331-page paperback by Harry Phillips of the North Carolina Botanical Garden is a definitive reference for wildflower gardeners. It covers more than 100 genera of wildflowers with detailed information on propagation and cultivation. \$17.62
9. *Wetlands*. This Audubon Society Nature guide by William A. Niering is a comprehensive field guide, fully illustrated with color photographs. \$18.67
10. *A Garden of Wildflowers*. This 290-page paperback by Henry W. Art includes 101 species native to North America. Useful information on propagation and culture are included with tables for pH preferences and soil moisture conditions. \$15.53
11. *The Great Forest, John Clayton and Flora*. This intriguing 121-page paperback by VNPS member Harriet Frye describes the work of John Clayton (1693-1773) as a botanist in colonial America. \$16.95
12. *Wildflower Conservation Guidelines*. One page of VNPS guidelines to help protect wild plants in their native habitats. Free with SASE
13. *Sources of Native Plants and Wildflowers*. Three-page list of sources of wildflower seeds, native grass seeds, herbaceous and woody native plants. Free with SASE

VNPS notecards

Five beautiful designs of Virginia wildflowers in pen and ink drawings by VNPS staff artist Barbara Stewart on fine quality bond paper with matching envelopes. A set of 10 cards, two of each design. Specify color, ivory or ice blue. \$7.80

T-Shirts and Sweatshirts

Wildflowers of Virginia t-shirts and sweatshirts are available for purchase by VNPS members and friends. These high quality shirts feature five native species in full color: pasture rose, bloodroot, black-eyed Susan, white trillium and cardinal flower. Accurately depicted in the tradition of a fine botanical print, each flower is accompanied by a short description.



The t-shirt is pure cotton and available in short or long sleeves, sweatshirts are a cotton-polyester blend. Profits on the shirts are divided between the VNPS and local chapters.

Shirts may be ordered from local chapters. The cost, including tax, is \$13.59 for a short sleeve t-shirt, \$15.68 for a long-sleeve t-shirt and \$21.95 for a sweatshirt. Please add \$2 for postage and handling for shirts which are to be mailed.

Wildlife Viewing Guide

The *Virginia Wildlife Viewing Guide* is the latest in a series of high quality, full-color guidebooks describing easily accessible areas where you can observe native, free-roaming wildlife. Each area is described with the type of wildlife you are likely to see, the lay of the land and optimal seasonal or time of day information. Maps are also provided.

Much of the proceeds goes to conserve wildlife and wildlife habitat. Copies of the guide will be available through the VNPS at less than retail price within the next month. The price is \$8, including postage. Send your order with check or money order to Catharine Tucker, 302 Danray Drive, Richmond, VA 23227 or phone (804) 264-6941.

Auctions yield \$2,280

Twin auctions...silent and live...yielded donations to VNPS of \$2,280 when held at our Annual Meeting in Charlottesville. The Jefferson Chapter Auction Chair, Pat Willis, and her helpers are responsible for another successful, fun-filled event. Gifts of flats of wildflowers, a weekend in Paris (Virginia), books, gardening tools, birdbaths and redbud seedlings from Monticello enriched us.

New VNPS officers

Serving as first vice-president is Bob Eubank, Blue Ridge Chapter. He is completing a term as second vice-president for his chapter and was previously a Director At-Large on the state board.

Since his retirement as microbiology supervisor for the Virginia Department of Agriculture's Animal Health Lab, he has been busy researching propagation and germination methods and starting a wildlife habitat design business using native plants. He is active in the Lynchburg Bird Club and coordinates the WaterWatch Project.

Sylvia Sterling, John Clayton, and Ann Crocker, Potowmack, are both membership chairs for their chapters.

Sign up early for Bruce Peninsula botanical trip

The Virginia Native Plant Society will again conduct a botanical trip to the Bruce Peninsula of Ontario next June. This will be the fifth consecutive year in which members have revelled in the profusion of wildflowers on the Bruce, especially our native orchids. We have seen 27 species of orchids there and in 1992, 21 species were in bloom.

The trip is limited to 15 persons. We will arrive on the Bruce June 17 and depart June 24. Since it is slightly over 700 miles to our destination, most people make the trip in two days. Unless something drastic happens to the exchange rate between the U.S. and Canadian dollars, the total fee for the trip including a boat trip to Flower Pot Island will be \$450. A firm price will be fixed after the first of the year. Participants in the trip will provide

Thanks to Jefferson Chapter!

All of us who were fortunate enough to attend the 1994 annual meeting of the Virginia Native Plant Society enjoyed a well-planned weekend in the Charlottesville area. Gay Bailey, President of the Jefferson Chapter, and her members planned interesting programs. Even the weather cooperated.

Tim Williams' Friday evening presentation on Virginia's Shale Barrens and Lucinda Stanton's program about Thomas Jefferson and the botanists of his era left us wishing for "more!" Both speakers were from the Jefferson Chapter.

The fieldtrips were diverse and satisfied our yearning to know more about trees at Montpelier and the landscaping on the grounds of the University of Virginia. The trip to Big Levels was the envy of most of us since it was limited to 16 participants. There are endangered species of native flora and fauna in this sinkhole region of Augusta County, and the small group saw the Virginia sneezeweed in bloom, grass of Parnassus, lady's hats, as well as a tiger salamander.

"All of the hike leaders were wonderful," Gay said, pointing out that over 100 VNPS members hiked

their way around the region.

The banquet Saturday night proved delicious, and was sandwiched between the exciting silent and live auctions. The evening was also a tearful farewell to outgoing president Nicky Staunton who was given a "going away" to treasure through the years.

The evening began with the election of new officers. Frank Coffey of the Blue Ridge Wildflower Society is our new VNPS President. The entire slate of candidates was elected by acclamation. There were many "thank yous" to past members of the VNPS board who served faithfully.

Jefferson Chapter members set the stage for this successfully executed weekend and they are given our sincere, abundant appreciation.

"We were very pleased. The planning of this meeting brought a small core group of us together every Wednesday night since late spring," Gay noted. She had special praise for Laura Leavitt, Tim Williams, Ted Scott, Brian Gallagher, Pat Willis and Doug Coleman.

"We enjoyed it," Gay concluded. "People had fun, learned a lot and were glad to be here. We're glad we did it and glad they came!"

their own transportation to and from the Bruce. (We will provide all registrants with a list of those going to facilitate carpooling and travel arrangements.) After arrival, we will carpool each day, sharing the driving chores as equally as possible. The lodge where we will stay for the duration of our time there has provided very adequate accommodations for the last four years. The food has been excellent and, I understand, better than ever in '94.

The co-leaders of the trip will be Dr. Donna Ware and Ted Scott (his sixth trip to the area). We are opening registration immediately. A deposit of \$50 will reserve a place for the first 15 people to make a deposit with priority to those on the waiting list for '94. Any excess deposits will be returned and the name placed on the waiting list in the order in which they

are received and used to replace any vacancies that might develop. The balance will be due **no later than** April 1. Cancellations prior to April 1 not filled from the waiting list will forfeit the deposit. Cancellations after April 1 not filled from the waiting list will forfeit the full amount.

Talk to some of the 60 some members who have already enjoyed this trip. We are confident they will give a favorable report as this is an unusually rich area botanically. Please send all deposits, made out to Virginia Native Plant Society, as well as any questions to: Ted Scott, 12493 Spicewood Road, Orange, VA 22960-2201 or 703-672-3814

If you would like to go, we advise a prompt deposit as the trips in the past have filled very quickly.

Virginia's Rarest Plants

Disjunct distributions pose challenge to botanists

Plants with discontinuous (or disjunct) distributions present a challenge to botanists of intervening areas to fill in the gaps. Such a challenge was posed to Virginia botanists by the globally rare coastal plain species *Sabatia kennedyana*, Plymouth gentian, which was known only from Nova Scotia, Massachusetts, Rhode Island, Connecticut (historic), North Carolina, and South Carolina. The challenge was answered in 1992 when *Sabatia kennedyana* was found in small numbers at one site in Caroline County, Virginia, by Gary Fleming of the Virginia Department of Conservation and Recreation.

It is speculated that the current distribution of this species may be due to rising sea levels that began approximately 15,000 years ago after the end of the last glaciation. The broad coastal plain that existed during lower sea levels of the glacial period and included the continental shelf from Newfoundland to Florida was reduced and fragmented by rising sea levels. Consequently, the distribution of some species that had populated the more extensive coastal plain became fragmented, relegated to isolated suitable habitats of today's smaller coastal plain.

A member of the Gentian family, the *Sabatia* genus differs from the more familiar *Gentian* genus in having a wheel-shaped arrangement of usually pink petals on a very short



Sabatia kennedyana
Plymouth gentian

Illustration by Megan G. Rollins

tube, rather than a tubular to bell-shaped blue, white, or green corolla. *Sabatia kennedyana* is most similar to *S. dodecandra* (perennial sea-pink) which is found in salt and brackish marshes, and along stream margins, ditches, and riverbanks, but differs in details of flower parts and habitat. Plymouth gentian is a perennial herb found on the shores of coastal plain freshwater bodies with fluctuating water levels. It produces yellow-

green, lance-shaped leaves in basal rosettes, and clusters of these rosettes arise from vegetative reproduction. Some of the rosettes produce an erect stem with 1-10 pink (occasionally white) flowers, over an inch wide, and each with a yellow center bordered by red. Flowering occurs from July to September when water levels are lower. In Nova Scotia and New England, the plant is found on the exposed margins of coastal plain freshwater ponds. In North and South Carolina, the plant is found in the draw-down zone of a blackwater river. The Virginia population is on the boggy and sandy margins of a beaver-dammed pond which appears to experience only minor changes in water level.

The largest number of populations (over 150) of *Sabatia kennedyana* are found in eastern Massachusetts, with many of the populations on Cape Cod. Other significant areas where Plymouth gentian is found include southern Nova Scotia and along one river system in the Carolinas. Rhode Island currently contains only three populations. It is unlikely that many more populations will be found in Virginia. The most serious threats to this species over its range are probably from changes in water table levels and water quality arising from adjacent development or direct manipulation of pond or river water levels.

Offroad vehicle use also poses a threat. Some ponds in Massachusetts containing *Sabatia kennedyana* have been protected and at least portions of a few other sites in other states are under public ownership. Plymouth gentian currently has no legal status in Virginia, but Virginia's sole population is found on public land, and management recommendations have been developed to help protect this attractive wildflower.

Nancy E. Van Alstine
Natural Heritage botanist
Virginia Department of
Conservation and Recreation
November 1994

Shenandoah Chapter produces wildflower brochure

The Shenandoah Chapter of the Virginia Native Plant Society has produced an attractive brochure, "Favorite Wildflower Walks, Rockingham & Augusta Counties."

The brochure, in green print on white paper, features nine different walks with directions to each site and the most common species one would expect to find at each spot.

The project is the result of the hard work and creative thinking of Shenandoah member Doris Baker. It

was designed as a guide for newcomers, tourists or interested persons of all ages in the Shenandoah Valley.

The chapter funded the printing for 1,200 copies which have been distributed to area organizations, parks and other institutions which distribute educational material to the public. If you would like a copy of the brochure, send a SASE to Shenandoah Chapter, Box 22, Bridgewater College, Bridgewater, VA 22812.

For your Library

A Journal in Thyme by Eric Grissell. Not a gardening calendar or a how-to book, but rather an intimate look at one gardener's yearly trip through his garden is the layout of this 332-page hardcover work.

A series of weekly essays that begin in November documents a full year's cycle in the life of a gardener and his garden. As the year unfolds, we find that in spite

of hail or rain, sickness or pressing obligation, drought or advancing years, or even periodic ineptitude, the garden demands its tending.

"The way I garden there is no telling exactly what will be done by the day's end--if anything. My garden plans often begin the day before, when I am not faced with any real work. Then during the night, when my subconscious takes over, plans

somehow change drastically in form," is the way Grissell begins his first journal entry.

"Arghhh!! The first weekend of spring and all it's done is rain since day one of the season..." he writes months later. "And now, sadly, we are running out of time, you and I. The weeks of October come rushing toward their fiery climax. The garden is crashing down all about us as tons of leaves fall..." he laments near the end of the book.

All-in-all a fascinating trip through the intertwining days, weeks and months of one man, his plants and the landscape they create. For those botanists, Grissell uses both the botanical and common names of the plants he interacts with during the year and an index helps the reader find his way back to particularly memorable passages.

The book is attractively illustrated with black and white linocuts, while the space inside the front and back cover is devoted to a map of Grissell's landscape. ISBN 0-88192-276-5, The book can be ordered directly from Timber Press, Inc., for \$24.95 plus \$4.95 shipping and handling. To order, call 800-327-5680.

Illustrated Plants of Florida and the Coastal Plain by Dr. David Hall. More than 1,200 wildflowers of Florida and the Southern coastal plain are illustrated and described in this 448-page paperback. The book is a unique collaboration between noted botanist Dr. David Hall and plant collectors Leland and Lucy Baltzell.

The book describes the wildflowers of Florida and the Southeastern Coastal Plain from Lake Okeechobee in Florida northward. Most common shrubs and herbaceous plants are included. Grasses, rushes and trees are excluded.

Plants are arranged alphabetically by family. The intent is for users to simply look through the illustrations for a match. Two indexes are included for reference. ISBN 0-929895-40-1; \$19.95. Books can be ordered from Maupin House Publishing, P.O. Box 90148, 32 S.W. 42 Street, Gainesville, FL 32607, 800-524-0634.



Do Not Use This Plant For Christmas Decorations

Ground pine (*Lycopodium obscurum*) is an attractive, evergreen ground-cover native to woodlands of the Eastern United States. Ground cedar, running cedar, and running pine* are similar lycopodium species. All resemble miniature conifers but are closely related to ferns and reproduce by runners and spores.

Ground pine is often used at Christmas for wreaths and roping. Unfortunately, all plant material offered for sale has been collected from wild populations because it is not currently being propagated and grown commercially. In some areas over-collection has led to serious depletion of wild stands.

When used indoors, ground pine dries out quickly and becomes a fire hazard. Tiny, dust-like spores ignite so easily that they were once used in fireworks and for photographic flashes in the early days of photography.

Do your part to conserve native plants — don't use ground pine and related species in your Christmas decorations.

*Ground cedar - *Lycopodium tristachyum*, Running cedar - *L. clavatum*, Running pine - *L. flabelliforme*



Prepared by Reston Association and Prince William Wildflower Society
Distributed by Prince William Wildflower Society, P.O. Box 83, Manassas, VA 22110
Drawings by Nicky Staunton

Familiarity with *Kalmia*'s habitat helps cultivation

Editor's note: This is the second part of an article written by VNPS Horticulture Chair Nancy Arrington on the cultivation of mountain laurel, the 1994 Wildflower of the Year.

Selections and controlled crosses between genetic variants of *Kalmia* and the "normal" species have produced around 50 named cultivars that are being propagated today. Richard Jaynes, author of *Kalmia: The Laurel Book II*, is responsible for about half of these. He began selecting and breeding mountain laurels in the early 1960s at the Connecticut Agricultural Experiment Station. He retired in 1984 and continues his work with mountain laurels at his nursery in Hamden, Connecticut.

The oldest cultivar, *Splendens*, was described in 1896 in England, and several cultivars were introduced by American nursery men beginning in the 1940s. Most cultivars were difficult to propagate

and not readily available. In recent years, tissue culture has made many cultivars available at local nurseries and garden centers and through mail order specialists.

Familiarity with mountain laurel's natural growing conditions gives clues to its cultivation in our gardens. It is usually seen growing in clearings or at the edge of woods which suggests at least partial sun. In fact, the more sun plants receive, the denser their growth will be and the more prolific their flowering. Part shade during mid-day will prolong the life of the flowers.

The pH of wild stands is between 4.0 and 5.5 and gardeners may need to add aluminum sulfate, ferrous sulfate, or finely divided sulphur to soil 5.6 or higher to lower the pH. Planting areas should be amended with peat moss, leaf mold, or superfine bark mulch to provide the excellent drainage required. Mulch to keep the roots cool and moist.

Mountain laurel doesn't need much fertilizer and Jaynes recommends only 1/4 the rate suggested for acid-loving plants. Removing flower clusters immediately after flowering encourages the formation of new shoots that will produce next year's flowers. Natural populations tend to flower well every other year because after flowering, the plant's energy goes into seed formation instead of new shoot growth.

Flower buds form in August and September on current season's growth. Jaynes suggests a neat trick for plants that don't bloom despite growing in excellent conditions. He says a little stress in the form of less water and fertilizer will likely stimulate flowering. This is the exact opposite of the extra water we are normally advised to give azaleas in August to assure flowers in the spring.

I hope you'll try some of the mountain laurel cultivars in your garden. They're truly all-season shrubs that can be used as foundation plants, in woodland gardens, or in partially shaded perennial borders. Attractive buds open to colors that range from pure white to bright red. Some forms have banded or spotted flowers. Dwarf selections grow slowly to around 3 feet and have excellent foliage. Of course, all have evergreen foliage that doesn't curl up in cold weather like that of rhododendrons. If your local nurseries don't carry mountain laurel cultivars, encourage them to do so. Write to me at P.O. Box 462, Manassas, VA 22110 if you would like mail order sources.

Nancy Arrington
Horticulture chair

Results visible at Roosevelt Island

The long planned return to Roosevelt Island scheduled for October 8 did not happen. We regret that it was not possible to gather to work; however, we will put out notice in good time for the next event.

In order to assess results of our two previous workdays, a visit on October 9 did occur. A brief report described the entrance area, which was "weed-whacked," as still relatively clear of ivy. Few plants had returned during the summer following the spring ephemeral blooms. On the left of the path next to our site, the ivy was lushly green and profuse! No native plants were visible through this dense mat of ivy. In contrast, our cleared area showed much exposed soil and a few native plants.

At the top of the slope where hand pulling had taken place and trout lilies were heavily populated in the spring, little was visible but thick ivy shaded by a copse of young pawpaws which formed understory for the mature hardwoods. Down the slope at the small triangular area

which was dug by handtools, the native ginger was flourishing. It had multiplied and there was no reinvasion of the ivy to any appreciable degree. The final location where hand pulling had occurred, was not visited.

An observation would be that our efforts might include future reintroduction of some summer natives at the bridge entrance to Roosevelt Island. The work accomplished is visible and should encourage us to continue with several workdays a year to remove invasive plants and record data based on our work.

Nicky Staunton
Former VNPS President

Production rolling along on invasives fact sheets

Under the direction of Conservation Chair Ted Scott and with the help of the Division of Natural Heritage, fact sheets on invasives have been rolling off the presses.

To date, fact sheets on kudzu, porcelain berry, mile-a-minute weed, common reed, Asiatic sand sedge, and a

revised sheet on purple loosestrife have been printed. In addition, 14 or 15 more are being planned.

The sheets have caught the interest of state agencies in other eastern states as well as the Garden Club of America. VNPS members will soon receive five of the fact sheets.

• Registries

(Continued from page 1)

On the floodplain of the Potomac River within Riverbend Park, spectacular displays of spring flowers include the white trout lily, *Erythronium albidum*, and valerian, *Valeriana pauciflora*. The former species was recorded previously in the Virginia atlas only from Loudoun, Fairfax and Arlington counties and the latter from Loudoun and Fairfax counties.

Scotts Run Nature Preserve, although only 4 miles from downtown Washington, D.C., includes diverse habitats with a rich herbaceous flora and several rare and uncommon species for the area.

At our recent annual meeting in Charlottesville, Gary Roisum ac-

cepted engraved registry plaques for the Fairfax County Park Authority and for Huntley Meadows Park, of which he is manager. Naturalist Alonzo Abugatta accepted plaques for the Riverbend Park and Scotts Run Nature Preserve.

Several designated areas within the Manassas National Battlefield Park include wooded and open field areas. Within these meadow areas may be found significantly important botanical communities of the Civil War era. During the VNPS annual meeting field trip in the fall of 1993, the uncommon *Buchnera americana* was discovered in a field along the unfinished railroad parking area. The plant was discovered by Pat Schlinder and Jocelyn Sladen and

identified by Cris Fleming and Jessie Harris. Barbara Mauller, park ranger, accepted a plaque for these sites within this national park.

Located within heavily populated areas, these newest registry sites are under continual threats from overuse by the public and the spread of invasive exotics. It is hoped that the registry of these sites in public parks by the VNPS will bring about a greater awareness of the significance of these areas and the necessity for the continual vigilance to preserve these environmentally sensitive areas so near urbanized development.

Dorothy C. Bliss
 Site Registry Chair

Tour of Mt. Cuba Center for the Study of Piedmont Flora has been arranged

Mt. Cuba Center for the Study of Piedmont Flora in Delaware is recognized by most people who have visited it as one of the finest exhibits (if not the finest) of native flora in this country. The writer has had the privilege of visiting it twice this year, once in May as a guest and in August as a member of a scheduled tour for this year's meeting of the Eastern Native Plant Alliance.

Although Mt. Cuba is open to the public only one day per year, reservations for groups such as native

plant societies are accepted for the period April to September. Based on this visitor's experience, it has been assumed that many of our members would delight in seeing this garden. Accordingly, a tour for 25 VNPS members has been arranged for 1 p.m. Friday May 19, 1995. The tour will last approximately two hours, and there is no charge.

However, there are some logistics to be worked out, as it will require approximately 3 1/2 to 4 hours (from Orange) to get there. Before much can

be done to make arrangements for rides, etc., we must know who is interested, who is willing to drive, and how many riders can be accommodated. Therefore, we are asking those who seriously intend to make the trip to please register their names, addresses, and phone numbers along with driving info suggested above to Ted Scott, 12493 Spicewood Road, Orange, VA 22960-2201, phone 703-672-3814 in the evening.

Please do not register if you are not sure you intend to go.

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, Route 1 Box 381, Delaplane, VA 22025

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The deadline for the next issue is Feb.10

Chapter News

A day at Zuni

Members of the South Hampton Roads Chapter spent a day this past spring at the Blackwater Ecological Preserve which is also known as the Zuni Pine Barrens.

The trip leaders, Old Dominion University botanist Dr. Lytton Musselman, and his son, John, explained that this site is the last reproducing stand of long leaf pine, *Pinus palustris*, in Virginia and is the northernmost limit for this tree.

The pine is fire dependent for its germination and controlled burnings in recent years have aided the restoration of the pine at the reserve. The reintroduction of fire has also caused the return of other rare plants that once existed in this habitat 50 years ago - white fringed orchid, pitcher plants and creeping cranberry.

The group saw several rare plants including pixie moss, *Pyxidantha barbulate*, which thrives in pine barrens, and the water hickory, *Carya aquatica*, found along the Blackwater River.

Ted's award-winning lily

The Garden Club of Virginia held its annual lily show near the home of Ted Scott, a member of the Jefferson Chapter and the VNPS Conservation Chair.

The lily show was the largest of its kind in the Middle Atlantic States. On the morning of the show *Lilium superbum*, in Ted's wildflower garden opened. On a whim he entered one specimen which was about 7 feet tall with 16 blossoms or buds.

The next day Ted got a call about coming to pick up his "Best Lily in the Show" award! Ted's lily was the only North American native lily in the show.

Mt. Rogers National Recreation Area threatened by highway change

A letter from the Southern Environmental Law Center dated August 30 has informed us of plans by the Virginia Department of Transportation (VDOT) to reroute highway U.S. 58 through the very heart of the Mount Rogers National Recreation Area.

This is one of the most beautiful and significant natural sites in all of Virginia. It has the three highest peaks in the state and provides a home for 35 state threatened and endangered species and 51 globally listed species. The writer has botanized and hiked in this area and no other area of the state is its equal. If VDOT succeeds in carrying out these plans, the Mount Rogers

National Recreation Area of 154,000 acres will never be the same, and Virginia tax payers will foot the entire \$165 million bill.

This is not a local issue. It is important statewide. Besides its own special values, this pristine area is worth fighting for to protect other areas from receiving similar invasions by VDOT at future dates. Should VDOT succeed in expropriating this public land set aside for special uses, it might well establish the precedent for reversing other protection many of us have worked so hard to establish in other areas.

Those who are interested in adding their assistance to the effort

to change VDOT's plan can do several things to help, although this material will appear too late for them to meet the deadline for public comments (October 30).

- Get additional information by calling Andrea Trank at 804-296-7165.
- Write letters to the editor of your local newspaper, your delegate to the General Assembly, or the Governor. If enough people write, it will make a difference.
- Write especially to your member of the Virginia Commonwealth Transportation Board. If you have difficulty finding who this is, call 703-672-3814 for assistance.

Ted Scott
Conservation Chair



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